

The McNair Scholars Journal

of the University of Washington



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Volume VI
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From the
Dean of the Graduate School

It is with real pleasure that I write to introduce this sixth volume of *The McNair Scholars Journal*. The papers contained in this volume represent a remarkable breadth of scholarship. They also represent a depth of scholarship that encompasses the best of what the University of Washington has to offer. The Scholars, their faculty mentors, the staff of the McNair Program, and all of us at this institution are justifiably proud of this work.

The McNair Scholars' Program honors the memory and achievement of the late Dr. Ronald E. McNair, a physicist and NASA astronaut. Its goal is to encourage young men and women to emulate the academic and professional accomplishments of Dr. McNair. One of the goals of the McNair Program is to encourage students who have been disadvantaged in their pursuit of academic excellence to attain not only a baccalaureate degree, but to continue a career in graduate education culminating in a doctoral degree. It is because of this goal that The Graduate School is proud to be a partner in this program. The outstanding undergraduate students who are selected to be McNair Scholars are actively recruited by our own and other graduate schools nationwide. They represent the imagination, talent, and dedication that will enrich the future professorate and provide the leadership needed in a complex and changing world.

Thanks to all of our McNair scholars and mentors for helping to create a vital and vibrant intellectual community for all of us here at the UW. Congratulations on this excellent publication.

Suzanne T. Ortega
Vice Provost and Graduate Dean

From the
Vice President and Vice Provost for Diversity

The McNair Scholars Journal is evidence that the McNair Program provides a valuable opportunity for students to explore research on significant issues important to them as they prepare for graduate school. Many students would not have had such an opportunity without a program like this to support their research and professional growth. McNair scholars work with faculty and graduate student mentors who are committed to the rigors of scholarship—a working relationship that both students and faculty describe as unique and beneficial. Students also have access to venues such as conferences and journals where they can present their original research. Many former McNair alumni are making important contributions to the world of ideas by addressing pressing social issues and scientific questions in the academy and research institutions. As you can see from the essays in this, the sixth issue of the McNair Scholars Journal, the University of Washington continues to strive to provide a quality academic experience to our diverse student body.

For four straight years I have had the pleasure of thanking the faculty, staff and students who together made the McNair Scholars Journal possible. The journal is proof of the amazing things that can be accomplished through collaboration. Regretfully, this is the last issue of the Journal that I will have the satisfaction of introducing as I prepare to assume the position of Vice President for Access, Equity, and Multicultural Affairs and Vice Provost at the University of Minnesota. Since 2001 I have been fortunate to work with an administration, staff and faculty dedicated to implementing diversity in the curriculum and student services at the University of Washington. Rest assured I will be following the accomplishments of UW students with delight from my new home in Minnesota.

Nancy “Rusty” Barceló, Ph.D.
Vice President and Vice Provost for Diversity

From the
Acting Associate Dean, The Graduate School, GO-MAP

I am very pleased that you have the opportunity to read the work of our McNair Scholars. This work represents the culmination of the efforts of very talented students who represent the breadth and excellence of the academy. Our McNair Scholars are from many different disciplines, from the humanities to the social sciences to the natural sciences, but all are alike in their excellence, which you will clearly see in their work.

The McNair Program's mission, the encouragement of students who have been disadvantaged, is critical to the future of higher education in the U.S. As our population becomes increasingly diverse, we need more role models on our faculties and in leadership positions, but it is also critically important that we not waste talent. Though these students have been disadvantaged, they are very talented and we need them to succeed. This is the reason that the University of Washington Graduate School's Graduate Opportunities and Minority Achievement Program (GO-MAP) is a proud partner with the McNair Program. We share a mission, finding, encouraging, and supporting these talented students so that they can take their place in the next generation of scholars and intellectual leaders of this society.

Finally, it is important that we recognize that one of the important things that the University of Washington and other research universities do best is to train researchers. Our students have the wonderful educational opportunity to study with and learn the craft from some of the leading scholars in their discipline. By taking advantage of this opportunity McNair Scholars will be among the most competitive for the best spots in graduate training programs as well as for the fellowships and research assistantships that will support their work and study.

I hope that you enjoy reading their work and join me in appreciating the quality of these students.

Sincerely,

Robert D. Crutchfield, Acting Associate Dean
The Graduate School, GO-MAP

From the
Director

I am very pleased to present the sixth edition of the University of Washington's McNair Scholars Journal to our reading audience. The high caliber of work carried out by our scholars is demonstrated by the fact that one of these projects has already been accepted for publication in a top-flight, peer-reviewed scholarly journal. The collective excellence of these twelve projects is a testament to the hard work of our students and the unwavering support of faculty mentors who supervised these projects. As always, I want to extend my gratitude to the faculty, whose guidance and support has allowed our students to grow in meaningful ways, while giving our scholars the foundation to enter graduate school with confidence and solid research experience.

The McNair Program at the University of Washington strives to create meaningful academic experiences that will enable our students to succeed at the next level. The research component for McNair Scholars has two specific goals: First, engage students in the research enterprise at the undergraduate level, so they develop the analytical and methodological skills, academic sophistication, and confidence that will make them successful students in graduate school. Second, provide students a unique opportunity to publish their undergraduate research, so the scholars gain an early understanding of the critical role that publishing will play in their academic careers. In this respect, the McNair Journal is a key component in the preparation of our scholars for careers in research and teaching.

Our journal involves the work of several people who work behind the scenes proofreading, editing and preparing the final draft for publication. I would like to extend my appreciation to the UW McNair staff, Dr. Steve Woodard, Associate Director, and our graduate student staff, Jill, Marc, and Zakiya, for their commitment to the McNair mission and for bringing this project to completion. They are an asset to the program and have been instrumental in preparing this high quality journal.

On behalf of the entire McNair Staff, I sincerely hope that you enjoy reading the sixth edition of the McNair Scholars Journal.

Dr. Gabriel E. Gallardo
Director, McNair Program
Assistant Vice President, Office of Minority Affairs

Journal Disclaimer

While the McNair Program Staff has made every effort to assure a high degree of accuracy, rigor and quality in the content of this journal, the interpretations and conclusions found within each essay are those of the authors alone and not the McNair Program. Any errors or omission are strictly the responsibility of each author.

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Why are Samoans Not in College?
An Evaluation of Delinquency, Cultural Politics, and a Proposal for
Change for the Seattle Samoan Community

Penina Deanna Afereti

Abstract

Samoans make up a large number of Pacific Islanders on the U.S. mainland. With them being one of the dominant group for Pacific Islanders, they still do not measure up to other dominant racialized groups. The reason for this being that maybe accessibility of resources needed to achieve that status to ascending on to institutions of higher education are not available to Samoans. Samoan youth may also feel obliged to fa'a Samoa lifestyle and "get a job to help out the family" right after high school. Some of them have also adapted to the stereotypical, mainstream-ethnic culture of gangs, violence, and other criminal behavior. These are some possibilities that would account for the minimal representation of Samoans at the post-secondary educational level.

With very little assistance, these students continue to face and overcome challenging economic and social hardships on the road to college. As more indigenous researchers become conscious of the position their community is in, with respect to education, they become proactive members of the community in at least trying to provide the access to educational resources such as outreach and recruitment programs for college. The significance of this project is that it will benefit the Samoan community with thorough data and information. From this assessment, the location of Samoan adolescents in higher education will be apparent, and thus concrete solutions can be recommended for the improvement of this community.

Overview

The Pacific Islander group was a foreign category to the "average American" vocabulary until the annexation of the Hawaiian Islands. The United States' "manifest destiny" and exploration and expansion into the Pacific introduced the Western world to the peoples of the Pacific. Today, the Pacific Islander group has flourished in the United States with an assortment residing in Hawai'i. On the continental U.S., the majority of Pacific Islanders reside along the West Coast mostly in California and Washington.

One group that has shown significant change and some adaptation to the American living system while retaining their strong

cultural living system is the Samoan group. Samoans have struggled to make a place for themselves in the complicated society of America. In the educational system, Samoans are either seen as entertainers, as football players and exotic dancers, or as the trouble-makers or bullies. Samoans are rarely seen as the “All-American 4.0, All Student Body President” type of student.

However, many believe that the fa’aSamoa, the “Samoan way” of life, prohibits Samoans in the U.S. from social mobility. Fa’aSamoa may seem as a very difficult system to live by within the so-called “simple life” of American living, but Samoans understand the complexity of both cultures and can actually live harmoniously with their Samoan heritage while embracing the American life. Education is actually one of the most important aspects of the fa’aSamoa. The way the system of the fa’aSamoa is preserved and passed on is education. I will explore the different reasons as to why Samoans in the U.S. educational system have struggled and why many fail to even reach the level of higher education with some respect to the Samoan lifestyle.

The goal of this essay will be to address the question: why is there a small number of Samoans in college? To completely answer this question, I shall look at all factors and any type of influences as to why Samoan adolescents choose the path of their future, and why not too many choose the path to higher education. Before we can further dive into the Samoan culture and fa’aSamoa, one must have to look back in the past first, and explore the history of the Samoan people and how they came to be in the United States. I will build up on the history to reiterate the problem at hand, and then introduce all the different factors to explore as possible causes for the lack of Samoans in college. These factors are not limited to, but include: the fa’aSamoa, alternative to education – such as employment or involvement with gangs –and finally, the accessibility to higher education for Samoans and Pacific Islanders as a whole. What is the most appropriate way to correctly address such an issue that is considered sensitive to this specific community? Lastly, I shall answer this question after completing the assessment on dependent factors. I will attempt to propose a solution to the problem; a solution that will speak specifically to the Samoan community of Seattle, Washington.

Brief History

The Samoan Islands are located in the heart of Polynesia. Polynesia stretches in a huge triangle in the South Pacific Ocean from Aotearoa (New Zealand) in the southwest, to Rapa Nui (Easter Islands) in the southeast, and up to Hawai’i at its northern point. The Samoan

archipelago consists of four main big islands: Tutuila and Manu'a, which make up what is now known as American Samoa, and Savai'i and Upolu which make up Samoa, formerly known as Western Samoa¹. American Samoa and Samoa once were joined as one, unified country. It wasn't until Germany, the United Kingdom, and the United States began to realize the benefit of having control over Samoa that they would forever divide the people, nationally. The Tripartite Agreement of 1889 divided the Samoan islands; the western islands became a Germany colony and the eastern islands became a U.S. Territory. Western Samoa became the first Pacific country to gain its independence on January 1, 1962. In 1997, it amended its constitution to change its name from "Western Samoa" to "Samoa" which Samoans from neighboring American Samoa protested fearing that it would diminish its own identity².

The migration of Samoans to the U.S. was very little at first, but after military influence in Pago Pago, American Samoa, that all changed. As the United States began to take control of Eastern Samoa, the categorization of Samoans born in this region changed from immigrant to nationalist. Before the Tydings-McDuffie Act and before their independence in 1946, Filipinos were allowed to migrate freely to the United States³. Just as their Pacific brothers did before them, Samoans began to use their status as "nationals" to enter freely into the United States without much restriction. The migration pattern for early Samoans would be to stop in Hawai'i first, and for most, continue on to the continental U.S. on the West Coast in California after a long stay in Hawai'i⁴. From there, it is assumed that most Samoans would move upward to Washington, while very little settle in Oregon. After these Samoans have rooted themselves in their location, they would then work to bring more family over directly to their new place of residence. The influx of Samoan migration is due in large part to opportunity within the military and education.

¹ CIA World Factbook,
<http://www.cia.gov/cia/publications/factbook/geos/ws.html>

² Hutchinson's Encyclopedia,
<http://www.tiscali.co.uk/reference/encyclopaedia/hutchinson/m0019887.html>

³ Chan, Sucheng. Asian Americans: An Interpretive History

⁴ Janes, Craig R. Migration, Social Change, and Health : A Samoan Community in Urban California

The Dilemma at a Glance

Samoans make up a large number of Pacific Islanders on the U.S. mainland. With them being one of the dominant groups for Pacific Islanders, they still do not measure up to other dominant racialized groups. The reason for this being that maybe accessibility of resources needed to achieve that status to ascending on to institutions of higher education are not available to Samoans. Samoan youth may also feel obliged to fa'aSamoa lifestyle and "get a job to help out the family" right after high school. Some of them have also adapted to the stereotypical, mainstream-ethnic culture of gangs, violence, and other criminal behavior. These are some possibilities that would account for the minimal representation of Samoans at the post-secondary educational level.

With very little assistance, these students continue to face and overcome challenging economic and social hardships on the road to college. As more indigenous researchers become conscious of the position their community is in, with respect to education, they become proactive members of the community in at least trying to provide the access to educational resources such as outreach and recruitment programs for college. The significance of this project is that it will benefit the Samoan community with thorough data and information. From this assessment, the location of Samoan adolescents in higher education will be apparent, and thus concrete solutions can be recommended for the improvement of this community.

Culture: Fa'aSamoa

The Samoan way, the Fa'aSamoa, is the system that Samoans live by. Outsiders may see it as a system designed to make its followers fail, but it is designed to help Samoans sustain their balance in life and culture. There are many important points of the Fa'aSamoa structure. The five that I will point out are fa'alavelaves (occasions), religion, fa'aaloalo (respect), education, and language. All of these five aspects of fa'aSamoa have a different type of influence. One may have a negative influence, another, a positive influence, and some may have both negative and positive influences. Nonetheless, all of these serve as factors for Samoan youth in making that life changing decision to furthering his or her education.

Fa'alavelave

"Fa'alavelave" literally means to bother, tangle, and/or to complicate. When used in the fa'aSamoa context, it is referred to as "life cycle events" that complicate or tangle with current living. These events

or occasions are not limited to, but include: funerals, marriages, sickness/hospital expenses, graduations, birthdays, etc. In the event of any of these occasions occurring within a family, the immediate family and other relatives are expected to contribute financially as well as other types of support. “Hiding behind the financial challenge is the given participation in fa’alavelave for most Samoan students.”⁵ Samoan students currently in college are not exempt from this tradition. For most Samoan college students, they feel obligated and part of their duty to contribute on behalf of their immediate family for fa’alavelaves. “Samoan students are challenged...to meet demands of family while achieving school”⁶ and one of those demands is the participation in fa’alavelaves. One college student in a prior study about fa’aSamoa and the fa’alavelave system replies, “If I got involved, I’d never get ahead. All the time, we have to give to the family. If someone comes to visit from Samoa, we have to give them some money...”⁷ Church functions are considered another part of fa’alavelaves where instead of obligation of kinship, it is instead looked at as obligation of Christian kinship – the “church family.” This harnesses the concept that Samoan college students cannot succeed or complete college due to such obligations. For most Samoans, the burden can be so great that they decide to take a leave of absence from school, and in doing so, almost all do not come back or ever finish up.⁸

Religion

Religion is another important part of fa’aSamoa and the Samoan culture. When American Samoa was first being colonized by the Westerners, their missionaries had great influence over the Samoan people. Just as the Native Hawaiians have done, the Samoans embraced Christianity and adopted it into the fa’aSamoa structure. Native practices of earlier Samoan gods are now considered taboo in the Samoan way of life. In both Samoan countries, most public places of establishments are closed on Sundays in devotion to the common day of worship. For many colonized societies like Samoa, religion became a form of colonization. Christianity was fused into the fa’aSamoa system in so much that other aspects of the fa’aSamoa, such as fa’alavelaves, are tied in with religion and faith. For centuries, religion has promoted literacy. In Samoa, the

⁵ Tsutsumoto: 54

⁶ Tsutsumoto: 40

⁷ Kotchek, Lydia. Adaptive Strategies of an Invisible Ethnic Minority, The Samoan Population of Seattle, Washington. 1976: 142

⁸ Tsutsumoto

religious institution itself advocates for education. Christianity is the dominant faith in Samoa at 99.7%. For Christians spreading the Word is achieved primarily through diffusion and translation of the Bible, creating new orthographies and new literate populations throughout the world. O le Pi Tautau (Samoan alphabet poster), published by the Congregational Christian Church⁹, is the primary visual in teaching the alphabet to Samoan children. The poster displays the letters and numbers of the Samoan alphabet along with visual examples of the letter. Even the letter “H” is a religious figure, “Herota” (Herod).

Religion seems to go hand in hand with education in the fa’aSamoa system. Polynesian high school students were surveyed for a recurring outreach program, the Polynesian Outreach Program, administered by the Polynesian Student Alliance at the University of Washington. When asked about certain challenges and/or obstacles to (higher) education, many Samoan students replied with confidence, “Put God first, and everything will fall in place” or “All things are possible through God”, and a more humorous remark, “Jesus will pay [for college].”¹⁰ Faith is a positive influence for many Samoan students who are looking to advancing their education. Those who are said to lack faith, are sure to not choose the route to higher education.

Fa’aaloalo

Fa’aaloalo means to have respect or great reverence. Similar to Christian values, Samoan youth are taught to have great respect for their parents, elders, teachers, leaders, chiefs, and everyone older than they are no matter what the difference is. Fa’aaloalo can effect a Samoan student’s decision to further his or her education both negatively and positively. A positive example is how respect is so ingrained into a student that motivates and pushes the student further in his or her academics. “...the strict discipline and rules of fa’aSamoa taught Samoan students to respect authority – parents and teachers. For some students, the fear of the actions their parents might take if she did not prepare for college was a major factor that pushed them to achieve academically.”¹¹ Some of the student participants in the POP program responded about fa’aaloalo and how it positively affects their schooling. “...you learn through the “fa’aSamoa how to be respectful...” “...the

⁹ Duranti, Alessandro, Elinor Ochs, and Elia K. Ta’ase. “Change and Tradition in Literacy Instruction in a Samoan American Community” In E. Gregory, S. Long, and D. Volk (eds.), Many Pathways to Literacy: 160

¹⁰ POP Surveys (Simone, Benjamin, & Dyna)

¹¹ Tsutsumoto: 60

fa'aSamoa will discipline me to stay in school and also to help my family through my success."¹²

Some people may view the concept of fa'aaloalo negatively with regard to education in that:

“Samoan students in public schools meet with a pattern of authority and required performance which differs from those in their homes. Authority at home is often strict; children should be seen and not heard. Public schools emphasize individual competition and assertiveness. Fa'aSamoa stresses group activities and avoidance of individual ostentation.”¹³

There can be different levels of respect. The respect within the church (for the reverend, pastor, etc.) is at the top alongside of the respect for matais (village/family chief). Below that there is a great amount of respect for the home (parents), and all other authority figures (teachers, law enforcements, etc). For some students living at home, “feaus (chores) will take priority over the time needed to complete homework assignments.”¹⁴ Since the respect level at home would have higher status than that in other areas, such as school, Samoan students could easily fall into the trap of pushing academics aside to please the dominant authority figure, parents.

Language

Language is an extremely important part of fa'aSamoa and for any other culture for that matter. Language is the means of communication. In Pacific societies, the preservation of our languages sustains our history. There never were record-keeping or written histories for Pacific Islanders, but they maintained their culture through the cultivation of the fa'aSamoa language, for Samoans. It is the only way that the fa'aSamoa has continued to live from generation to generation. The only problem is that in America, language is seen as a barrier to accessing [higher] education. A Samoan's skills in reading and writing English are often below those of his or her classmates. This can also contribute to other academic areas such as social studies and science because these areas rely on reading comprehension. Within a family

¹² POP Surveys (Naomi &Elijah)

¹³ Kotchek: 132

¹⁴ SEED, 1994:9

environment where Samoan is the language of communication and English or written material is hardly ever used, the Samoan student does not receive as much practice or reinforcement for learning the English language as does his or her classmates.

Difficulty with the English language restricts the ability of Samoans to get skilled jobs, to be successful in school, to receive services to which they are entitled, and to gain information about the society of the U.S. that could be helpful to them. English Learning Language (ELL, formerly English-as-a-Second-Language, ESL) courses are periodically available through the public school system, some community colleges, and Neighborhood House, but Samoans are not taking advantage of these opportunities. Some Samoan leaders explain this lack of motivation for these classes by pointing out that the classes are not specifically tailored to teaching Samoan, and none of the instructors have very little or no knowledge of the Samoan language and/or culture. Another reason why Samoans, or any many other Pacific Islanders, have trouble adapting the English language is that their native language is learned orally. The language of the Pacific does not really have structure or grammatical rules. English is very complex to Samoans because they are confronted with concepts about parts of speech and grammar. These rules and structures are foreign to Samoans and thus the root of many obstacles for Samoan students

Not only do Samoans suffer from this problem, but many other foreigners or international students have the same problem. Language is the key to admission into American, dominant society; it is definitely a roadblock to many opportunities. Student respondents from the POP survey were asked whether or not, as a Pacific Islander, if they believe it is hard to get into college and why. Two students mentioned language as a main reason why it would be hard for many students to get into college “because some can’t speak English” or “language skills that would have to be learned” would be an extra challenge.¹⁵ So for many students who have this problem with language as an issue, most would choose not to continue onto [higher] education just because the English language is well cherished in the American educational system and those who are having a difficult time conforming to the English language would no doubt become educational victims. Furthermore, the preservation of the Samoan language is a very important aspect of the fa’aSamoa system. Those who become very involved with the whole fa’aSamoa most likely choose not to conform to any standards of American society, and those who do choose to conform, are stigmatized. For many Samoan youth,

¹⁵ POP Surveys, (Bernice & Nadia)

this would affect their decision whether to continue on with their education.

Education

Education is another important part of fa'aSamoa. Many believe that the fa'aSamoa does not support education, but "the knowledge of faaSamoa, Samoan customs, roles and responsibilities, and the way this knowledge was disseminated is education."¹⁶ The missionaries and Americans superimposed their educational system over the one which continues to function under the fa'aSamoa. The value of education is very high in many Samoan families. "Academic progress in Samoan schools, however, is not as fast as in the United States."¹⁷ Although Samoa has an established community college as an outlet for post-secondary education, any other job training or higher education requires that a person leave the islands. Due to the poor educational system that was implemented by early colonization in American Samoa, many families move to America for the "better education." For some in Samoa, they move to other countries such as Australia or New Zealand where their permission of entry is not as complicated as it was if they were immigrating to the United States. A needs assessment report completed by the City of Seattle Human Resources Division for the Samoan community in Seattle reflected that "over 100 scholarships are available to Samoans to attend colleges in the United States, but past experience has shown that only a few of the Samoans on scholarship complete their college degree." When in America, those that have difficulty conforming to the American educational system usually would fall into the trap of language as a main issue, or other issues of the American legal system.

Alternatives to Higher Education

Employment – Obligation to the Family

In 1980, state statistics reported that approximately 1,050 Samoans were living in Seattle with about 400-500 other Polynesians. Samoans believed these numbers were inaccurate and estimated about 3,000 Samoans in Seattle. At this same time, the average number of Samoan persons in the household was 7.4 compared to the city-wide average of 2.2 persons per household. The average of Samoans

¹⁶ Tsutsumoto: 21

¹⁷ Berrrian, David B. The Samoan Community in Seattle: A Needs Assessment. 1980: 5

employed per household was 1.6, supporting an average of 5.1 persons.¹⁸ In 1990, the U.S. Census cited that about 4,130 Samoans resided in the state of Washington, and 2,251 concentrated in the Seattle area. Members of the Seattle Samoan community disagreed again with the numbers stating reasons that many Samoans were unable to complete the Census and/or they did not classify their race/ethnicity.

With the population increase, Samoans are forced to seek means of financial support for themselves and their families. The Samoan culture places central importance on the community. Individuals are respected to the extent they contribute to the well being of their family, church, and village. In turn, all members of the family, church, and village collectively have the responsibility to provide for the needs of the individual. Samoan living operates communally. Since each member of the family is expected to contribute to the family, most Samoan students would feel the pressure of getting a job to support the family.

“Most Samoan students do not extend their education beyond high school. Most Samoan families cannot afford to pay for their children’s higher education and scholarships are not often available. Moreover, Samoan families tend to encourage children to work after high school in order to raise the family income.”¹⁹

This family obligation plays a huge part in the students’ academics. When asked about the difficulties and obstacles of going to college, a student participant of the Polynesian Outreach Program said, “...I feel that it is kind of hard to get into college because it’s really hard to keep up your grades and take care of your brothers and sisters at the same time.”²⁰ Some students will pick up jobs after school as soon as they are legal to work. In turn, this can disrupt or worsen the academic progress for many Samoan students. For this, and many more other reasons, many Samoan youth would rather continue on the path of employment and instant money than that of greater pay in the long run with a better education.

¹⁸ Berrian: 3

¹⁹ Berrian: 9

²⁰ POP Survey (Deanna)

Gang Involvement

The needs of some youth – if not addressed by educators, parents, or other institutions – can easily be addressed amongst gangs.²¹ Gang violence and youth delinquency are also another reason why many youth do not go to college or much less, complete high school. As with many other minority groups, Samoan youth who are estranged amongst their peers become susceptible to recruitment into gangs. Some of these factors include: family functioning, community involvement, and peer relations. High school students were surveyed about obstacles to college, fa'a Samoa, and gangs through the Polynesian Outreach Program at three different high schools. When asked specifically, “Why do you think Polys join gangs and get involved with violence?” 13% of these students cited family functioning, 6% said academic failure, 37% of total respondents cited peer pressure as the source for gang affiliation, and the remaining 56% did not respond to the question and gave other irrelative reasons.

For many Samoan families, poverty can exert a source of strain for the whole family in trying to “make ends meet.” Sociologists have longed debated over the issue of poverty as a contributing factor to delinquency. This can speak specifically for many minority groups at the bottom of the social ladder such as many Samoan families. According to a study on the Samoan community in Seattle, Samoans have remained at the lower economic status level due to inadequate employment skills, structural challenges including job discrimination and stereotypes, employment in low paying jobs, and a high rate of unemployment.²² The Strain Theory²³ proposes that deviance is a response to strain and frustration when individuals are not able to achieve their goals through conventional routes because of the lack of opportunities and resources. Since that is the case for many of these individuals, they will turn to illegitimate ways of attaining their goal, and these illegitimate can be anything from violence, theft/robbery, and/or violence, all activities that can be organized within a gang. In families where there is no sense of direction or love or appreciation from an authoritative figure (like a parent) for the adolescent, the idea of joining a gang would substitute for that family that the adolescent is looking for.

²¹ Tsutsumoto: 30

²² The Pacific Development Center & Malcom D. McPhee & Associates. [An Economic Development Program for the Seattle Area Samoan Community.](#) 1991

²³ Agnew, R. “A Revised Strain Theory of Delinquency.” [Social Forces.](#) 1985

The sense of disconnection from the greater Samoan community can lead many Samoan adolescents to joining a gang.

“Community involvement for Samoans is synonymous with membership in their respective churches....The involvement in a predominantly Samoan church also means involvement in the Samoan community and traditional customs and values....Family and ethnic community are important parts of a Samoan’s life. When the connections to these systems are disrupted, adjustment or development becomes difficult for the adolescent particularly when the disruption lasts for a lengthy period of time.”²⁴

External to their own Samoan community, Samoan youth may align themselves with a gang for protection as violence seems to be an impending issue amongst the lower-economic society of America. A Samoan college student at the University of California, Los Angeles commented on Samoans in gangs:

“Also now, I can see where Samoan youngsters join gangs because they feel that it’s a way for them to protect themselves from just living in this kind of community where violence is pretty rampant. Maybe it’s a defensive response. Not to police, but to other gangs...Even myself, to be honest with you, when I hear something like that, it gets me thinking about, ‘wow, what’s going on? I’d better watch my back.’ As soon as I start thinking that way, then I understand the need why some of these guys might want to join the gang. It’s for protection. I don’t necessarily agree that joining a gang is the answer, but it’s obviously an alternative, and it’s a reality. And it’s definitely a barrier. Once you start joining a gang, academics is not even a possibility.”²⁵

Peer pressure is a big reason why gangs are developed amongst any group. Cited as the biggest, collective factor for gang involvement

²⁴ Godinet, Meripa Taiai. Exploring a Theoretical Model of Delinquency With Samoan Adolescents. 1998: 31, 32

²⁵ Tsutsumoto: 52

amongst POP students, peer pressure has come to be a universal factor for many adolescents to joining a gang or engaging in criminal activity. When asked about Samoan youth in gangs, another Samoan college student responded:

“Peer pressure has a lot to do with it. I mean you have a lot of Samoan kids who are followers. There’s always one of that whole bunch who always wants to lead. But if that’s the wrong person to lead, the example, as far as leading others are not going to be as good as someone who’s looking out for the benefit of everybody.”²⁶

Sociological Learning Theory²⁷ is one of the theories that can explain peer pressure as a source of delinquency. Social Learning Theory implies that associating with delinquent peers and modeling their criminal behaviors is a major influence of becoming involved in delinquent activities. As many of the Samoan students have mentioned, Samoan adolescents like to be followers. Unfortunately for a lot of youth today, the example that many adolescents seem to follow is that of a delinquent.

Another important factor to consider when observing the rates of youth of color compared to white youth is discrimination. Stereotyping goes hand in hand with discrimination. Like many other minority groups, negative labels and stereotypes can affect the behaviors of those groups. Labeling theory links stereotypes with delinquency. The model asserts that multiple discrimination leads to delinquency when a youth is the recipient of negative stereotyping. This youth will internalize the negative stereotypes and act upon them and fulfilling the label. Some of the negative stereotypes or images of Samoans include aggressive, hot-tempered, and violent.

Many of the students surveyed under the Polynesian Outreach Program gave “stereotypes” as a reason why many Pacific Islander students fail to excel in school. “I don’t think that being a P.I. is what makes it hard [to go to college] except that there aren’t high expectations to live up to.” Others site these same “stereotypes” as reason for joining a gang. Why do Polynesians join gangs and get involved in violence? “It’s a stereotype many Polys don’t want to let down.” “Stereotype, it’s

²⁶ Tsutsumoto: 52

²⁷ Akers, R.L. Deviant Behavior: A Social Learning Approach. (2nd Ed). 1977

a label [of gang banging] that some identify with.”²⁸ Another Samoan college student at UCLA replied: “...being a part of a gang is obviously a hindrance to your academic success. But then being a part of a gang is part of a stereotype that a lot of Samoan youth buy into.”²⁹

Access to Higher Education

Limited Resources

Pacific Islanders have been linked to Asians since the “discovery” of their existence, for over a thousand years. The cause of this misclassification can be due to poor judgment and miseducation. Pacific Islanders may have limited resources due to a number of reasons, but the one that sticks out is the fact that they have long been wrongfully classified within another minority group that is no longer seen as underrepresented. The “Asian/Pacific Islander” label has is overused and tiresome, but most importantly it is incorrect. There are many resources to obtaining necessary job skills and education for underrepresented groups. Asian Americans are no longer seen as an underrepresented group, but because Pacific Islanders are associated with this large group, they have to suffer the losses. One prime example of this is scholarship opportunities such as the Gates Millennium Scholarship. Mavis Tevaga, GMS recipient and colleague, mentioned that because under the GMS system, Pacific Islanders are counted together with Asian Americans, there are very few Pacific Islanders in the program given that each ethnic group is allotted a certain amount of scholarships. This is the problem that not only Samoans face, but all other Pacific Islander groups experience when applying for such a great opportunity.

In 2000, the United States formally recognized Pacific Islanders as an individual group with the U.S. Census. This was probably the first time Pacific Islanders were able to be seen alone, separate from the Asian Pacific Islander label. With this formal recognition, Pacific Islanders were on the verge on developing many ways to address their concerns especially the issue of education and its attainment. Before this, Pacific Islanders needs and concerns were masked and shadowed under the larger group of Asian Americans. In terms of representation on college campuses, it was harder to assess actual representation in terms of enrollment, retainment, attrition, graduation, and other factors that are important to monitor for a specific group. Without the accurate information about these precise characteristics, it would be hard for

²⁸ POP Surveys (Shandi & Kianna)

²⁹ Tsutsumoto: 52

many Pacific Islander students, including Samoans, to seek assistance in academia.

Solutions & Recommendations

For the Student: Organize to Overcome Barriers

As noted throughout the analysis, Samoan students face many routes and roadblocks to achieving a college education. The pervasive issues concern cultural conflict within the fa'aSamoa system, financial burden and obligation to the family, gang influence, and the lack of support or opportunities provided for Samoan students. With all of these factors looming ahead for the Samoan student, it is important to recommend a few suggestions for the student on how to approach each issue. Fa'aSamoa can be seen as an impediment to higher learning, but the positive aspects of the fa'aSamoa system are great and rewarding. The student needs to learn how to utilize the positive advantages of the fa'aSamoa system for his/her own advancement throughout education, and limit his/her participation with other activities of the fa'aSamoa system that can overpower academics.

Many students understand the economic weight placed on the family, and for some, the only option would be to assist with all financial concerns by getting a job. Although contributing to the family income is not a bad thing, the danger is when this contribution becomes so great that other important aspects of the student's life, such as education, become ignored or forgotten. For the many students that fall into this predicament, it is important to educate themselves on the many opportunities and ways to assist one's family. Scholarships and financial aid prove to be a big assistance for families of the few Samoan students in college.

Instead of following deviant behaviors of others, maybe students should reward successful behavior. "If peer pressure, as identified by most of the respondents as the cause of school failure is based on a group of kids following principles, then why not create a context in which students will fall into a positive, rewarding type of peer pressure... a peer pressure to succeed?"³⁰ Students who fall into the trap of stereotypes and labeling theory can use discrimination to prove the stereotype to be false. Instead of fulfilling the label, students should use the prejudice as motivation to prove otherwise.

The lack of support and conventional opportunities for Samoan students to attaining a higher degree of learning can be solved through participation and organization. There may not be many opportunities for

³⁰ Tsutsumoto: 76

Samoan students simply because there is no general perception of their need as a group. To combat that notion, Samoan students should organize amongst themselves and build alliances and partnerships with other groups experiencing the exact same hardships. The most common organizations that are now formed with great participation from Samoan students are Pacific Islander clubs or Polynesian clubs. By massive organization, students can work collectively to gain a greater voice, representation, and empowerment within the larger student body. It will also be easier for other groups, who can and are willing to assist them, to identify them and their needs.

With the development of many outreach and recruitment programs such as the Polynesian Student Alliance's Polynesian Outreach Program at the University of Washington, Samoan high school students are presented with the opportunity and resource to higher education. The only problem is that many Samoan students fail to see what great of an opportunity these programs provide for them. One of the most frustrating parts of this view is that some students acknowledge the fact that these opportunities are beneficial, but they just do not want to participate because they "don't feel like it" or "don't need it." The fact of the matter is that Samoan students have such great pride. Sense of pride in family and culture is one of the greatest aspects of Samoan culture. Many Samoan students are victims of this same pride; they deny the reality of their need for help.

The purest suggestion is that many of these students need to understand that these opportunities are rare. In a lesson taught at church, the phrase that sticks out of my mind is "pride equals die."³¹ Too much pride in one's self can only take one so far. Samoan students need to see the extent of their failure and seek the assistance that is so desperately needed. Participate! Participation within such programs or after-school tutoring programs are simple ways to getting back on track and staying there.

For the School: Pacific Islander Awareness

As mentioned earlier, Pacific Islanders have been "marginalized within the margins." Many formal institutions are slow in recognizing the individuality of Pacific Islanders. Without these formal acknowledgements, Pacific Islander students would not have equal access to opportunities that are greatly needed within the community. It

³¹ Pastor Afereti of the Samoan Independent Seventh-Day Adventist Church, Seattle.

is recommended that many schools should acknowledge these concerns and persistent issues within the Pacific Islander community.

For school administrators, counselors, and teachers, it is important for them to not fall into the trap of discrimination and stereotyping. This is important because the relationship and trust that the student has with these officers are extremely important in shaping the academic career of a student. Misunderstandings between the teacher and student serves a great barrier for students to attaining a higher education, much less it can disrupt the student's education altogether. Because the fa'aSamoa system may not coincide with the free expression of ideas experienced in school, Samoan students are quick to alienate themselves from the rest of the class. It is the teacher/counselor's job to be sensitive to a student's needs and concerns.

The lack of support found within educational institutions is another problem that many Samoan students are concerned with in regards to education. A simple recommendation to school administrators is may be to recruit and staff those from Pacific Island background especially in schools with a high population of Pacific Islander students. For many Pacific Islander students, including Samoans, the presence of another, older figure of the same or similar heritage can be a source of support and guidance for the student. The inclusion of a curriculum that is so diverse as to include the study of Pacific Islanders is another bonus for the educational system to retain its Pacific Islander population.

For the Parent: Support and Enforcement

The parents are a child's first teachers. The role a parent is so wide and great. Samoan parents are figures that are put on a pedestal. Obedience and reverence is ingrained in the minds of many Samoan youth, and obedience to their parents is a part of the fa'aSamoa system, fa'aaloalo. Child neglect is a very serious issue and Samoan families are not exempt from it. Samoan parents need to pay more attention to their children and become involved with the affairs of their students. Parents should serve as great enforcement officers in getting their students involved in academic programs and opportunities. Parents are the prime example for children to follow, and it is their responsibility to lead the way.

Many Samoan students look to their parents as motivation for succeeding in school. There are plenty of Samoan families where one or both parents have not completed high school education. Samoan parents were burdened with the hardship of caring for older relatives and thus many had to drop out of school to "take care of the family" (obstacle of higher education). Since their parents were unable to complete school,

many Samoan students today are using this as inspiration for them to accomplish something not only for themselves, but for their parents as well. It is the parents' duties to support their student and encourage them to continue on with all endeavors that lie ahead. They know the limitations of their students, and their love should extend to challenge their child to ascending into the level of higher education.

Conclusion

It is a great challenge for many high school students to continue on with their education through college. The benefit of a college education and a degree is valued in American society today, which many students of different ethnic origins are hopping on the bandwagon. Those that seem to get left behind are seen as the "unwilling" or "unassimilable" groups. What are the exact reasons why these students are not up to the challenge? For Pacific Islander communities, the challenge is a gamble between family, work, church, and culture. There can be a numerous reasons why there are not too many Samoan college students, but the factors that are explored in this analysis are the issues of cultural conflict, financial obligation, gang involvement, and the lack of support/opportunities for access of higher education.

The greater challenge for Samoan students is learning to counteract these factors and achieving a balance to overcome these barriers. It is possible for Samoan students to accomplish. There are many who have already accomplished such a mission and are working diligently to assist others in doing the same. Until there is significant change made throughout the Samoan community, educational institutions, and within the home, Samoan and other Pacific Islander students will need to work vigorously to overcome the stigmas associated with being an overlooked entity in higher education. The greater challenge shall remain for Samoan and other Pacific Islander students to make themselves a visible force to be reckoned with and to educate others on their hardships and misfortunes for their own advancement throughout academia.

References

- Agnew, R. "A Revised Strain Theory of Delinquency." Social Forces. 1985
- Akers, R.L. Deviant Behavior: A Social Learning Approach. (2nd Ed). Belmont, CA: Wadsworth, 1977

- Berrain, David B. The Samoan Community in Seattle: A Needs Assessment. Seattle: City of Seattle, Department of Human Resources, 1980.
- Chan, Sucheng. Asian Americans: An Interpretive History. New York: Twayne Publishers, 1991.
- CIA World Factbook, “Samoa” 2000.
<http://www.cia.gov/cia/publications/factbook/geos/ws.html>
(Accessed 7 February 2005).
- Duranti, Alessandro, Elinor Ochs, and Elia K. Ta’ase. “Change and Tradition in Literacy Instruction in a Samoan American Community. E. Gregory, S. Long, and D. Volk (eds.), Many Pathways to Literacy. New York: RoutledgeFalmer, 2004.
- Godinet, Meripa Taiai. Exploring a Theoretical Model of Delinquency with Samoan Adolescents. Seattle: University of Washington, 1998.
- Hutchinson’s Encyclopedia, “History of Samoa” 2004
<http://www.tiscali.co.uk/reference/encyclopaedia/hutchinson/m0019887.html> (Accessed 7 February 2005).
- Janes, Craig R. Migration, Social Change, and Health: A Samoan Community in Urban California. California: Stanford University Press, 1990.
- Kotchek, Lydia Dougherty. Adaptive Strategies of an Invisible Ethnic Minority, The Samoan Population of Seattle, Washington. Seattle: University of Washington, 1975.
- The Pacific Development Center and Malcom D. McPhee & Associates. An Economic Development Program for the Seattle Area Samoan Community. Seattle: U.S. Department of Commerce Economic Development Administration – Technical Assistance Program, 1991.
- Polynesian Outreach Program Questionnaire & Surveys. Seattle: Polynesian Student Alliance. 2005

Student Equity, Excellence and Diversity. O Le Sulufa'iga: Report of the University of Hawai'i Task Force on Samoans and Pacific Islanders in Higher Education. Honolulu: University of Hawai'i at Manoa, 1994.

Tsutsumoto, Thomas Sakai. Higher Educational Perspectives: Through the Narratives of Samoan College Students. Los Angeles: University of California, 1998.

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Appendix

POP Questionnaire & Survey

Name: _____
High School: _____
Email: _____
Grade: _____
Ethnicity: _____

What do you expect from this program?

What are your classes?

What are you weak areas?

What are your strengths?

What are your goals?

What are your plans after high school and why?

If planning on college, how are you going to pay for college?

What do you think about Polynesians/Pacific Islanders (Samoans, Tongans, etc.) in college?

As a Pacific Islander, do you think it's hard to get into college? If so, how and why? If not, please explain why not?

Why do you think Polys join gangs and get involved with violence?

How many people of your ethnic background do you know are involved with this type of life style in Seattle, Washington?

SAMOANS ONLY: Do you think the fa'aSamoa lifestyle can co-exist with today's American living standards? Please explain.

PAST POP PARTICIPANTS ONLY: Compared to previous years, how can we improve the Polynesian Outreach Program?

THANK YOU!!!

Puget Sound Grocery Report

Empirical Data Collection, Field Work, and Analysis: Analysis of the Potential Factors Influencing Grocery Shopping Trip Mode Choice

Antonio Amado

Abstract

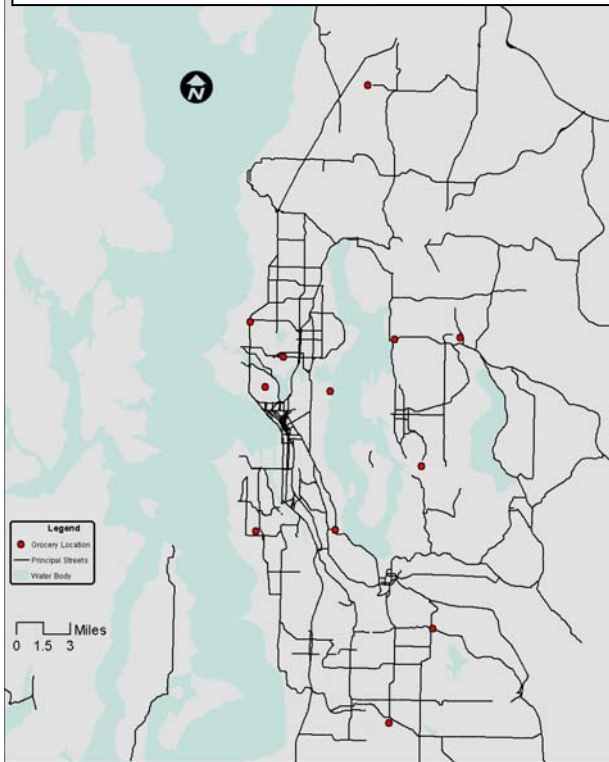
The purpose of this research is to describe factors that influence grocery shopping trip mode choice in the Seattle-Puget Sound region. It is commonly believed that motorized modes of transportation are used to access grocery stores due to the large amounts of groceries people would otherwise have to carry. Understanding the behavior of humans and that of suburban and urban form can show the levels of walking and motorized transportation to access grocery stores. This study analyzes motorized and non-motorized modes of accessing grocery stores to get a better understanding of why people choose a specific mode of transportation.

Introduction

It is commonly believed that people rarely use non-motorized modes of travel to access grocery stores. Among the factors leading and supporting this belief are ample parking availability at grocery stores, the inconvenience of carrying heavy loads of groceries, and the lack of pedestrian facilities near the stores, as well as time and distance constraints. However, a few studies have shown that people use non-motorized transportation to access commercial areas, and more people walk where appropriate pedestrian infrastructure is available (Moudon et al 1997; Steiner 1996).

This work was designed to examine the extent to which people walk to access grocery stores in both urban and suburban locations. Six urban and six suburban grocery stores in Washington State's Puget Sound area were selected that have comparable density, income, land use type, and mix of retail facilities. Previous studies have shown that these factors influence residential levels of non-motorized trips. The urban stores were located in neighborhoods that have small blocks and relatively complete sidewalk systems, while the suburban stores were located in the neighborhoods that have large blocks and incomplete, discontinuous sidewalk systems.

Figure 1 Grocery store locations studied in Puget Sound. Mariner site location was approximated (not geocoded).



This research examines some of the factors that may influence people’s travel mode choice to access grocery stores. It focuses on the influences of site characteristics, shopper’s demographic factors, and the amount of groceries being carried.

Study Sites:

Study sites (See Fig.1) were selected in urban and suburban areas to distinguish between high and

low density areas (building structures and population), land use arrangement, and walkability measures. Rural areas were not chosen because this type of land is characterized by large regions of undeveloped/agriculture land with small clusters of activity for grocery shopping. Suburban sites typically are abundant with single-family housing, open space, and mixed-density landscape. Urban sites are characterized by high-rise structures, public transit, and close proximity to many activities, services, and people. The sites chosen are as follows (See Appendix A for exact address):

Urban Sites: Greenwood, Madison Park, Queen Anne, Rainier Beach, Wallingford, and White Center

Suburban Sites: Factoria, Fairwood, Kent, Kirkland, Mariner, and Redmond

Hypothesis

Statistical hypothesis testing was used as a basis for the argument of comparing urban and suburban non-motorized and motorized transportation expectations that are believed to be true. Each claim, denoted as H_i for $i = 1..6$, are the null hypothesis' and are assumed true unless significant evidence against that hypothesis can disprove it. With hypothesis tests we can separate the significant effects that contribute to transportation and shopping from the random chance that they occur. For example, hypothesis testing can show the significant contributing percentage of shoppers using non-motorized transportation in relation to location, number of bags carried, and other socioeconomic and demographic factors. This work hypothesizes that people's access mode choice to grocery stores will be associated with the following factors:

1. Site characteristics:

H1: Urban sites produce more non-motorized trips than the suburban sites

H2: People rarely walk in the suburban sites

2. Shoppers' demographic factors:

H3: People of color use non-motorized modes more frequently than whites

H4: Young (aged less than 16) and the elderly (aged over 65) people will use non-motorized modes more frequently than the middle-aged group (aged from 16 to 65)

H5: More females walk to the grocery stores than males

3. The amount of groceries:

H6: People with small amounts of groceries are more likely to walk than those with large amounts of groceries

Data Collection

This experiment employed environment behavior observation techniques, which include six major components of observation. They are: (a) actor-who, (b) act-doing what, (c) significant others-with whom, (d) relationships, (e) context, and (f) setting (Sommer and Sommer, 1991). Based on these components, a standardized checklist was developed and reviewed. These components allow for a quantitative analysis of the observation results. The following variables were observed for data collection and analysis:

1. Travel mode (non-motorized or motorized)
2. Cart used (yes or no)

3. Number of bags
4. Gender (male or female)
5. Age (<16,16-65, >65)
6. Ethnicity (person of color or white)
7. In a group (yes or no)
8. Had a pet (yes or no)

Teams of three to four University of Washington students from the fall 2004 Urban Design and Planning 479 course were assigned grocery stores in the King County and Snohomish County area to collect data of the above variables. Each team used a standard data collection sheet before going to the site to ensure consistency between team members. The observation duration was one hour preceded by a 15 minute testing diagnostic observation. As this experiment does not require any intrusive observations, the observers remained fairly unrecognized as outsiders to the subjects, so that the observers' presence did not affect the subjects' behaviors.

Data collectors positioned themselves close enough to the front door to clearly see and observe customer's exiting the grocery store. In addition, their position was far enough to have the ability to scan the store parking lot in case pedestrians crossed through. During observation, the grocery consumers' travel mode, age, gender, race, use of cart, number of bag(s), number of people in group, and presence of a pet were recorded. All the observations were done in the afternoons with the exception of the Fairwood site that was observed at 10:50-11:50AM. The days and exact times (see Table V) of the observations varied depending on the site. The data collected was then entered into Microsoft Excel and Statistical Package for the Social Sciences software (SPSS).

Literature Review

The aspects addressed in this review will be from a business marketing, transportation, and urban planning view. A business view is presented to show the sales of the grocery industry and how much households on average buy; moreover, a marketing subcategory is viewed to see how the relation of customer loyalty and frequency of trips can help both the grocery industry and advocate non-motorized communities. Transportation aspects looked at are average number of trips per week, average amount of money spent per trip, and sidewalk transportation systems. Lastly, from the urban planning perspective the amount of physical activity and the resources available, importance of

sidewalk networks for non-motorized travel, and the differences between walking versus using motorized travel.

Business View

Access to perishable items and groceries is essential for people. According to *Progressive Grocer 2002 Annual Report* shoppers visit grocery stores twice a week and spend [an average] of \$73. To confirm this statement Bawa studied 1,443 households in three US markets and found on average that households made about 110 trips over a one-year period (~2.09 trips/week) and spent over \$26/trip (Bawa 1999). Furthermore, the *Food Marketing Institute* (FMI) calculated the weekly grocery bill by household size for 2003 as seen in TABLE I (Food Marketing Institute 2004). Total sales of supermarkets in 2004 was \$457.4 million based on figures from FMI's

TABLE I: Weekly grocery bill by household size

One person	\$52
Two person	\$ 80
Three person	\$ 104
Four person	\$ 138

26,000 food retailers. Food retailing executives polled by *Progressive Grocer* gave a retail rating of the most viable type of retail format from 0 (poor) to 100 (excellent) and supermarkets rated 13th in 2000 and increased in ranking to 11th in 2001. From these quick facts grocery shopping is one of the top consumer behaviors and a basic need for most people.

Having grocery stores nearby for people to access with little effort does not necessarily mean shoppers will use those stores for grocery shopping. For example, most shoppers perceive a more limited set of choices for shopping than what is actually available in an area (Robinson and Vickerman 1976). With this said, there are many aspects that need to be taken into account of why people shop. For grocery stores, *Progressive Grocer 2002 Annual Report* ranked the top 45 store selection criteria by consumers, and the top three were 1-cleanliness, 2-accurate price scanning, and 3-low prices. An interesting caveat in the report was that "convenient store location" ranking moved up drastically from 13th in 1998 to 11th in 1999 and 2000 to number six in 2001. In addition to the above variables, aesthetics have also been shown to contribute to the "image" in choosing a shopping center (Nevin & Houston 1980, Fotheringham and Trew 1993). Moreover, Tauber's studies found that shoppers gain leisure when shopping as well as

physical activity and sensory stimulation (Tauber 1972). Other factors that are taken into account for pedestrians when grocery shopping are the total distance walked versus the cost of traveling by car, weight of items bought, major road intersections, and how many things bought at grocery store. Currently, with the average gas price in Washington being \$2.41 (Energy Information Administration) many people are now considering the forms of transportation in which they take in accessing local stores which are accessible by walking.

Customer loyalty has always been key in marketing strategies because investing in new customers' costs businesses money and one strategy to a successful business is having a solid customer base. For example, Huddleston says that "consumers spend an average of 78% of their food dollars at one primary store... customer loyalty can yield favorable operating cost advantages for retailers, streamlined inventory management, fewer markdowns, and simplified capacity forecasting" (Huddleston 2004). Furthermore, conventional business management suggests the average amount of costs in getting a new customer is five to eight times more than maintaining a loyal customer. Some of the many business advantages of having loyal customers are increased spending, frequent trips to place of business, and word of mouth recommendation that increase market share. Since grocery store profit margins are slim they depend on mass amounts of buying from their customers to absorb their overhead. Having grocery stores within walking or biking distance could increase frequency of shopping and could improve customer base and loyalty.

Transportation/Urban Planning View

The Centers for Disease Control and Prevention along with the American College of Sports Medicine recommend adults to engage in moderate-intensity physical activity at least 30 minutes on five or more days of the week. Sidewalks are one of the transportation systems that can provide walking space to yield access not only to adults but to young and old people, disabled, and persons without motorized transportation. Furthermore, sidewalks take less area to build, are cheaper, and friendlier on the environment than roads. Examples of sidewalk networks that offer commercialized areas, including grocery stores, relatively close to neighborhoods and provide access for walking safely are Seattle's Burke-Gilman/Sammamish River trail, King County's interurban trail, and Pierce County's foothill trail. When walking, the perception of time versus distance, is an influential variable when people perceive their environment because, as Rapoport suggests, subjective distance is estimated in terms of time (Rapoport 1977). Consumers may weigh the

tradeoffs of time and value-added (meet somebody they know, gas saved, exercise) non-value added (high gas prices, weather, etc) items when shopping or walking/biking. Furthermore, a theoretical view that still holds today by Holton (1958) has established the standard between “convenience” and “comparison” goods. A “convenience” good being a frequently purchased item with minimal effort and a “comparison” good being one where a shopper compares quality, price, and style and is willing to travel farther to purchase. Grocery stores have typically fallen into the category of having “convenience” goods because they have perishable and non-perishable food items which are available locally i.e. minimize time and distance traveled.

One of the transportation systems that are correlated with walking is sidewalks. In two suburban sites studied by Hess in the Puget Sound (also looked at in this study, See Fig. 2), Kent East Hill and Mariner, sidewalk completeness was respectively 57% and 44% for 10.5 and 13.4 kilometers of street system. In the same study three urban sites, Madison Park, Queen Anne, and Wallingford, had sidewalk completeness of 100% for 37.4, 49.8, and 49.7 kilometers of street

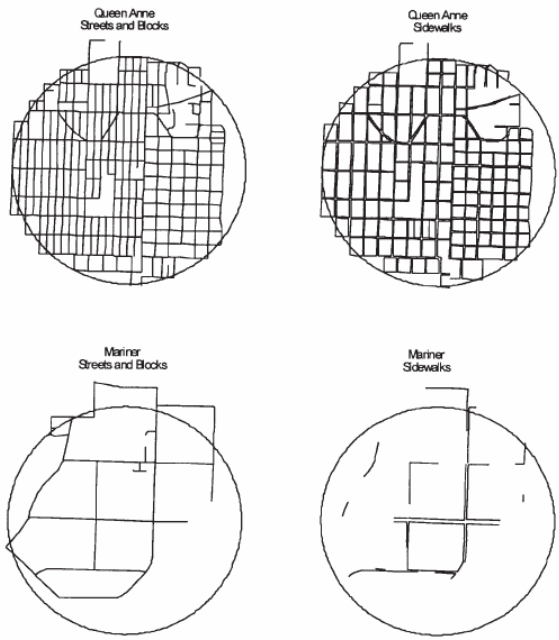


Figure 2 Street and sidewalk networks in an urban site, Queen Anne, and a suburban site, Mariner with a half-mile radius. Hess 1997

system (Hess 1997). All sites were measured for a half-mile radius that contained mixed land use for pedestrian travel. An illustrated depiction of sidewalk completeness can be viewed below for an urban site, Queen Anne, and a suburban site, Mariner. Hess’s (1997) findings showed that neighborhood

site design affects pedestrian activity. He further states that 78% of the

pedestrians studied enter commercial centers on a street lined with sidewalks. Moreover, in urban areas studied 98% of pedestrians enter commercial centers with streets that had sidewalks. Sidewalks are important for pedestrian travel because if there are no facilities people will not walk due to an unsafe environment for walking, but if there are sidewalks a buffer between cars is created and a feeling of safety is created for walking and accessing grocery stores.

Studies have found that people shop close to home for things they use frequently. In 1988, Hazel's findings of Great Britain for strategic planning control of large food stores concluded that 31% of supermarket trips made weekly or more required less than five minutes of travel time, and 55% required less than ten minutes (Hazel 1988). To compare the US and Europe shopping, six of the top ten US retailers sell food, similarly the 20 biggest retailers in Europe are grocery retailers (Hristov 2004). Money-wise, grocery shopping affects a large portion of the US (and Europe) otherwise most retailers would not invest into this market and business. In Figure 3 one can see that the high demand for public transportation in Europe, especially London, UK, can make traveling for activities such as shopping more efficient because of the

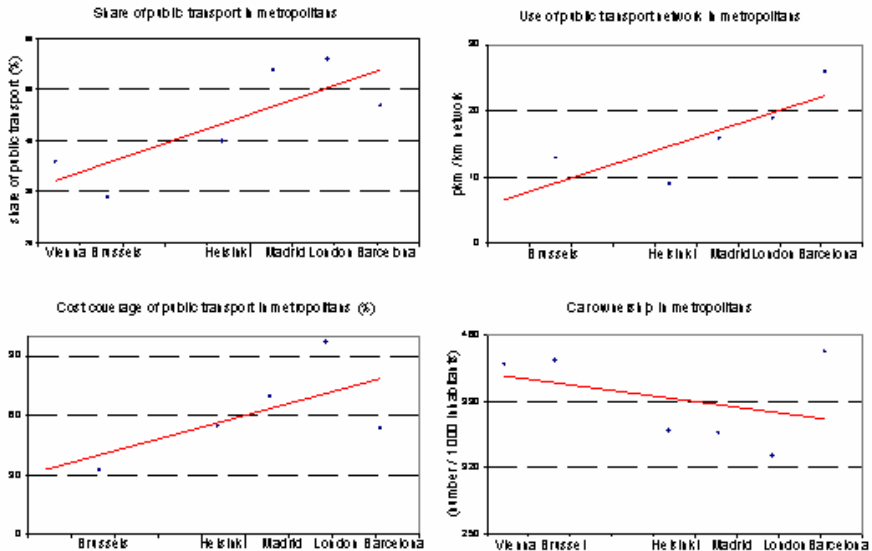


Figure 3 Concentration of residents by population density expressed in inhabitants per built surface in European metropolises (in increasing order by x-axis) versus transportation characteristics. European Environment Agency Report Term 2003 14 EEA31

proximity of services and mass amounts of people using public transit. If the travel time for Great Britain shoppers has been shown to be low, and greater use of public transportation in high urban density areas due to traffic congestion and limited expensive parking tends to decrease car ownership within urban boundaries, then more reliance is put on walking and biking. US food stores and cities could follow a similar strategy in order to capture pedestrians and bikers as grocery customers and in turn possibly make a motorized trip a non-motorized one and limit traffic within the city.

Analysis

We statistically analyzed our data using Analysis of Variances (ANOVA), the Kruskal-Wallis test, bivariate analysis, and binary logistic analysis. The ANOVA was used because it provides a convenient method for comparing the fit of two or more models from the same data set. From the ANOVA output, the variables which violated the ANOVA assumptions (i.e. non-normality or unequal variances) were put into the Kruskal-Wallis test to make a transformation of the data into a non-parametric test of significance that still assumes the population variances are comparable; however, has no assumption of normality. Bivariate statistical techniques were used for correlation analysis in exploring the relationship between variables. Lastly, the binary logistic analysis was used because many of the responses to variables being measured could take on two values; primarily yes or no. These statistical tests were the best in explaining the variables recorded in section III of this paper.

The ANOVA and Kruskal-Wallis test results are reported first, followed by a discussion of the analyses. The analysis results did confirm the statistical significance of a difference in means. Once this was established, analyses of the urban and suburban samples separately were performed. This last step gave us a better understanding of the data.

ANOVA analysis is only suitable for use with variables that are normally distributed and meet the “homogeneity of variance test” at the .05 level. The variables that did not meet the assumptions of the ANOVA test were analyzed for correlation using the Kruskal-Wallis test. In the ANOVA analysis, the non-motorized variable was compared to the cart, bags, sex, under16, over65, and group variables. In the Kruskal-Wallis test the non-motorized variable was compared to the: urban, from16to65, white/non-white, and group size variables. These two tests illustrate that there is a strong correlation (at the .01 level) between travel mode and cart, bags, sex, group, urban and group size. TABLE II below

summarizes the significance values from the ANOVA and Kruskal-Wallis tests.

The next step in the analysis we ran the Kruskal-Wallis and ANOVA tests on the urban group and suburban group separately. TABLE III summarizes the variables with sharp contrasts between the urban and suburban sites.

TABLE II: Non-motorized variables significance

	ANOVA sig.	Kruskal-Wallis sig.
cart	0.000	n/a
bags	0.000	n/a
sex	0.000	n/a
under16	0.160	n/a
over65	0.101	n/a
group	0.000	n/a
urban	n/a	0.000
from16to65	n/a	0.701
white/non-white	n/a	0.886
group size	n/a	0.001

TABLE III : Kruskal Wallis and ANOVA test

	Suburban / ANOVA sig.	Urban Kruskal-Wallis sig.
under16	0.028	0.554
White/non-white	0.036	0.941

*White/non-white have same sig. since a binary value

These results show that in the urban group done with the Kruskal-Wallis test, the variables under16 and non-white were not significant in relation to travel mode. Conversely, the suburban group was significant (<0.05) in relation to travel mode in the ANOVA test. The difference in significance for non-white and under16 are striking. This difference is important in that it suggests that the location really

does drive travel mode decision-making. That is to say that in the urban settings, where the travel networks are more compact, walkable, and bikeable there is no statistically significant difference between demographic groups (except gender) and travel mode. Conversely, in the suburban sites there were a disproportionate number of younger and non-whites accessing grocery stores using non-motorized transportation. This is important because both of these populations generally have not had that great of access to automobiles. Following this line of reasoning, we argue that the suburban and urban study sites have great enough differences in urban form and possibly socio-demographic variables not captured in this study (i.e. income and education) that it affects travel behavior.

The last step in the statistical analysis was an attempt to build a model to predict behavior. For this we ran several binary logistic regression analyses as seen in TABLE IV:

TABLE IV Binary logistic output

Independent Variables included in equation	Cox & Snell R square ¹	Nagelkerke R _N square ²	Percentage correct
all variables	0.088	0.151	84.2
significant variables	0.088	0.150	84.2
bags, sex, under16, urban, groupsize	0.045	0.078	84.0
bags, sex, urban, group size	0.043	0.073	84.0

¹ The first measure is Cox and Snell's R², a measure of the fit of the model defined as $1 - \left[\frac{L(O)}{L(\hat{\beta})} \right]^{\frac{2}{n}}$ where $L(O)$ is the likelihood of the intercept-only model, $L(\hat{\beta})$ is the likelihood of the full model, and n is the sample size.

² The second measure is Nagelkerke's R_N². Recognizing that Cox and Snell's R² reaches a maximum for discrete models that depends on the value of the estimated percentage, Nagelkerke (1991) proposed dividing the Cox and Snell measure by the maximum. In this sense, R_N² measures the absolute percentage of variation explained by the model.

As the TABLE IV removing variables did not improve our R square values consistently, although we were unable to improve the predictive power of the model. We have found strong correlations between individual variables but we do not have enough significant variables to accurately model travel behavior to grocery stores. Some of the variables that might strengthen the regression were unavailable through field observations of behavior (e.g. education level, income, wealth, personal values, fitness level, location of home, block size, sidewalk ratio, average parcel size, land use mix, etc.).

The behavior phenomena captured in this study show that urban sites generate a significantly larger proportion of non-motorized grocery store trips than their suburban counterparts. Previous research suggests that there is a large latent market for non-motorized grocery shopping trips, given the increasingly convenience-oriented shopping patterns. This is important, as there is great potential for increasing use of non-motorized transportation for grocery shopping. Conventional wisdom has suggested that non-motorized travel to grocery stores should not be a priority, given the assumption of heavily encumbered grocery shoppers. In this study 38.2 % of the individuals observed had no bag and 31.8 % had only one bag. This type of encumbrance is no problem for most non-motorized travelers. In the face of contrary evidence, perhaps it is time to change the conventional wisdom about grocery shopping and non-motorized travel.

Results

Results are presented in Table V (Appendix B) and summarized below.

Site Characteristics

H1: Urban sites will produce more non-motorized trips than the suburban sites

Urban sites produced a total of 273 non-motorized trips (23.27% of total trips), compared to 183 non-motorized (12.70% of total trips) suburban trips. Suburban sites produced a total of 1258 motorized (87.30% of total trips), compared to 900 motorized (76.73% of total trips) urban trips. See Figure 4 (Appendix C) and TABLE VI below.

TABLE VI: Urban & Suburban Totals and Percentages

Site	Non-Motorized	Motorized
Urban	273	900
	23.27%	76.73%
Suburban	183	1258
	12.70%	87.30%

Furthermore, a breakdown of each sites motorized and non-motorized trips for the date gathered can be viewed in Figure 5 (Appendix C).

H2: People will rarely walk to the suburban sites

The data shows that people use motorized transportation rather than walking to the grocery stores in both urban and suburban areas. Especially, Redmond’s QFC produced 386 motorized trips, which accounted for 91.09% of the total trips.

Shoppers’ Demographic Factors:

H3: People of color will use non-motorized modes more frequently than whites

An average of 17.44% of total trips were made on foot. Among the people of color, 19.15% were made on foot and 17.00% for white, which shows a slightly higher margin of non-motorized trips within the group of people of color. Urban site shows more people of color used non-motorized modes of traveling than in the suburban counterparts. See TABLE VII and Figure 6 (Appendix C).

TABLE VII: Share of non-motorized trips- White vs. People of Color

Site	TOTAL	RACE/ETHNICITY	
	Non-motorized	W	PoC
URBAN TOTAL	273	216	56
	23.27%	22.52%	26.17%
SUBURBAN	183	144	39
TOTAL	12.70%	12.42%	13.83%
GRAND TOTAL	456	360	95
	17.44%	17.00%	19.15%

In Figure 6 one can see that whites are the predominant ethnicity that go to urban and suburban grocery stores with the exception of Rainier Beach.

H4: Young (aged less than 16) and the elderly (aged over 65) people will use non-motorized modes more frequently than the middle-aged group (aged from 16 to 65)

People aged over 65 tend to walk comparable to the other two age groups. Young people aged less than 16 were shown to walk the most in both urban and suburban sites. This may be due to them not having a car and being forced to use non-motorized transportation. See TABLE VIII and Figure 7 (Appendix C).

TABLE VIII: Share of non-motorized trips-People in different age groups

Site	TOTAL	AGE		
	Non-motorized	<16	16-65	>65
URBAN	273	20	213	29
TOTAL	23.27%	25.00%	22.23%	21.64%
SUBURBAN	183	30	130	24
TOTAL	12.70%	17.54%	12.52%	10.34%
GRAND	456	50	343	53
TOTAL	17.44%	19.92%	17.18%	14.48%

H5: More females will walk to the grocery stores than males

This hypothesis was not shown to be true here. Male shoppers were observed to produce a higher share of walking trips than female shoppers in both urban and suburban sites. See TABLE IX, and Figures 8,9 (Appendix C).

TABLE IX: Share of Non-motorized trips- Male vs. Female

Site	TOTAL	GENDER	
	Non-motorized	Female	Male
URBAN TOTAL	273	142	138
	23.27%	20.91%	27.88%
SUBURBAN	183	83	101
TOTAL	12.70%	10.47%	15.61%
GRAND TOTAL	456	225	239
	17.44%	15.29%	20.93%

TABLE X: Frequency of gender by area

Site	Female	Male
Urban	679 or 58%	495 or 42%
Suburban	793 or 55%	647 or 45%

The Amount of Groceries:

H6: People with small amount of groceries will be more likely to walk than those with large amount of groceries

The analysis implies that the amount of groceries is not associated with the travel mode. People who used motorized travel had a higher amount of groceries, 1.91, as opposed to non-motorized mode of

travel that had 85.5% bag(s) of groceries respectively. See TABLE VII and Figure 10.

TABLE XI: Share of non-motorized trips- Cart vs. No Cart, Average number of bags

TRAVEL MODE	TOTAL	Cart	No Cart	# of Bags
Non-Motorized	456	13	443	379
	17.44%	2.59%	20.97%	
Motorized	2159	489	1670	3189
	82.56%	97.41%	79.03%	

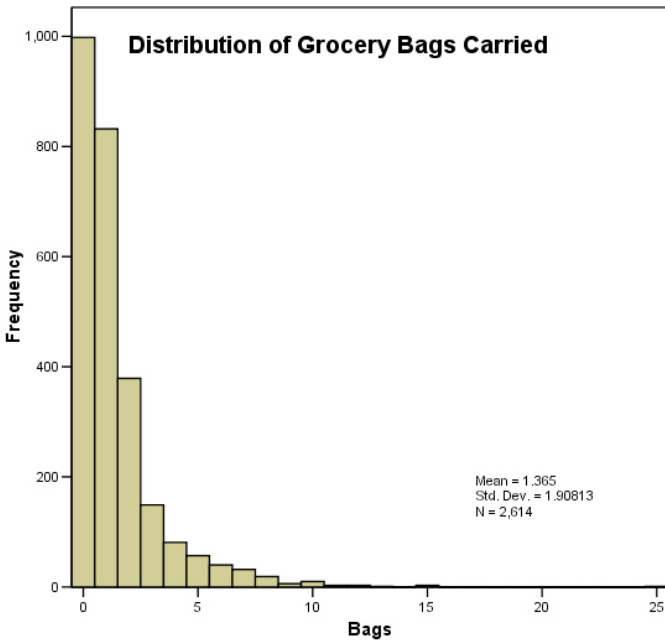


Figure 10. Histogram of grocery bags carried for all sites

Conclusion

TABLE XII: Summary of Findings

	Hypotheses	Findings
Site characteristics	Urban sites will produce more non-motorized trips than the suburban sites	YES
	People will rarely drive to the suburban grocery stores	NO
Shoppers' demographic factors	More people of color will use non-motorized modes of travel than whites	YES
	More young and elderly people will use non-motorized modes of travel than the middle-aged group	Partly YES, Partly NO
	More females will walk to the grocery stores than males	NO, Partly YES for total
The amount of groceries	People with less amount of groceries will walk more than those with more amount of groceries	NO

Site location differences were shown to be strongly associated with non-motorized mode of travel; especially, walking in this case. Overall, the urban sites produced more non-motorized trips than the suburban sites. From Fig.4 we can see that many people opt for motorized transportation in suburban sites, especially Redmond with approximately 92% of all their shoppers viewed by this study choosing motorized transportation.

The shoppers' demographic variables, such as age, gender, and ethnicity, seem to be related to the type of transportation only to some degree. It was shown in this study that more people of color used non-motorized transportation to access grocery stores than whites did. The age groups captured in the sample showed comparable amounts of walking to grocery stores. People age 16 and less walked the most to grocery stores in urban (25.00%) and suburban (17.54%) sites. Looking at the percentages of all the age groups using non-motorized travel they were relatively close to one another and the average; the average for urban was 22.9% and for suburban was 13.5% (See Fig. 7). Gender differences were not significantly related with their travel mode choice; but overall more females did walk to grocery stores. Females had a

higher proportion of non-motorized trips to the grocery store more than males, but for the total trips taken males and females go the grocery store about the same amount of times as seen in TABLE X and Figure 9. The average number of grocery bags carried was 1.36 with a large part of the sample being 0, 1, 2, or 3 number(s) of bags being carried. People with motorized travel were strongly associated with having more grocery bags per trip.

Suburban and urban study sites have great enough differences in urban form and possibly socio-demographic variables but are not captured in this study (i.e. income and education) that it affects travel behavior. Hence, the variables measured do not make a strong correlation with a linear model to use as a predictor of grocery shopping. Variables that could be measured for a stronger model of liner regression are education level, income, wealth, personal values, fitness level, location of home, block size, sidewalk ratio, average parcel size, and land use mix.

References

- Bawa, Kapil & Ghosh, A. 1999. A model of household grocery shopping behavior. *Marketing Letters* 10;2: 149-160.
- Economic Development Council of Seattle and King County. Accessed 11/23/04
http://www.edc-sea.org/research_data/economic_demographics.cfm
- Energy Information Administration.
http://www.eia.doe.gov/oil_gas/petroleum/data_publications
- European Environment Agency. 2003. Indicator fact sheet TERM 2003 14 EEA 31-Urban spatial characteristics and transport. October; 1.
http://themes.eea.eu.int/Sectors_and_activities/transport/indicators/spatial/TERM14%2C2003.10/TERM2003_14_EEA31_Urban_spatial_characteristics_and_transport.pdf
- Food Marketing Institute. 2004. Trends in the United States: Consumer attitudes and the supermarket. June; 55.

- Fotheringham, A & Trew, R. 1993. Chain image and store-choice modeling: The effects of income and race. *Environment and Planning A* 25: 179-196.
- Hazel, G.M. 1988. The development of a disaggregate trip generation model for strategic planning control of large foodstores. *Traffic Engineering and Control* 29 (2):95-103.
- Holton, R.H. 1958. The distance between convenience goods, shopping goods, and specialty goods. *The Journal of Marketing* 23 (July):53-56.
- Hristov, L. 2004. Food retailing: Impact on society and the economy. CIES-The Food Business Forum & Oxford Institute of Retail Management. Oct 2004: 38-51.
http://212.123.6.109/_layouts/ifbwebsite/pdf-doc/Elsevier_Oct2004.pdf
- Huddleston, P. & Whipple, J. et al. 2004. Food store loyalty: Application of a consumer loyalty framework. *Journal of Targeting, Measurement and Analysis for Marketing*. Vol. 12 (3)(March). 213-231.
- Moudon, A. V., Hess, P. M., Snyder, M. C., and Stanilov, K. 1997. Effects of site design on pedestrian travel in mixed-use, medium-density environments. *Transportation Research Record*, 1578, 48-55. <http://www.enhancements.org/trb%5C1674-002.pdf>
- Mokhtarian, P.L. & Salomon, I. 1999. How derived is the demand for travel? Some conceptual and measurement considerations. Institute of Transportation Studies, University of California-Davis, June.
- Nevin, J.R. & Houston, M.J. 1980. Image as a component of attraction to intraurban shopping areas. *Journal of Retailing* 56 (1) (Spring): 77-93.
- Progressive Grocer. 2002. *Progressive Grocer Annual Report*. Vol. 69. Accessed 25 May 2005 (Proquest). New York.
- Rapoport, A. 1977. Human aspects of urban form: Towards a man-environment approach to urban form and design. 1st ed. Oxford; New York: Pergamon Press.

Robinson, R.V.F. & Vickerman, R.W. 1976. The demand for shopping travel: A theoretical and empirical study. *Applied Economics* 8:267-281.

Sommer, B., and Sommer, R. (1991). A practical guide to behavioral research: Tools and techniques. New York: Oxford University Press.

Steiner, R. L. (1996). Traditional neighborhood shopping districts: Patterns of use and modes of access. Doctoral Dissertation. University of California, Berkeley.

Tauber, EM. 1972. Why do people shop? *Journal of Marketing* 38 (October): 46-59.

http://www.fmi.org/facts_figs/keyfacts/grcryexpenses.htm

<http://sev.prnewswire.com/food->

[beverages/20050502/NYSU01501052005-1.html](http://bev.beverages/20050502/NYSU01501052005-1.html)

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Appendix A

Addresses of grocery stores

Sites	Grocery Store	Address	Town	State	Zip
Factoria	Safeway	3903 Factoria Mall SE	Bellevue	WA	98006
Fairwood	Albertsons	14215 SE Petrovitsky Rd	Renton	WA	98058
Kent	Top Foods	26105 104th Ave SE	Kent	WA	98031
Kirkland	QFC	211 Park Place Center	Kirkland	WA	98033
Mariner	Albertsons	520 128th Street Southwest	Mariner/Everett	WA	98204
Redmond	QFC	8867 161ST AVENUE NE	Redmond	WA	98052
Greenwood	Safeway	8340 15TH Ave NW	Seattle	WA	98117
Madison Park	Bert's Red Apple	1801 41st Ave E.	Seattle	WA	98112
Queen Anne	Safeway	2100 Queen Anne Ave	Seattle	WA	98109
Rainier Beach	QFC	9000 Rainier Ave S	Seattle	WA	98118
Wallingford	QFC	1801 N 45th St	Seattle	WA	98103
White Center	QFC- Westwood Town Center	2500 SW BARTON	Seattle	WA	98126

Appendix B

TABLE V: Summary of Shopper Characteristics by Urban & Suburban Sites and Travel Modes

Site	Travel Mode	TOTAL	CART		BAGS # of Bags	GENDER		AGE			RACE/ETHNICITY		IN GROUP	PET
			Yes	No		Female	Male	<16	16-65	>65	W	PoC		
Greenwood 11/5/04 5-6PM Clear & Cool	Non-Motorized	12	2	10	15	7	5	0	9	3	10	2	3	0
		17.9%	16.7%	83.3%	1.25	58.3%	41.7%	0%	75%	25%	83.3%	16.7%	25%	0%
	Motorized	55	9	46	90	38	17	0	50	5	52	3	15	0
		82.1%	16.4%	83.6%	1.64	69.1%	30.9%	0%	90.9%	9.1%	94.6%	5.45%	27.3%	0%
	Total	67	11	56	105	45	22	0	59	8	62	5	18	0
		100%	16.4%	83.6%	1.57	67.2%	32.8%	0%	88.1%	11.9%	92.5%	7.5%	26.9%	0%
Madison Park 11/11/04, 4:25- 5:25PM Sunny/Cold	Non-Motorized	50	0	50	34	35	22	10	34	6	48	2	21	3
		40.3%	0%	100%	0.68	70%	44%	20%	68%	12%	96%	4%	42%	6%
	Motorized	74	7	67	108	51	17	4	58	12	72	2	11	0
		59.7%	9.5%	90.5%	1.46	68.9%	23.0%	5.4%	78.4%	16.2%	97.3%	2.7%	14.9%	0%
	Total	124	7	117	142	86	39	14	92	18	120	4	32	3
		100%	5.6%	94.4%	1.15	69.5%	31.5%	11.3%	74.2%	14.5%	96.8%	3.2%	25.8%	2.4%
Queen Anne 11/1/04 5-6PM Rain-misty & ~50 F	Non-Motorized	40	0	40	46	20	20	2	36	2	38	2	11	2
		27.2%	0%	100%	1.15	50%	50%	5%	90%	5%	95%	5%	27.5%	5%
	Motorized	107	36	71	125	55	52	14	85	8	107	0	47	0
		72.8%	33.6%	66.4%	1.17	51.4%	48.6%	13.1%	79.4%	7.5%	100%	0%	43.9%	0%
	Total	147	36	111	171	75	72	16	121	10	145	2	58	2
		100%	24.5%	75.5%	1.16	51%	49%	10.9%	82.3%	6.8%	98.6%	1.4%	39.5%	1.4%

Site	Travel Mode	TOTAL	CART		BAGS	GENDER		AGE			RACE/ETHNICITY		IN GROUP	PET
			Yes	No	# of Bags	Female	Male	<16	16-65	>65	W	PoC	Yes	Yes
Ranier Beach 10/31/04 1:50-2:50PM Sunny, 55 F	Non-Motorized	33	1	32	26	9	24	3	28	2	8	25	9	0
		21.2%	3%	97%	0.79	27.3%	72.7%	9.1%	84.8%	6.1%	24.2%	75.8%	27.3%	0%
	Motorized	123	24	99	177	73	49	7	93	22	44	78	39	0
		78.8%	19.5%	80.5%	1.44	59.4%	39.8%	5.7%	75.6%	18.0%	35.8%	63.4%	31.7%	0%
Total	156	25	131	203	82	73	10	121	24	52	103	48	0	
		100%	16.0%	84.0%	1.30	52.6%	46.8%	6.4%	77.6%	15.4%	33.3%	66.0%	30.8%	0%
Wallingford 10/30/04 4-5PM Clear	Non-Motorized	123	2	121	127	63	60	2	95	15	107	15	26	2
		34.0%	1.6%	98.4%	1.03	51.2%	48.8%	1.6%	77.2%	12.2%	87%	12.2%	21.1%	1.6%
	Motorized	239	52	187	210	132	107	8	214	28	229	11	99	0
		66.0%	21.8%	78.2%	0.88	55.2%	44.8%	3.4%	89.5%	11.7%	95.8%	4.6%	41.4%	0%
Total	362	54	308	337	195	167	10	309	43	336	26	125	2	
		100%	14.9%	85.1%	0.93	53.9%	46.1%	2.8%	85.4%	11.9%	92.8%	7.2%	34.5%	0.6%
White Center 11/6/04 4-5PM Cloudy/Damp No Rain	Non-Motorized	15	1	14	15	8	7	3	11	1	5	10	4	0
		4.7%	6.7%	93.3%	1.00	53.3%	46.7%	20%	73.3%	6.7%	33.3%	66.7%	26.7%	0%
	Motorized	303	55	248	495	188	115	27	245	30	239	64	158	0
		95.3%	18.1%	81.9%	1.63	62.1%	37.9%	8.9%	80.9%	9.9%	78.9%	21.1%	52.2%	0%
Total	318	56	262	510	196	122	30	256	31	244	74	162	0	
		100%	17.6%	82.4%	1.60	61.6%	38.4%	9.4%	80.5%	9.8%	76.7%	23.3%	50.94%	0%
URBAN TOTAL	Non-Motorized	273	6	267	263	142	138	20	213	29	216	56	74	7
		23.3%	2.2%	97.8%	0.96	52.0%	50.6%	7.3%	78.0%	10.6%	79.1%	20.5%	27.1%	2.6%
	Motorized	901	183	718	1205	537	357	60	745	105	743	158	369	0
		76.7%	20.3%	79.7%	1.34	59.6%	39.6%	6.7%	82.7%	11.7%	82.5%	17.5%	41.0%	0%
Total	1174	189	985	1468	679	495	80	958	134	959	214	443	7	
		100%	16%	84%	1.25	58%	42%	7%	82%	11%	82%	18%	38%	1%

Site	Travel Mode	TOTAL	CART		BAG S # of Bags	GENDER		AGE			RACE/ETHNICITY		IN GROUP	PET
			Yes	No		Female	Male	<16	16-65	>65	W	PoC	Yes	Yes
Factoria 11/1/04 6:20-7:20PM Raining	Non-Motorized	23	2	21	21	13	11	0	22	1	12	11	4	0
		12.8%	8.7%	91.3%	0.91	56.5%	47.8%	0.0%	95.7%	4.3%	52.2%	47.8%	17.4%	0%
	Motorized	157	48	109	361	79	77	15	134	8	107	50	63	0
		87.2%	30.6%	69.4%	2.30	50.3%	49.0%	9.6%	85.3%	5.1%	68.2%	31.8%	40.1%	0%
	Total	180	50	130	382	92	88	15	156	9	119	61	67	0
		100%	27.8%	72.2%	2.12	51.1%	48.9%	8.3%	86.7%	5.0%	66.1%	33.9%	37.2%	0%
Fairwood 11/7/04 10:50-11:50AM Cloudy, No Rain	Non-Motorized	15	0	15	7	6	9	2	11	2	13	2	7	0
		9.3%	0%	100%	0.47	40.0%	60.0%	13.3%	73.3%	13.3%	86.7%	13.3%	46.7%	0%
	Motorized	147	59	88	412	86	61	17	104	26	120	27	56	0
		90.7%	40.1%	59.9%	2.80	58.5%	41.5%	11.6%	70.8%	17.7%	81.6%	18.4%	38.1%	0%
	Total	162	59	103	419	92	70	19	115	28	133	29	63	0
		100%	36.4%	63.6%	2.59	56.8%	43.2%	11.7%	71.0%	17.3%	82.1%	17.9%	38.9%	0%
Kent 11/9/04 2:15-3:15PM Cloudy/Cool	Non-Motorized	12	1	11	2	4	8	6	3	3	10	2	8	0
		5.4%	8.3%	91.7%	0.17	33.3%	66.7%	50.0%	25.0%	25.0%	83.3%	16.7%	66.7%	0%
	Motorized	212	62	150	169	121	91	26	115	71	165	47	81	0
		94.6%	29.3%	70.7%	0.80	57.1%	42.9%	12.3%	54.3%	33.5%	77.8%	22.2%	38.2%	0%
	Total	224	63	161	171	125	99	32	118	74	175	49	89	0
		100%	28.1%	71.9%	0.76	55.8%	44.2%	14.3%	52.7%	33.0%	78.1%	21.9%	39.7%	0%
Kirkland 11/6/04 1:25-2:25PM Overcast/ Cool,Light Rain	Non-Motorized	63	1	62	30	31	32	10	40	13	55	8	27	0
		27.2%	1.6%	98.4%	0.48	49.2%	50.8%	15.9%	63.5%	20.6%	87.3%	12.7%	42.9%	0%
	Motorized	169	24	145	148	93	76	7	124	38	158	11	56	0
		72.8%	14.2%	85.8%	0.88	55.0%	45.0%	4.1%	73.4%	22.5%	93.5%	6.5%	33.1%	0%
	Total	232	25	207	178	124	108	17	164	51	213	19	83	0
		100%	10.8%	89.2%	0.77	53.5%	46.5%	7.3%	70.7%	22.0%	91.8%	8.2%	35.8%	0%

Site	Travel Mode	TOTAL	CART		BAGS	GENDER		AGE			RACE/ETHNICITY		IN GROUP	PET
			Yes	No	# of Bags	Female	Male	<16	16-65	>65	W	PoC	Yes	Yes
Mariner 11/6/04 1:30-2:30PM Drizzly	Non-Motorized	36	2	34	35	17	19	8	27	1	25	11	20	0
		16.1%	5.6%	94.4%	0.97	47.2%	52.8%	22.2%	75.0%	2.8%	69.4%	30.6%	55.6%	0%
	Motorized	187	46	141	361	121	66	26	142	19	138	49	107	1
		83.7%	24.6%	75.4%	1.93	64.7%	35.3%	13.9%	75.9%	10.2%	73.8%	26.2%	57.2%	0.5%
	Total	223	48	175	396	138	85	34	169	20	163	60	127	1
		100%	21.5%	78.5%	1.78	61.9%	38.1%	15.2%	75.8%	9.0%	73.1%	26.9%	56.9%	0.4%
Redmond 11/6/04 3:20-4:20PM Overcast	Non-Motorized	34	1	33	21	12	22	4	27	4	29	5	12	0
		8.1%	2.9%	97.1%	0.62	35.3%	64.7%	11.8%	79.4%	11.8%	85.3%	14.7%	35.3%	0%
	Motorized	386	67	319	533	210	175	50	289	46	327	59	190	0
		91.9%	17.4%	82.6%	1.38	54.4%	45.3%	12.9%	74.9%	11.9%	84.7%	15.3%	49.2%	0%
	Total	420	68	352	554	222	197	54	316	50	356	64	202	0
		100%	16.2%	83.8%	1.32	52.9%	46.9%	12.9%	75.2%	11.9%	84.8%	15.2%	48.1%	0%
SUBURBAN TOTAL	Non-Motorized	183	7	176	116	83	101	30	130	24	144	39	78	0
		12.7%	3.8%	96.2%	0.63	45.4%	55.2%	16.4%	71.0%	13.1%	78.7%	21.3%	42.6%	0%
	Motorized	1258	306	952	1984	710	546	141	908	208	1015	243	553	1
		87.3%	24.3%	75.7%	1.58	56.4%	43.4%	11.2%	72.2%	16.5%	80.7%	19.3%	44.0%	0%
	Total	1441	313	1128	2100	793	647	171	1038	232	1159	282	631	1
		100%	22%	78%	1.46	55%	45%	12%	72%	16%	80%	20%	44%	0%
GRAND TOTAL	Non-Motorized	456	13	443	379	225	239	50	343	53	360	95	152	7
		17.4%	2.6%	21.0%	0.11	15.3%	20.9%	19.9%	17.2%	14.5%	17.0%	19.2%	14.2%	87.5%
	Motorized	2159	489	1670	3189	1247	903	201	1653	313	1758	401	922	1
		82.6%	97.4%	79.0%	0.89	84.7%	79.1%	80.1%	82.8%	85.5%	83.0%	80.8%	85.8%	12.5%
	Total	2614	502	2113	3568	1472	1142	251	1996	366	2118	496	1074	8
		100%	19%	81%	1.36	56%	44%	10%	76%	14%	81%	19%	41%	0%

Appendix C – Figures 4-9

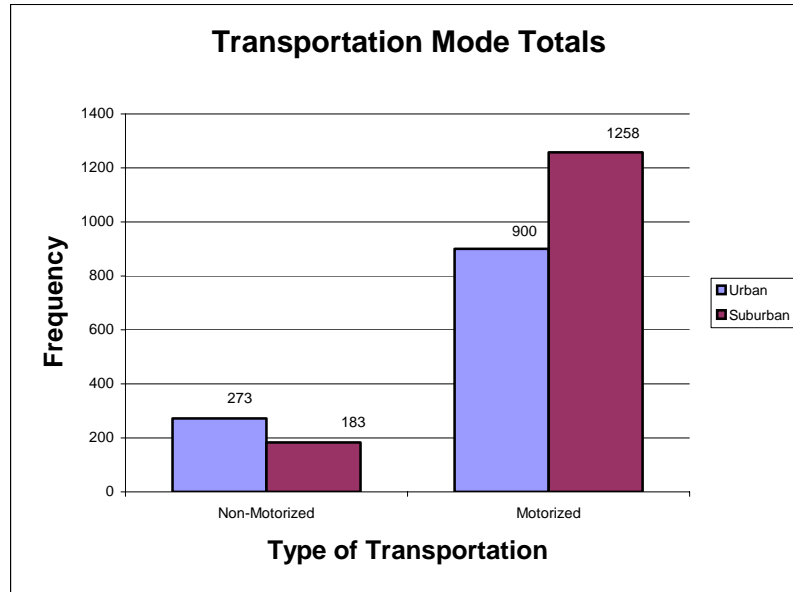


Figure 4. Motorized & non-motorized trips for urban vs. suburban sites

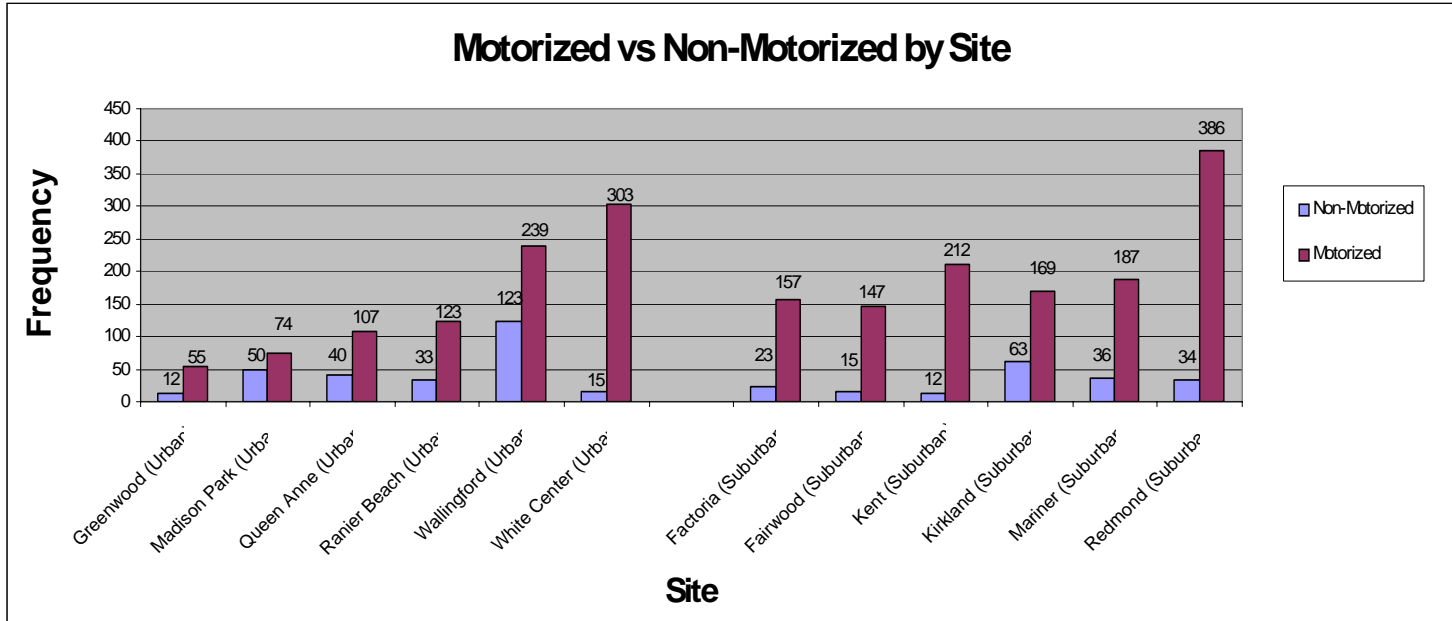


Figure 5. Motorized and non-motorized trips by site; separated into urban and suburban groups

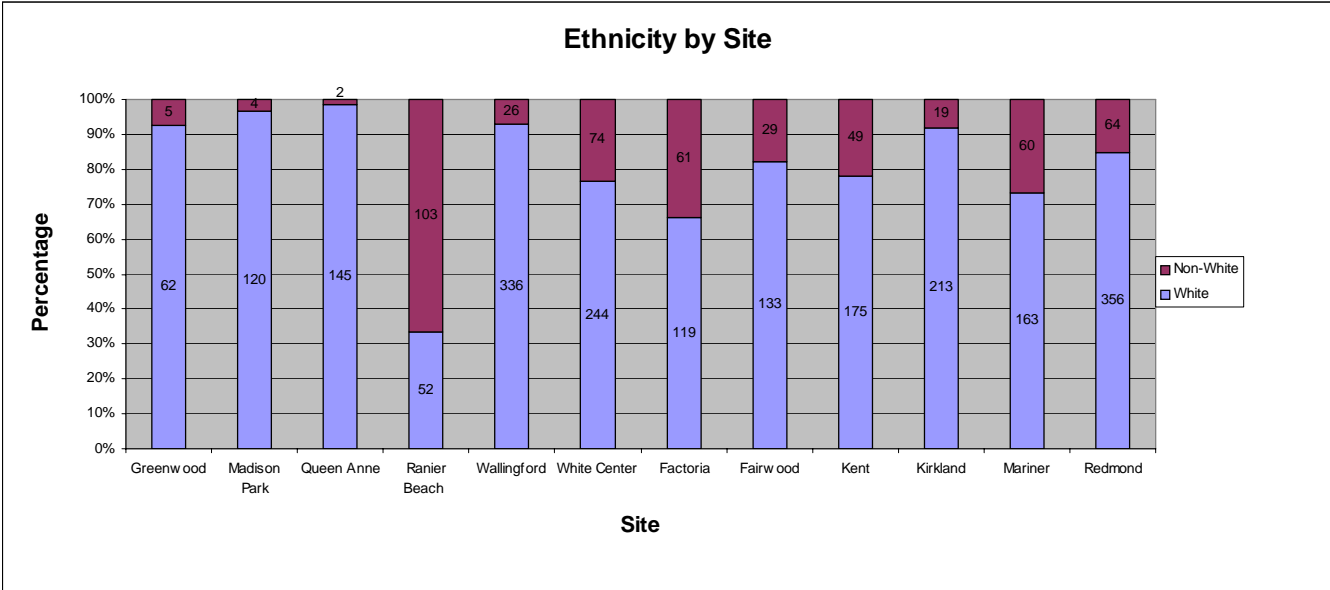


Figure 6. Ethnicity by site represented by stacked columns. Stacks compare the percentage each white and non-white persons contributed to the total.

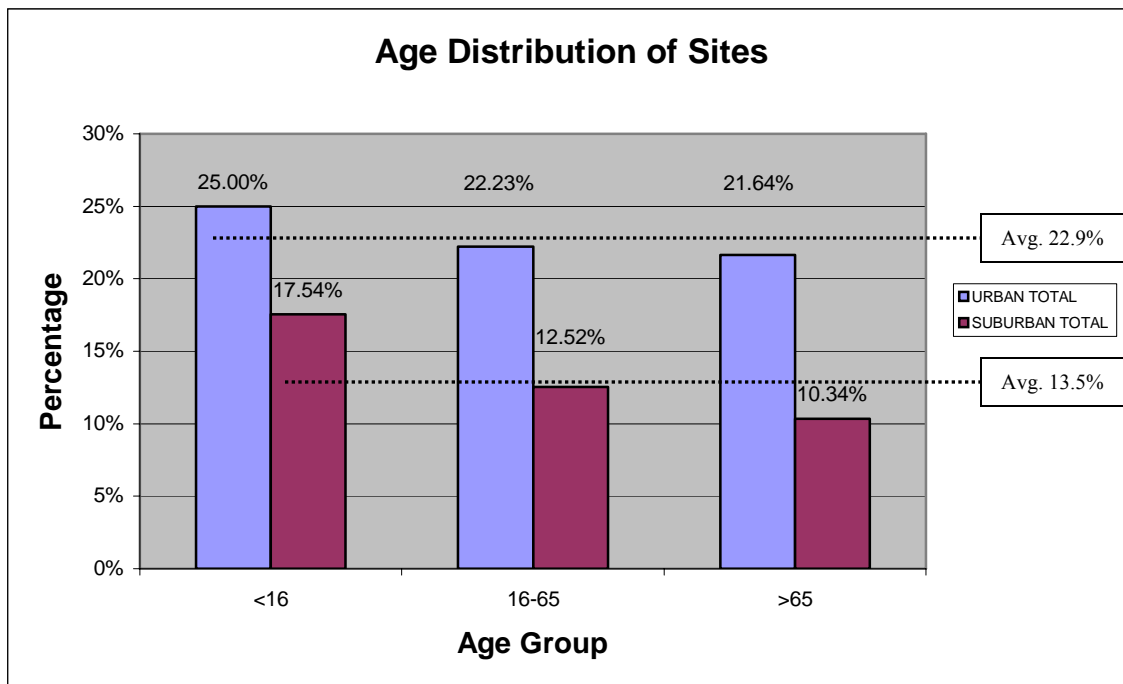


Figure 7. Distribution of age groups who used non-motorized transportation

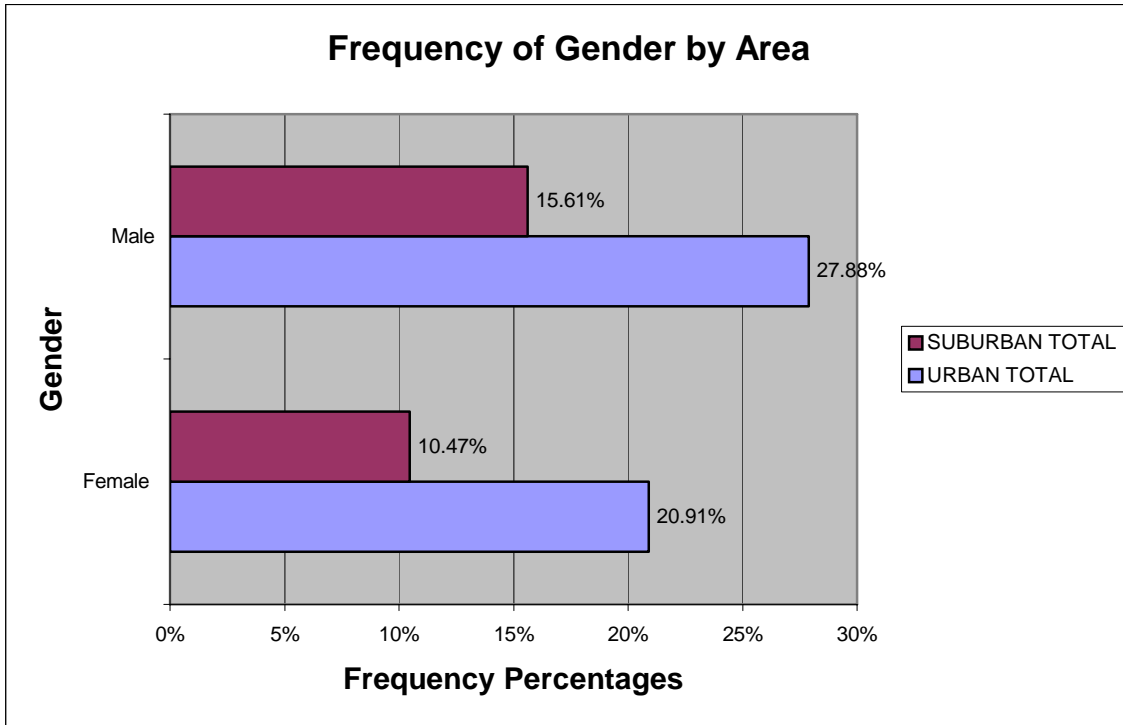


Figure 8. Percentages of males and females who went to one of the study sites

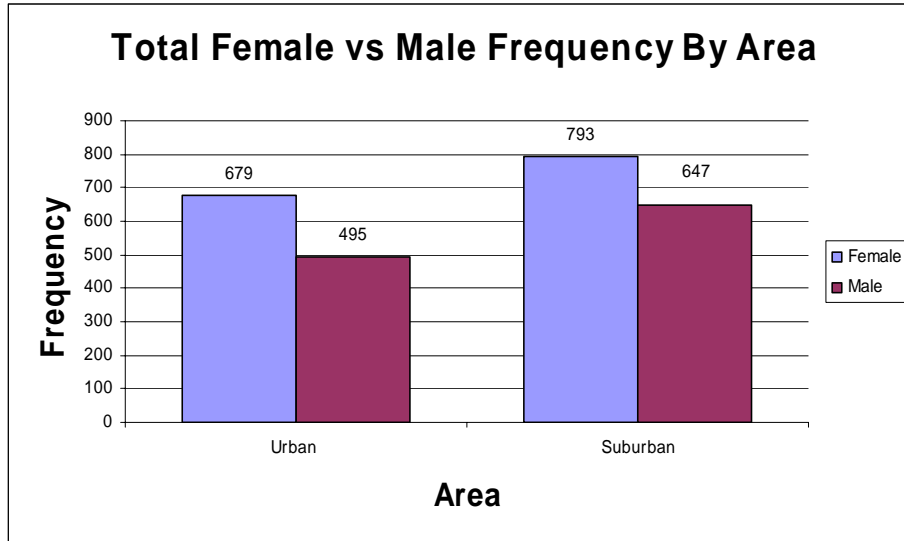


Figure 9. Total frequency of gender by area

Is there a Burden of “Acting White” Keeping African American Students from Academic Success?

Oluwatope Fashola

Abstract

John Ogbu has proposed an explanation-- the “burden of acting White” hypothesis--for the Black-White gap in education. In addition to racial inequality, lack of occupational opportunity, and unequal treatment within education institutions, he argues that African American student peer groups do not support positive school behavior. Because African American students fear being labeled as “acting White,” they do not meet their high academic aspirations with effort, and exhibit negative behaviors towards the educational system which represents “White institutions.” Researchers worry that the oppositional culture model has become so respected in the academic community that it threatens to divert attention from other explanations for the racial gap in school performance.

Introduction

The "burden of 'acting White'" hypothesis or oppositional culture theory formulated by Berkeley professor John Ogbu has continually been surrounded by controversy in disciplines ranging from African American studies to economics, largely due to the complexity and misunderstanding behind the Black-White test score gap that has become increasingly crucial to the debate on America's education system. Ogbu has proposed an explanation – the “burden of acting White” hypothesis – for the Black-White gap in education. In addition to racial inequality, lack of occupational opportunity, and unequal treatment within education institutions, he argues that African American student peer groups do not support positive school behavior.

Because African American students fear being labeled as “acting White,” they do not meet their high academic aspirations with effort, and exhibit negative behaviors towards the educational system which represents “White institutions.” Researchers worry that the oppositional culture model has become so respected in the academic community that it threatens to divert attention from other explanations for the racial gap in school performance. Ogbu has raised a lot of important questions regarding the role of society on the performance of African American students, as well as the negative effects of racism and impoverishment on the African American community as a whole.

The secondary analysis presented in this paper focuses on four questions that attempt to test the consistency of the burden of acting White.

I am interested in the indicators used to measure the “acting White” hypothesis such as negative sanctions for high achieving African Americans (involuntary minorities), poor parental guidance, negative behavior in the classroom, and the idea that Blacks have high aspirations but are not meeting them with effort (Ogbu, 1991, p.282). Specifically, I would like to answer the questions: Are African American students more likely to come from more impoverished homes than are White students? Do African American students receive less encouragement from parents, teachers, friends, and others than their White peers? Are African American students less engaged in their schooling and exhibit more negative behaviors than White students? Are African American students less educationally ambitious than White students?

The threat behind the oversimplification of the “burden of ‘acting White’” or the oppositional culture theory to minority education is that it puts full responsibility of the educational gap on involuntary minority groups. Many believe that the oppositional culture theory has been oversimplified, leading researchers and policymakers to overlook the collaboration and culmination of multiple forces on the educational outcomes of the Black students (Horvat & Lewis, 2003). Others (Foley, 1991; Slaughter-Defoe, 1990) have argued that Fordham and Ogbu’s (1986) thesis overlooks or minimizes within group variation. Ainsworth-Darnell and Downey worry that the oppositional culture model has become so respected in the academic community that it threatens to divert attention from other explanations for the racial gap in school performance (1998). The “Black-White achievement gap remains one of the most pressing problems in education today” (Horvat & Lewis, 2003). Understanding how to improve the academic achievement of Black students and how to remove roadblocks to their success are crucial.

In Ogbu’s theory he makes a distinction between voluntary and involuntary minorities in terms of the oppositional culture theory, which he believes does not affect both minority groups equally. Voluntary minorities such as immigrants do much better academically because they have a home country of reference from which to define themselves positively, while African Americans, Native Americans and other minority groups are considered involuntary minorities because they were brought to America against their will and do not have a definite country of reference. This aspect of Ogbu’s theory will not be tested within the confines of the data set provided, however the limitations of testing the Black-White dichotomy are acknowledged.

Literature Review

American youth do not all grow up equally within a bubble consisting of comparable schooling, economic levels, and parental education and then apply to college. African American student participation and subsequent attainment are both affected by their pre-college educational experiences (Freeman, 1998). Therefore, to ignore the societal or environmental experiences that shape their development is an incomplete picture of all the factors influencing African American educational attainment.

Critics of the oppositional culture theory believe that it has undermined the possibility of viewing any critical and complex position on the part of Black students to interpret their world and has shifted attention away from the social reality of White supremacy to an erroneous belief that Black students are rejecting academic success en masse (Lundy, 2003). The oppositional culture theory has been argued over, re-assessed and re-interpreted many times over. Many sociological, economical, and educational theorists have taken aspects of Ogbu’s theory and constructed research questions regarding the theory’s validity. Horvat and Lewis focus on the notion of stigmatization by Black peers and the ability to form Black peer groups that are positive towards education. Ainsworth-Darnell and Downey focus on four hypotheses: (African American) students perceive fewer returns, exhibit greater resistance to school than do dominant (White) students or immigrant minority (Asian American) students, high-achieving involuntary minority students are negatively sanctioned by their peers for their achievement, resistance to school accounts for the racial gap in school performance between involuntary, dominant (White), and immigrant minority (Asian American) students.

The central thesis of Horvat and Lewis’s study is that one weakness of the oppositional culture theory is the suggestion that the African American peer group ideology is monolithic, or that acting White is universally defined when ideology has an active quality; it is defined through the processes in which meaning is constructed. Second, their article examines the notion of acting White and ties it to the critical literature on Whiteness, in the process demonstrating how it fosters White supremacy by making Whiteness an invisible category (2003). Spencer, Noll, Stoltzfus, and Harpalani viewed the “burden of ‘acting White’” as an explanation for the achievement gap between White and African American students, which states that African American youth would do better if they adopted a Eurocentric cultural values system. They believe that this theory, along with a great amount of the

established literature on minority youth identity development, depends on a deficit-oriented perspective to explain the discrepancy between African American and White students. This is problematic because the perspective denies minority youth a culturally specific normative developmental perspective of their own, and instead, compares their experience to the normative developmental processes observed in White children (2001).

An important finding within the Ainsworth-Darnell and Downey study was that African American students are statistically equal to Whites with respect to grades, but their attitudes, which are not controlled, are much more positive. Yet, when African American students have attitudes only as positive as Whites, they earn lower grades. Without such pro-school attitudes, African American students would surely be farther behind White students than they are now (1998). The Datnow (1997) study also discovered results that were in contrast to Fordham and Ogbu's (1986) finding that adopting academically successful behaviors leads Black students to be labeled as acting White and consequently marginalized by Black peers. Datnow's students actually made social gains within the school when they were academically successful. Their Black peer groups allowed for the development of an identity that was not oppositional and that promoted academic success. This did not mean, however, that these students were fully accepted by African American peers outside of school; subsequently, many of the students developed a variety of strategies to address the dilemma of being caught between the worlds of their African American peers in and outside of school (2000).

What the proponents of oppositional culture theory and acting White fail to perceive is that Black students, in their rejection of White cultural references, are embracing their own culture and asserting African agency. It is not a rejection of academic success but rather a rejection of White cultural hegemony (Lundy, 2003). Datnow, also in opposition to the "burden of 'acting White'" theory found that "like the African American and Latino students in the Mehan et al. study, the African American students in the present study were also found to develop criteria for success within their peer group that rewarded an academic orientation yet reaffirmed the students' cultural identity as African Americans" (2000).

Studies have found that Black students have an abiding faith in education, yet their outcomes do not match this faith (Macleod, 1987; Mickelson, 1990; Ogbu, 1978). Mickelson (1990) made the important distinction between abstract attitudes (attitudes toward education that are grounded in the dominant ideology) and concrete attitudes (attitudes

toward education that are based on poor returns from investing in education and participating in the opportunity structure). Her findings showed that concrete attitudes are a better indicator of students' academic achievement than are abstract attitudes. In Kozol's study of immigrant and involuntary minorities he states that the “central thesis of [his] chapter is that the relatively poor school performance of Blacks in Stockton, in spite of their wish to succeed, is rooted in their history of involuntary incorporation into American society and the subsequent discriminatory treatment of them in a system of racial castes” (1991). Ogbu continuously refers to societal inequality within the housing, occupational, and school system, stating that “the lower school performance adaptive to their position was encouraged by differential schooling. The latter was achieved through community wide educational policies and practices, the treatment of Blacks within the schools themselves and through denying Blacks payoffs commensurate with their educational efforts and accomplishments” (Ogbu, 1991).

This explanation of racial discrimination, educational inequality, etc. juxtaposed with the conclusion that African American home and community environment are “dysfunctional” for Black school children are the elements of Ogbu's theory that cause the most controversy. Careful assessments of Ogbu's articles and books have increasingly found similarities between Ogbu's understanding of inequality and that of his challengers; yet it is the conclusion that all the aforementioned oppression has caused a culture of opposition which does not seem to be consistent – it seems to branch off into an evolved theory of the culture of poverty.

Data and Methods

The data set provided for this study was taken from the University of Washington Beyond High School (UWBHS) research project which was made possible by the Andrew W. Mellon and Bill and Melinda Gates foundations as well as the collaboration between University of Washington social scientists and a Pacific Northwest school district. Both the long and short term goals of the study are concerned with the shape of post secondary educational opportunities in American society. Both foundations which support this study have an interest in diversity and specifically increasing access to higher education.

With the cooperation of the school administration, the Beyond High School Project (UWBHS) administered an in-school “paper and pencil” questionnaire to senior students in all the comprehensive high schools in the district. The first survey of high school seniors was

conducted in five public high schools in the Spring of 2000, and those same five schools were surveyed again in the Spring of 2002. For the 2003 survey, three private schools and four more public schools were added to the sample yielding nearly 2,500 surveys from twelve high schools--bringing the three-year total to nearly 5,000. The senior survey includes questions on aspirations and plans for college and work after high school, as well as questions on family background, perceptions of school and home environments, self-esteem, and participation in school-related and non-school-related activities. Less than 2 percent of enrolled seniors (or their parents) refused to participate.

The analysis reported here is based on two cross-sectional surveys of high school seniors in a metropolitan public school system in the Pacific Northwest in the spring of 2000 and 2002. In this sample of high school seniors, only about one-half were (only) White. The remainders were incredibly diverse with about 9% Hispanic, 17% Black, 6% East Asian (Chinese, Korean, and Japanese), 4% Cambodian, 5% Vietnamese, 4% Filipino and Other Asian, and 5% American Indian, Hawaiian, and Pacific Islander. Although the numbers of students in some of these groups are small, our priority is to examine as many groups as possible within the limits of the data.

Measures

In order to address the key hypotheses of the oppositional culture theory I focused on four groups of questions from the Tacoma Schools Project 2000 and 2002 data. Survey questions or items were taken from both years (2000 and 2002) and used as a cross sectional sample of African Americans and White students at the selected Tacoma schools.

Educational Aspirations and Expectations. The question used to measure aspirations consisted of "How far would you like to go in school?" The values were recoded from a continuous variable (11.4-less than high school to 20-Ph.D., MD or other professional degree) to a nominal variable. The responses "Less than high school," "High school graduation only," "Less than 2 years of college," "vocational, or business school," and "two or more years of college, including a 2 year degree" were coded as 0. "Finish college (4 or 5 year degree)," "Master's degree or equivalent," and "Ph.D., MD or other professional degree" were coded as 1. The question used to measure Expectations consisted of "Realistically speaking, how far do you think you will get in school?" The values were recoded from a continuous variable (11.4-less than high school to 20-Ph.D., MD or other professional degree) to a nominal variable. Again, the responses "Less than high school," "High school graduation only," "Less than 2 years of college," "Vocational, or

business school,” and “Two or more years of college, including a 2 year degree” were coded as 0. The responses “Finish college (4 or 5 year degree),” “Master’s degree or equivalent,” and “Ph.D., MD or other professional degree” were coded as 1.

College plans. The question used to measure College plans consisted of “Do you plan to go to college or other additional schooling right after high school? That is, do you plan to be continuing your education this fall” The values were recoded from “No,” “Don’t know,” and “Yes—without a response of a specific college” were coded as 0. The responses of “Yes—with a specific community college, four year college, or university” were coded as 1.

College Application. If the respondent mentioned one or more specific schools in response to the follow up question about colleges most likely to attend, then s/he was asked “Have you applied to this school?” The responses were coded as 1 if the student answered “Yes” and 0 if the students answered “No” or “Don’t Know” or if the student gave no response.

Socioeconomic status. Parent’s education was analyzed by asking students “What is the highest degree or level of schooling that he (your father) or she (your mother) has completed?” Students answers were coded as 0 for “12th grade, no diploma” and below, “High school grad or equivalent” was coded as 1; “Some college, no degree,” “Associate degree (occupational or vocational),” and “Associate degree (academic program),” were coded as 2; “Bachelor’s degree,” “Master’s degree,” and “Professional degree,” were coded as 3.

Home Ownership was used as a measure of wealth. Students were asked “Does your family own or rent their home?” Responses were coded as 1 for “Own (with or without mortgage),” and 0 for “Rent.”

Parenting. Communication and Support: Summary index based on the following items: “How often have you and your parents discussed school activities” (never, rarely, sometimes, often)? “How often have you and your parents discussed going to college” (never, rarely, sometimes, often)? “My family will support me in whatever I choose to do after high school” (strongly agree, agree, disagree, strongly disagree).

Encouragement. Father’s encouragement was assessed through the item “What does your father or the person most like a father to you, think is the most important thing for you to do after high school?” The nominal measurement for this item was “Go to college” coded as 1 and “Enter a trade school,” “Enter military service,” “Get a job,” “Get married,” and “I don’t know” coded as 0. Mother’s encouragement, Brother’s or Sister’s encouragement, Friend’s encouragement, and Favorite teacher encouragement were assessed through the same items.

Student Behaviors. Student behaviors were assessed through a summary index of: late/miss/cut school, ready to learn, and in trouble. Late/miss/cut was assessed through three items, however if one or more of the items were missing, then the average would be computed on the non missing items. The three items for late/miss/cut were “I was late for school” (Never, 1-2 times, 3-6 times, 7-9 times, over 10 times), “I cut or skipped classes” (Never, 1-2 times, 3-6 times, 7-9 times, over 10 times), “I missed a day of school” (Never, 1-2 times, 3-6 times, 7-9 times, over 10 times). Ready to learn was also a summary index based on the average of the following items “I went to class with a pencil, or paper” (Never, 1-2 times, 3-6 times, 7-9 times, over 10 times), “I went to class without my books” (Never, 1-2 times, 3-6 times, 7-9 times, over 10 times), “I went to class without my homework” (Never, 1-2 times, 3-6 times, 7-9 times, over 10 times). Finally, in trouble, our last summary index used the items “I got into trouble for not following school rules” (Never, 1-2 times, 3-6 times, 7-9 times, over 10 times), “I was put on in school suspension” (Never, 1-2 times, 3-6 times, 7-9 times, over 10 times), “I was suspended or put on probation from school” (Never, 1-2 times, 3-6 times, 7-9 times, over 10 times). The values for all of the ready to learn items were recoded from continuous values to nominal with “Never” coded as 1, “One to two times” coded as 2, “three to six times” coded as 3, “seven to nine times” coded as 4, and “over ten times” coded as 5.

Race/ethnicity. Our primary independent variable in this study is race and ethnicity. Following the new approach to measuring race from the 2000 census, the senior survey allowed respondents to check one or more race categories (Perlmann and Waters 2002). The responses to the race question were combined with a separate survey question on Hispanic identity to create a set of eight mutually exclusive and exhaustive race and ethnic categories that reflect the considerable diversity in the population of youth in West Coast cities. Although most students had an unambiguous race and ethnic identity, there was a significant minority of students of mixed ancestry (about 15 percent) and some (about 5 percent) who refused to give a response.

Analysis

Descriptive statistics were run for the individual variables and indexes after all of the appropriate recodes were in place. The means and crosstabs were converted to percentages by race in order to compare the African American and White students within the table format. The methods used to analyze the data include descriptive statistics and correlations.

Results

Consistent with Ogbu and Mickelson the African American students have a slightly higher score for educational aspirations (16.8) than White students (16.5) which is the same mean score for the total group. Scores for educational expectations in years were the same for both groups. While 3% more of the White students planned to attend a four-year, the groups had equal percentages (31% for both) concerning their plans for attending two year schools. The percentage of students who reported NO/DK was higher for African American students (35%) than White students (31%). This means that while both groups have comparable aspirations and expectations Whites have a slightly higher percentage of students who are going to four year colleges (3%) and slightly fewer who don't know what they are going to do. Four percent more White students (56%) applied to college than African American students (52%) despite the higher aspirations and identical expectations of the two groups (Table 1 – see Appendix for all tables).

Among the high school seniors 29% African American students are in intact families, which is 29% less than Whites (58%). Coming in second place to White students for mother's and father's education were African Americans, with 13.4 average education for fathers and 13.6 for mothers. Whites were ahead of African Americans by about a year for fathers (14.3) and about .6 for mothers (13.9). Most likely connected to average education, 77% of White students report that their families own their home, but African Americans were among the lowest percentage of the sample with 46%. African Americans are the second lowest to Whites (12%) with only (17%) being first generation.

Whites have more encouragement by parents, with 10% by fathers and 4% more encouragement by mothers as well as slightly more encouragement by friends (1%). African Americans receive more encouragement from siblings (3%), teachers (1%), and other adults (1%). African Americans have the highest mean report of late/miss/cut (4.98) followed closely by Whites (4.56), at the same time they also have the second highest mean for being ready to learn (3.16) again directly followed by Whites (3.13). African Americans have the highest mean for being in trouble (.50) which is interesting because Whites are on the lower end (.38) of means for getting in trouble. African Americans have a lower mean for homework hours (2.49) compared to Whites (2.76).

Discussion

Students in intact families consistently had a higher percentage regarding aspirations, expectations, college plans (both 4 and 5 year),

and applying to college. The largest observable percentage difference was between four year college plans and intact families, while the lowest percentage difference was between aspirations and intact families. The consistent trend within Mothers education was that the higher the educational achievement of the mother the higher the percentage for all categories. Similarly to the mothers education, the higher the educational achievement of the father the higher the percentage for all categories.

Even though White students had a slightly higher percentage rate for college application, this does not suggest that a large number of African Americans are opting out of higher education. Considering the higher percentages of intact families, home ownership, and encouragement one would expect the percentage difference to be much greater. It is commonly known that African Americans are singled out more often for “getting in trouble” than Whites. Despite the close proximity of their scores for negative behaviors such as being late/miss/cut, African Americans are in trouble at a much higher rate despite their second place standing for positive behavior like being ready to learn (which does not assume a oppositional culture towards education). Both African Americans (2.49) and Whites (2.76) have lower means than the total for homework hours, however African Americans’ mean homework hours are less than that of Whites.

These findings suggest that African American students do not have peer groups that are oppositional to the pursuit of higher education; our study shows that African American friends are slightly more encouraging than White friends. African American respondents also report more encouragement by siblings and slightly more encouragement (1%) by teachers and other adults. Findings that African American parents were slightly less supportive were not expected. Although encouragement by African American mothers was only slightly less than White mothers, only 59% of African American respondents reported encouragement by fathers.

Limitations

The Ainsworth-Darnell and Downey article incorporated Asian Americans into Ogbu’s hypothesis by discussing the differences between the immigrant minority groups and the involuntary minority groups. The Asian American students were used to explore the voluntary versus involuntary minority status which states that “lacking an identifiable foreign reference group, involuntary minorities contrast their condition with that of the dominant group” (Ainsworth-Darnell, Downey, 1998, p.540). This comparison tends to produce resentment because they

conclude that involuntary minorities fare poorly solely because they belong to a disfavored group. This disconnection between the history and the present causes the most damage psychologically in terms of education aiding minority students in defining themselves in positive terms.

However, previous studies have found that the collective struggle is also a means of inspiration for some high achieving African American students. Although the Beyond High School project does have ethnic groups which could be considered voluntary minorities they were not used in the secondary analysis because upon close inspection of the groups individually it was found that they have a lot of variation within the groups. Splitting the voluntary groups would yield a data sample that wouldn't be comparable to our data for African Americans and White students. Also, there was a time limitation regarding research into the oppositional theory which did not allow for adequate investigation of these groups.

Another limitation of the study is the use of the binary racial categories Black and White. A notable number of students reported being biracial or multiracial, yet were aggregated into one category for purposes of analyses. Ogbu's theory doesn't speak directly to biracial or multiracial experience however the influence of these respondents on this study is acknowledged.

References

- Ainsworth-Darnell, James W; Downey, Douglas B. Assessing the oppositional culture explanation for racial/ethnic differences in school performance. *American Sociological Review*. Vol 63(4) Aug 1998, 536-553. Albany, US.
- Arshavsky, N.P., *Goals and beliefs about school achievement among adolescents of the three ethnic groups and their relation to these students' academic grades*. 2000, Arshavsky, -Nina-Postanogova: U Wisconsin - Madison, US.
- Bankston III, C.L. and S.J. Caldas, *The American school dilemma: Race and scholastic performance*. *Sociological Quarterly*, 1997. **38**(3): p. 423-429 URL: <http://www.ucpress.edu/journals/tsq/>.
- Barken, Elazar. 2000. *The guilt of nations: restitution and negotiating historical injustices*. New York : Norton.

- Ballantine, Jeanne H. 1997. *The Sociology of Education: A Systematic Education*. Upper Saddle River, New Jersey: Prentice Hall.
- Ballard, A.B. 1973. *The Education of Black Folk: The Afro-American struggle for knowledge in White America*. New York: Harper Colophon.
- Bergin, Daniel A; Cooks, Helen C. High school students of color talk about accusations of "acting White". *Urban Review*. Vol 34(2) Jun 2002, 113-134. Kluwer Academic/Plenum Publishers, US.
- Bond, Horace Mann, *The Education of the Negro in the American Social Order*. New York: Prentice Hall. 1934.
- Bowman, P.J. and C. Howard, Race-related socialization, motivation, and academic achievement: A study of Black youths in three-generation families. *Journal of the American Academy of Child Psychiatry*, 1985. **24**(2): p. 134-141 URL: <http://www.jaacap.com/>.
- Bullock, Henry Allen. 1967. *A History of Negro Education in the South: From 1619 to the Present*. Cambridge, Massachusetts: Harvard University Press.
- Church, Robert L. 1976. *Education in the United States*. New York: The Free Press.
- Cook, Philip J; Ludwig, Jens. The burden of "acting White": Do Black adolescents disparage academic achievement? Jencks, Christopher (Ed); Phillips, Meredith (Ed). (1998). *The Black-White test score gap*. (pp. 375-400). x, 523pp.
- Daniels, Lee A. Editor. 2000. *The State of Black America 2000: Blacks in the New Millennium*. National Urban League.
- Datnow, Amanda; Cooper, Robert. Peer networks of African American students in independent schools: Affirming academic success and racial identity. *Journal of Negro Education*. Vol 66(1) Win 1997, 56-72. Assn of American Univ Presses/Howard Univ Press, U.S.

- Fischer, Claude S.; Hout, Michael; Jankowski, Marin Sanchez; Lucas, Samuel R.; Swindler, Ann and Voss, Kim. 1996. *Inequality by Design: Cracking the Bell Curve Myth*. Princeton, New Jersey: Princeton University Press.
- Freeman, Kassie. 1998. *African American Culture and Heritage in Higher Education Research and Practice*. Westport: Praeger Publishers.
- Fuerst, J.S. 1981. “Report Card: Chicago’s All-Black Schools.” *The Public Interest* 64: 79-91.
- Horvat, Erin McNamara; Lewis, Kristine S. Reassessing the “Burden of ‘Acting White’”: The Importance of Peer Groups in Managing Academic Success. *Sociology of Education*. Vol. 76 October 2003, 265-280.
- Jefferson, S.D. and R. Caldwell, An exploration of the relationship between racial identity attitudes and the perception of racial bias. *Journal of Black Psychology*, 2002. **28**(2): p. 174-192.
- Jencks, Christopher and Riesman, David. *The Academic Revolution*. Garden City, New York, Doubleday, 1968.
- Kousser, J. Morgan. 1980. “Separate But Not Equal: The Supreme Court’s First Decision on Racial Discrimination in Schools.” *Journal of Southern History* 46: 17-44.
- Kozol, Jonathan. 1991. *Savage Inequalities: Children in America’s Schools*. New Yourk: Harper Collins.
- Leake, Donald O., Chrisine J. Faltz. 1993. “Do we need to Desegregate All of Our Black Schools?” *Educational Policy* 7: 370-387.
- Logan, R.W. 1970. *The Negro in the United States*. New York: Van Nostrand Reinhold Co.
- Maddox, Resi Tamara. Peer pressure, coping, and racial identity among academically achieving Black adolescent females: An exploratory study. *Dissertation Abstracts International: Section B: the Sciences & Engineering*. Vol 62(7-B), Feb 2002, 3420, US: Univ Microfilms International.

Mahiri, Jabari. *Shooting for Excellence: African American and Youth Culture in New Century Schools*. 1998. New York: Teachers College Press.

Marshall, S., Ethnic socialization of African American children: Implications for parenting, identity development, and academic achievement. *Journal of Youth and Adolescence*. 1995. **24**(4): p. 377-396 URL: <http://www.wkap.nl/journalhome/htm/0047-2891>.

Morris, Aldon D. 1984. *The Origins of the Civil Rights Movement: Black Communities Organizing for Change*. New York: The Free Press.

Murrell, Peter, Jr. 1992. "Afrocentric Immersion: Academic and Personal Developments of African American Males in Public School." In *Freedom's Plow: Teaching for a Multicultural Democracy*. Editors: Theresa Perry and James Fraser. New York: Pantheon Books.

O'Hanlon, M., *Closing the Education Gap*, in *The Wall Street Journal*. 2002. p. A20.

Ogbu, John U. 1978. *Minority Education and Caste: The American System in Cross-Cultural Perspective*. New York: Harcourt Brace Jovanovich.

Ogbu, John U. 1974. *The Next Generation*. New York: Academic Press Inc.

Phinney, J.S., The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research*, 1992. **7**(2): p. 156-176.

Randall, Robinson. 2000. *The Debt: what America owes to Blacks*. New York: Dutton.

Randall, Robinson. 2000. *The Reckoning: What Blacks Owe to Each Other*. New York: Dutton.

- Riordan, Cornelius. 1997. *Equality and Achievement: An Introduction to the Sociology of Education*. New York: Longman.
- Slaughter, D.T., *Black Children, Schooling, and Educational Interventions*, in *Black Children and Poverty: A Development Perspective*, D.T. Slaughter, Editor. 1988, Jossey-Bass: San Francisco. p. 109-116.
- Sowell, Thomas. 1972. *Black Education: Myths and Tragedies*. New York: David McKay.
- Spencer, Margaret Beale; Noll, Elizabeth; Stoltzfus, Jill; Harpalani, Vinay. Identity and school adjustment: Revisiting the "acting White" assumption. *Educational Psychologist*. Vol 36(1) 2001, 21-30. Lawrence Erlbaum, US
- Steele, Claude. 1992. "Race and the Schooling of Black Americans." *Atlantic Monthly* 269 (April): 68ff.
- Steele, Claude and Aronson, Joshua. 1995. "Contending with a Stereotype: African American Intellectual Test Performance and Stereotype Vulnerability." Seminar on Meritocracy and Equality, University of Chicago, May.
- Watkins, Willian H. 2001. *The White Architects of Black Education: Ideology and Power in America, 1865-1954*. New York: Teachers College Press.
- Weinberg, Meyer. 1977. *A Chance to Learn: A History of Race and Education in the United States*, Cambridge: Cambridge University Press.
- Wilson, William J. 1987. *The Truly Disadvantaged: The Inner City, the Underclass and Public Policy*. Chicago: The University of Chicago Press.
- Witherspoon, Karen McCurtis; Speight, Suzette L; Thomas, Anita Jones. Racial identity attitudes, school achievement, and academic self-efficacy among African American high school students. *Journal of Black Psychology*. Vol 23(4) Nov 1997, 344-357. Sage Publications, US

U.S. Bureau of the Census. 1977. *Historical Statistics of the United States*. Washington, D.C.: USGPO. Census home page: www.census.gov

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Appendix

Table 1. Definitions and Measurements of Basic Variables in the 2000 and 2002 Beyond High School Project.

Variable	Complete Title or Question	Measurement
Educational Aspirations	How far would you like to go in school?	Nominal. The responses “Less than high school,” “High school graduation only,” “Less than 2 years of college, vocational, or business school,” and “Two or more years of college, including a 2 year degree” were coded as 0. “Finish college” (4 or 5 year degree), “Master’s degree or equivalent,” and “Ph.D., MD or other professional degree” were coded as 1
Educational Expectations	Realistically speaking, how far do you think you will get in school?	Nominal. Coded identically to Educational Aspirations.
College plans	Do you plan to go to college or other additional schooling right after high school? That is, do you plan to be continuing your education this fall?	The values were recoded from “No,” “Don’t know,” and “Yes—without a response of a specific college” were coded as 0. The responses of “Yes—with a specific community college, four year college, or university” were coded as 1.
College Application	Have you applied to this school?	The responses were coded as 1 if the student answered “Yes” and 0 if the students answered “No” or “Don’t Know” or if the student gave no response.
Socioeconomic Status	What is the highest degree or level of schooling that he (your father) or she (your mother) has completed?	Students’ answers were coded as 0 for “12 th grade, no diploma” and below, “High school grad or equivalent” was coded as 1; “Some college, no degree,” “Associate degree (occupational or vocational),” and “Associate degree (academic program),” were coded as 2; “Bachelor’s degree,” “Master’s degree,” and “Professional degree,” were coded as 3.
Home Ownership	Does your family own or rent their home?	Responses were coded as 1 for “Own (with or without mortgage),” and 0 for “Rent.”

Table 1 continued.

Variable	Complete Title or Question	Measurement
Encouragement	<p><i>Father</i>--What does your father, or the person most like a father to you, think is the most important thing for you to do after high school?</p> <p>Mother's encouragement, Brother's or Sister's encouragement, Friend's encouragement, and Favorite teacher encouragement were assessed through the same items.</p>	<p>The nominal measurement for this item was "Go to college" coded as 1 and "Enter a trade school," "Enter military service," "Get a job," "Get married," and "I don't know" coded as 0.</p>
Student Behaviors	<p>Student behaviors were assessed through a summary index of: late/miss/cut school, ready to learn, and in trouble.</p>	<p>Late/Miss/Cut was assessed through three items, however if one or more of the items were missing, then the average would be computed on the non missing items.</p> <p>"I was late for school," "I cut or skipped classes," and "I missed a day of school."</p> <p>Ready to Learn--"I went to class with a pencil, or paper," "I went to class without my books," and "I went to class without my homework."</p> <p>In Trouble--"I got into trouble for not following school rules," "I was put on in school suspension," and "I was suspended or put on probation from school."</p>
Race/ethnicity	<p>The race variable for this analysis consisted of an index of five questions regarding the student's race or ethnicity.</p>	<p>Our primary independent variable in this study is race and ethnicity. Following the new approach to measuring race from the 2000 census, the senior survey allowed respondents to check one or more race categories (Perlmann and Waters 2002). The responses to the race question were combined with a separate survey question on Hispanic identity to create a set of eight mutually exclusive and exhaustive race and ethnic categories that reflect the considerable diversity in the population of youth in West Coast cities.</p>

Table 2. Family Intactness, Average Education of Parents and Home Ownership by Race/Ethnicity.

Race	Intact Family	Average education of		Family owns Home
		Father	Mother	
African American	29%	13.4	13.6	46%
White	58%	14.3	13.9	77%

African American students are less likely to be in intact families than Whites. African American parents have slightly less education in years. Undoubtedly connected to average education, many more White students report that their families own their home.

Table 3. Encouragement for College by Mother, Friends, Teacher, and Other Adult by Race/Ethnicity.

Encouragement for College By:				
Race	Mother	Friends	Teacher	Other Adult
African American	73%	64%	77%	78%
White	77%	66%	76%	77%

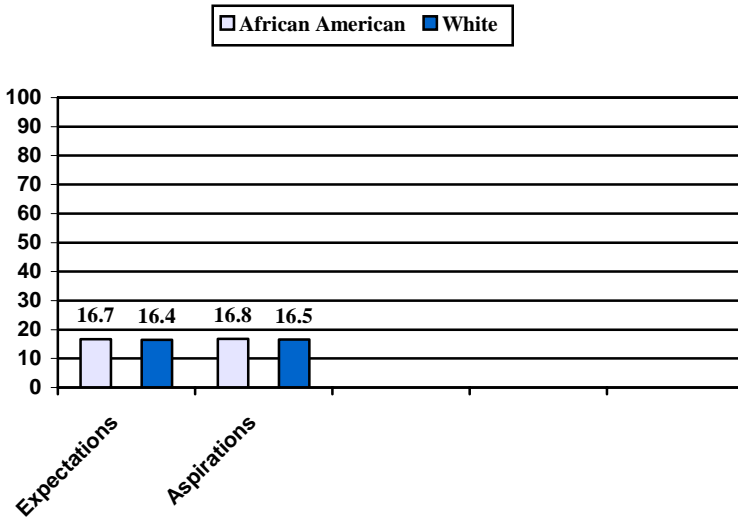
Whites have more encouragement by parents, with 10% more by fathers and 4% more encouragement by mothers as well as slightly more encouragement by friends (1%). African Americans receive more encouragement from siblings (3%), teachers (1%), and other adults (1%).

Table 4. Student Behaviors by Race/Ethnicity.

Race	Late/Miss/Cut		Ready to Learn		In Trouble		Homework Hours	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
African American	5	2.7	3.2	2.8	1.5	1.1	2.5	2.5
White	4.6	2.8	3.1	2.7	1.4	1	2.8	2.9

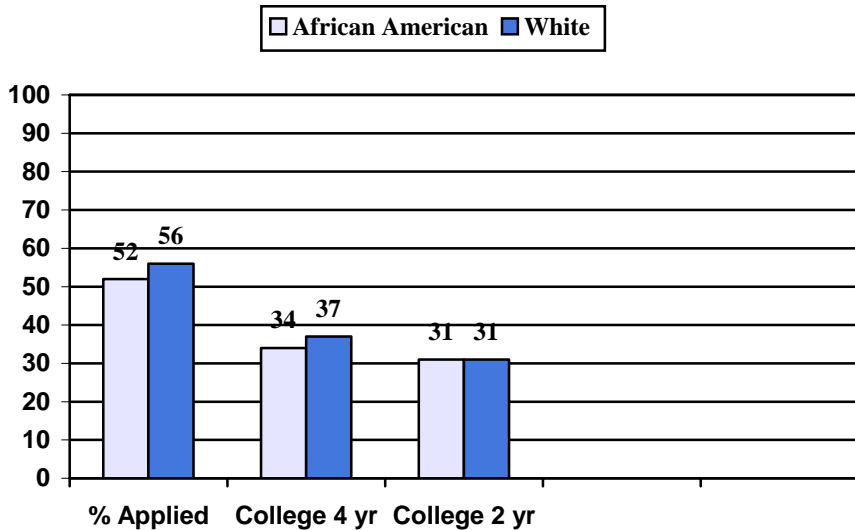
African Americans show slightly more negative behaviors for late/miss/cut and hours spent of homework, but they also show slightly higher frequencies of coming to class ready to learn, compared to their White peers. African Americans have the highest mean for being in trouble and White students have the lowest mean of all groups.

Table 5. Educational Expectations and Aspirations by Race.



Both groups have comparable aspirations and expectations, Whites have a slightly higher percentage of students who are going to four year colleges (3%) and slightly less who don't know what they are going to do in contrast to Black students.

Table 6. College Application by Race.



More White students (56%) applied to college than African American students (52%) overall.

African Americans and Educational Attainment: Which Factors from 5th to 12th Grade Influence Educational Attainment at Age 24?

Oluwatope Fashola

Abstract

This project explores African American educational attainment as it is affected by school bonding and school rewards. The analysis sample consists of 195 African American and 372 White urban students; within both ethnic groups 51% are male and 49% are female. Bonding to school, and perceived rewards from school measured at earlier time points are used to predict educational attainment at age 24. The analysis sample has been obtained from the Seattle Social Development Project (SSDP) longitudinal study which was started in 1981 by Principal Investigators, Drs. J. D. Hawkins and R. F. Catalano. The SSDP has interviewed a cohort of over 800 youth annually since elementary school, and is presently collecting age 27 data. The original intent of the study was to test strategies for reducing childhood risk factors for school failure, drug abuse, and delinquency. Subsequently, these data have been used to inform the field about the etiology of adolescent problem behavior. This presentation examines school bonding and school rewards at 5th, 8th, 10th, and 12th grades and educational attainment at age 24 among African American and White students. The methods used to analyze the data include descriptive statistics, correlations, and multiple regressions. Findings suggest that earlier (5th grade) school factors better predict educational attainment for African Americans and later factors better predict White students' educational attainment.

Introduction

Issues related to African American educational attainment have been studied since 1945, yet a significant amount of research has not acknowledged the importance of school factors that influence African American educational attainment. Research by McWhorter and Ogbu has primarily been focused upon the pathology of African Americans, with conclusions that students are not academically successful as a result of their rejection of “acting White,” not valuing education, or poor parental engagement. Claude Steele believes that researchers have vastly under appreciated how much the devaluation of African Americans in school affects their education (Steele, 1992). Recent studies on the school environment have found that school engagement was a better

predictor of academic achievement than family environment and ethnic identity (Hudson, 1999). Given the continued discrepancies in educational attainment between African Americans and Whites, this study will examine the relationship between both groups' experiences in school and educational attainment at age 24. Experience in school is defined in this study as students' bonding and perceived rewards from school.

Historically, African Americans have received inferior education, housing, and employment in comparison to the White population. With the end of Reconstruction in 1877, for African Americans and Mexican Americans, de facto segregation became the primary means through which access to schooling, housing, and jobs was controlled. One justification authorities offered for segregation was that mixing of the races would compromise the superior culture and intellect of White Europeans. American apartheid began with schooling. "Separate but Equal" was the law in many states. No matter where they lived, African American and Mexican American children had to attend separate schools that were invariably inferior to Whites' schools. This profoundly undermined the education as well as the self-esteem of those who were forced to attend (Fischer & Hout, 1996). The Brown decision which legally mandated desegregation would open doors to better education, employment, and housing. However, there still exists a disparity in these arenas, and it is most explicit in terms of educational attainment. The belief that schools promote occupational and social mobility for all groups in American society has persisted despite evidence to the contrary.

Since the 1970s, African Americans have demonstrated gains in educational aspirations and attainment. According to T. M. Smith (1997), in 1972, only 32% of African Americans planned to attend a 4-year college immediately after high school graduation, whereas in 1992, 52% planned to go directly into a 4-year college. Across this same period, the percentage of African Americans who planned to enter academic programs at 2-year colleges also increased. Between the 1980's and 1990's, there was also an increase in the number of bachelor's degrees awarded to African Americans, with the largest increase for African American women. Despite these positive changes, African Americans and Hispanics are less likely than White Americans and Asian Americans to enroll in college immediately after high school (Smith, 1997). This discrepancy has received attention from political leaders in the United States, and one of the current national education goals is to increase the participation of African Americans in higher education (National Education Goals Panel, 1999). In addition to being a social and

political issue, African American participation in education is an economic issue. Academic degrees are becoming increasingly important for the economic success of young people. That is, the earnings gap between those who have 4 or more years of college and those who do not has steadily widened across the last three decades (Snyder & Shafer, 1996). Education may be the main means of social mobility for individuals from minority groups (Crowley & Shapiro, 1982).

Pollard (1993) hypothesizes that the persistent gap in educational attainment is linked to experiences in elementary and secondary school for many minorities. Consistent with this review, Trusty (2002) states that “early academic performance is important for African Americans’ long-term educational development.” One of the key processes that lead to African American college attainment is a hope to pursue higher education even as early as grade school (Gurin & Katz, 1996). African Americans begin school with test scores that are fairly close to the test scores of Whites their age despite their socioeconomic disadvantages as group. The longer they stay in school, however, the more they fall behind; for example, by the sixth grade African Americans in many school districts are two full grade levels behind Whites in test scores. This pattern holds true in the middle class nearly as much as in the lower class. The record does not improve in high school. In 1980, for example, 25,500 minority students, largely African American and Hispanic, entered high school in Chicago (Steele, 1992). Four years later only 9,500 graduated, and of those only 2,000 could read at grade level. The situation in other cities is comparable.

Literature Review

“Today, those who do not graduate from college—and even more so, those who have a high school education or less—face bleak prospects. The earnings of college graduates are rising at a time when the earnings of high school graduates who did not attend college are falling” (Fischer & Hout, 1996). On average, people of color tend to be economically worse off and suffer from more social problems such as unemployment, low academic achievement, and incarceration, more so than Whites. African Americans and Latinos also tend to score lower than Whites on standardized tests. “For those who believe that inequality is “natural,” the second pattern clearly explains the first: Ethnic groups are socially unequal because they are intellectually unequal. But for those who understand that societies construct inequalities, the reverse is true: *groups score unequally on tests because they are unequal in society*” (Fischer & Hout, 1996).

In a study of African Americans in higher education, results suggest that African Americans can succeed educationally if they are in schools where they are expected to succeed (Steele, 2000). Cardman (2003) found that students who have a strong relationship with their teachers are more likely to attend college, but African American students are less likely than their White peers to have such a relationship—possibly contributing to the gap in college attendance rates between the two races. ACT researchers (2003) tested five factors to see how much they correlated with post secondary participation, including: the ratio of students in AP courses or in a college-prep track; students' perceptions of what their counselor, favorite teacher or coach wants them to do after high school; students' opinions of their teachers and general school climate; teachers' reports of how often they discuss college issues with students outside of the classroom; and students' participation in extracurricular activities. For White students, every factor was significantly correlated with college attendance. For African American students, all factors were significant except for two: the ratio of students in a college-prep track, and their perceptions of what their counselor, teacher, or coach would want them to do after high school. This implies that "African Americans were not forming strong interpersonal relationships with school staff (as were White students) that could propel them toward postsecondary education" (Wimberly, 1996).

Given the continued discrepancies in educational attainment between African American and White students, this study proposes to examine the relationships between students' experience in school and educational attainment at age 24. Experience in school is defined as students' bonding to school and perceived rewards from school from grades fifth to twelfth. As previously mentioned, studies conducted by researchers like Trusty (2002), Steele (1995), and Pollard (1993) have explored how school environmental factors influence African American youth in order to connect pieces of the achievement gap puzzle.

Methods

Participants were drawn from the Seattle Social Development Project (SSDP), a longitudinal study which began in 1981. The Principal Investigators are J. David Hawkins and Richard F. Catalano. SSDP tests strategies for reducing childhood risk factors for school failure, drug abuse, and delinquency. The respondents were drawn from high-risk neighborhoods in the Seattle area. First graders in five Seattle schools were assigned to intervention or control classrooms. Parents and teachers in intervention classrooms learned how to actively engage children in learning, strengthen bonding to family and school, and

encourage children's positive behaviors through the elementary grades. In 1985, when the original first graders entered the fifth grade, the panel was reconstituted to include other students for a total of 808. SSDP interviewed the youth every year through the 10th grade then data were collected at 12th grade and subsequently every three years (age 21, 24 and age 27). Of the 808 youths, 396 are female; 372 self-identified as Euro-American, 195 African-American, 170 Asian American, and 71 Native American or other ethnic group. Over 52% of the SSDP panel were low income as evidenced by participation in the free or reduced lunch program between the ages of 10 and 12. The last interview (at age 24) successfully located and interviewed over 752 of the original 808 participants (94.6% completion rate; 14 are deceased).

The present analysis focuses on a sub-sample consisting only of African American and White students. Data from 5th, 8th, 10th, 12th grades, and age 24 were used for these analyses. The African American and White samples both have 51% male. Of the students on free lunch, 32% are White and 75.1% are African American.

Measures

Rewards from School. The items used in this scale assessed students' perception of how rewarding they found their school experience. Students were asked their reaction to the following four items, "I feel safe at my school," "Other students in class want me to do my best work," "I like my classes this year," and "My teachers are fair". The response options to these items were coded as "No!", "no," "yes," and "Yes!" (1 to 4). A scale score was created by taking an average of the four items. Separate reward scales were created for each time period (i.e. 5th, 8th, 10th, and 12th grades). The alpha reliability coefficients ranged from 0.67 in 5th grade to 0.95 in 12th grade.

Bonding to School. Students were asked their reaction to the following four items, "I like school," "I do extra work on my own in class," "When I have assignments to do I keep working on it until it is finished," and "Most mornings I look forward to going to school." The response options to these interview items were coded as "No!", "no," "yes," and "Yes!" (1 to 4). A scale score was created by taking an average of the four items. Again, separate bonding scales were created for each time period. The alpha reliability coefficients for the bonding scale ranged from 0.62 in 5th grade to 0.96 in 12th grade.

Educational Attainment. To assess the students' educational attainment, one closed ended question asked at age 24, "What is the highest education degree or certificate you hold?" Respondents then chose an answer that ranged from A.A. to Ph.D. and professional degree.

By choosing an educational attainment measure at age 24 we allowed for additional time post high school to allow for more students to possibly complete their degree.

Control Variables. Two variables were included in our analyses in order to make sure that the racial/ethnic differences in bonding to school and positive experiences were independent of socioeconomic status and gender. Previous studies have shown that possible racial differences may be confounded without controlling for income. Low income status was assessed by whether the child's family received public assistance in the form of free and reduced lunch at school (1 coded for receiving free lunch and 0 for not). Gender was coded with "1" for boys and "2" for girls.

Analysis Plan

Descriptive statistics by ethnicity and gender were first investigated. Next, correlations between each of the scales were explored. Lastly, bivariate as well as multiple regression analyses were conducted examining the effects of school bonding and perceived school rewards on educational attainment at age 24. Separate regression models were run for each time point using statistical controls.

Results

Table 1 (see Appendix A for all tables) provides mean scores and standard deviations for all four time points. Results revealed that African American males reported higher perceived school rewards than White males and both males reported a higher mean score than the females. Both African American and White females reported the same mean score for rewards. For both racial groups, scores declined as grade level increased with the largest decline happening between grades 5 and 8. Results revealed that African American males and females have a stronger mean score on school bonding than Whites at 5th grade. Both groups report school bonding decreasing over time, all groups decreased to a mean of 2.6 at 12th grade.

Next correlations between bonding and rewards with educational attainment at 5th, 8th, 10th, 12th, and age 24 were explored. For African Americans, school bonding at 5th grade was significantly correlated with educational attainment at age 24. For Whites, schools bonding at 10th and 12th grades were significantly correlated with educational attainment. Rewarding school experiences at 10th and 12th grades were also significantly correlated with attainment for White students.

The correlations were followed by multivariate regressions at 5th, 8th, 10th, and 12th grades. After running the bivariate regressions we

found that the consistently significant variables for both African Americans and Whites were free lunch and gender. For African Americans at 5th grade the significance of free lunch was at the .001 level, however by the 8th, 10th, and 12th grades the significance level dropped to .05. White students' negative associations between free lunch and educational attainment were significant at the .001 for all grades. Bonding to school at 5th grade and bonding at 12th grade were significant and positive (.05) for African Americans. For White students bonding to school at 10th grade was the only other significant (.05) and positive variable other than gender and free lunch. Interestingly, for African Americans, gender wasn't significant at 10th grade, yet for White students gender was consistently negative and significant. Also African Americans had consistently negative associations with rewards, but there was no statistical significance at any time period. White students had negative associations between rewards from school and educational attainment at 5th grade only; however none of these associations were significant except rewards at 12th grade.

The positive correlation between bonding to school and educational attainment was to be expected since liking school, having a good work ethic, and looking forward to school would lead to more advanced academic study. However, the lack of consistency between the bonding to school and educational attainment for both groups was not expected. Projects conducted by other researchers on this topic have found that relationships with faculty didn't have an effect on their choice to participate in a college prep track which is a proxy for college aspirations. Research based on a sample of about 15,000 students, the analysis--conducted by the college-entrance test maker ACT--found that African American and White students' expectations of postsecondary education were roughly the same in the eighth grade. By the time the students were two years out of high school, however, actual college attendance rates varied substantially, with 44 percent of African Americans having no college at all compared to 33 percent of Whites, according to the study (Cardman, 2003).

Regarding the apparent lack of relationships with faculty, Wimberly hypothesized that students who form good relationships with teachers "may have expressed behaviors and attitudes that school personnel responded to favorably, and may also have had similar cultural experiences, attitudes and behaviors, however, it is just as likely there may have been cultural and social gaps between other students (African Americans) and their teachers that served as obstacles to positive student-school relationships." However, significant positive correlations were found between positive school experiences and these variables

suggesting that more than one positive school experience with a teacher promotes a child's self concept and academic achievement. Establishing the reliability and validity of this instrument lends support to subsequent research studies which measure the positive and negative school experiences of school-age children and of particular importance, the role of the educator in these experiences (Samuels-Rosoff, 1998).

Discussion

In regards to the reoccurring significance of income and educational attainment, "A Piece of the Educational Pie: Reflections and New Evidence on Black and Immigrant Schooling Since 1880," examines evidence on the impact of discrimination, social class, family structure, and culture on African American students' schooling. Results confirm earlier conclusions which demonstrate that economic well-being has a greater influence on educational attainment than race, family structure, or culture (Perlmann, 1987). Yet, findings by other researchers have indicated that school organization may be a particularly strong influence on how African American children see themselves in the present and how they anticipate their futures. The open school environment appears to override socioeconomic status in promoting both high levels of esteem and positive views of the future (Weaver, 1979).

Legislation following in regards to affirmative action and other such programs at times assumes that "any group inequalities in outcomes since the 1960s, therefore, can only be explained as the result of group inequalities in natural talent. But life is not so simple. Even if discrimination had ended in the 1960s—and it certainly did not—the weight of history is oppressively heavy." Decades later there has been moderate reform that has narrowed some of the gaps, but Americans were naïve to think that it would quickly erase three centuries of a rigid caste system (Fischer & Hout, 1996).

The purpose of this paper was to examine the effects of a rewarding school experience, and bonding to school on educational attainment at age 24 while controlling for gender and income status. Consistent with research done by Trusty, Steele, and Stikes, the results of the study revealed that factors such as a rewarding school environment and bonding to school are an important element associated with the educational attainment of African Americans. African American males and females both reported stronger bonds to school than White males and females, yet both races reported a decrease in bonding from 5th until 12th grade. It was my assumption in the early stages of the study that perhaps African Americans experienced a gradual decrease in bonding due to a lack in school rewards. However, the mean scale scores of

African Americans are not significantly lower than Whites across at all time points. In fact, at some time points African American males report having more rewards at school than Whites. Thus, the assumption can be made that although there is discourse surrounding educational attainment rates by African Americans that point to factors such as deficit culture, or rejection of “White” institutions, in this study, the most consistent predictor of educational attainment was income status. The African American students’ school experiences seem to parallel those of their White counterparts, however, the percentage of African Americans that were on the free lunch program was greater than their White peers and may account for lower college attendance rates. Many students have economic hindrances that prevent them from educational attainment even if they enjoy school and wish to pursue higher education.

In future studies, it would be interesting to explore whether African American students in the study had a desire to pursue higher education and whether they faced difficulties that prevented them from applying to college, for example, due to financial circumstances. Additionally, an in-depth look at whether African American students differentially drop out of college would be useful, and whether dropping out is tied to economic instability.

A limitation of this study should be discussed. The first issue is the aggregation of large groups into socially constructed ‘racial groups’ such as ‘White’ and ‘African American’. The term White includes all those of European, Middle Eastern, and North African descent while African American means all those of African, Jamaican, and Haitian descent. All of these varying nationalities, ethnicities, and cultures are lumped into categories. It’s also unclear how representative the sample of African Americans in Seattle is in comparison to the larger nation and the generalizability of the results. The Seattle area does not have a large population of African Americans and therefore the socialization of African Americans in this area is greatly influenced by the White community as well as the African American community’s stereotypes, expectations, and mores.

Areas with a higher concentration of African Americans such as New York, California, or Chicago, may be more representative, there is less interaction between both groups at a personal level. Another limitation of the study is the sole reliance on close-ended items and quantitative analyses. The items used were few in number and broad to get an overall understanding of the students’ school experience; however more specific questions regarding the students’ relationships with faculty and peers as well as their commitment to school would provide a more specified analysis of school environment. Additional information

gathered through qualitative interviews may have provided insight on specific elements of the students' school experience which would give a deeper look into their school experience and whether or not it was positive.

We have learned that early school experiences are important consistent with the results in this study and the conclusions of Smith, Stikes, as well as Pollard (1993). The question thus arises, what are the best ways to enhance the early academic performance of African Americans? The implications for counselors are many. Early academic performance is important for African Americans' long-term educational development. Analyses of 361 African American and Hispanic middle and high school students suggest that academic achievement in poor caste-like minority children is associated with several alterable social-psychological variables. "Moreover, these results provide tentative support for 2 ideas: (1) that academic achievement for caste-like minorities involves crossing cultural boundaries and (2) that achievement may be a resilient way of coping with stress. Educators should encourage these students, have high expectations for them, help them to solve problems, and reward them for their achievement efforts" (Pollard, 1993).

Instead of being stigmatized as a "problem" counselors and faculty should work towards acknowledging the disadvantages that many minorities face outside of the classroom. Parental education is instrumental in successful youth development, and may determine the amount of resources parents have to invest in their children (McNeal 1999). The parents of today's minority youths often had less formal education than the parents of young Whites. Because a student's academic performance is often affected by the parents' educational level, minority students start school at a disadvantage. Children whose parents never attended college are much less likely to visit a library, or to have books read to them, for example, than children whose parents attended college. But parents' educational levels do not completely explain the education gap among U.S. racial and ethnic groups. As previously noted, researchers should also look for explanations in the quality of schools and a tendency to track minority students into lower-level, remedial classes rather than the more rigorous classes needed to get into college. It is important to note, however, that even when successes are acknowledged, the unique contributors leading to success and resiliency in challenging environments are not typically identified or integrated into teacher training and policy considerations (Spencer, 2001).

References

- Arshavsky, N.P., *Goals and beliefs about school achievement among adolescents of the three ethnic groups and their relation to these students' academic grades*. 2000, Arshavsky,-Nina-Postanogova. U Wisconsin - Madison, U.S.
- Bankston III, C.L. and S.J. Caldas, The American school dilemma: Race and scholastic performance. *Sociological Quarterly*, 1997. **38**(3): p. 423-429.
- Barken, Elazar. 2000. *The guilt of nations: restitution and negotiating historical injustices*. New York : Norton.
- Ballantine, Jeanne H. 1997. *The Sociology of Education: A Systematic Education*. Upper Saddle River, New Jersey: Prentice Hall.
- Ballard, A.B. 1973. *The Education of Black Folk: The Afro-American struggle for knowledge in White America*. New York: Harper Colophon.
- Bond, Horace Mann, *The Education of the Negro in the American Social Order*, New York: Prentice Hall. 1934.
- Bowman, P.J. and C. Howard, Race-related socialization, motivation, and academic achievement: A study of Black youths in three-generation families. *Journal of the American Academy of Child Psychiatry*, 1985. **24**(2): p. 134-141 URL: <http://www.jaacap.com/>.
- Bullock, Henry Allen. 1967. *A History of Negro Education in the South: From 1619 to the Present*, Cambridge, Massachusetts: Harvard University Press.
- Church, Robert L. 1976. *Education in the United States*. New York: The Free Press.
- Daniels, Lee A. Editor. 2000. *The State of Black America 2000: Blacks in the New Millennium*. National Urban League.

MCNAIR SCHOLARS JOURNAL

- Fischer, Claude S.; Hout, Michael; Jankowski, Marin Sanchez; Lucas, Samuel R.; Swindler, Ann and Voss, Kim. 1996. *Inequality by Design: Cracking the Bell Curve Myth*. Princeton, New Jersey: Princeton University Press.
- Freeman, Kassie. 1998. *African American Culture and Heritage in Higher Education Research and Practice*. Westport: Praeger Publishers.
- Fuerst, J.S. 1981. "Report Card: Chicago's All-Black Schools." *The Public Interest* 64: 79-91.
- Jefferson, S.D. and R. Caldwell, An exploration of the relationship between racial identity attitudes and the perception of racial bias. *Journal of Black Psychology*, 2002. **28**(2): p. 174-192.
- Jencks, Christopher and Riesman, David. *The Academic Revolution*. Garden City, New York, Doubleday, 1968.
- Kousser, J. Morgan. 1980. "Separate But Not Equal: The Supreme Court's First Decision on Racial Discrimination in Schools." *Journal of Southern History* 46: 17-44.
- Kozol, Jonathan. 1991. *Savage Inequalities: Children in America's Schools*. New York: Harper Collins.
- Leake, Donald O., Chrisine J. Faltz. 1993. "Do we need to Desegregate All of Our Black Schools?" *Educational Policy* 7: 370-387.
- Logan, R.W. 1970. *The Negro in the United States*. New York: Van Nostrand Reinhold Co.
- Mahiri, Jabari. *Shooting for Excellence: African American and Youth Culture in New Century Schools*. 1998. New York: Teachers College Press.
- Marshall, S., Ethnic socialization of African American children: Implications for parenting, identity development, and academic achievement. *Journal of Youth and Adolescence*. 1995. **24**(4): p. 377-396 URL: <http://www.wkap.nl/journalhome.htm/0047-2891>.

- Morris, Aldon D. 1984. *The Origins of the Civil Rights Movement: Black Communities Organizing for Change*. New York: The Free Press.
- Murrell, Peter, Jr. 1992. "Afrocentric Immersion: Academic and Personal Developments of African American Males in Public School." In *Freedom's Plow: Teaching for a Multicultural Democracy*. Editors: Theresa Perry and James Fraser. New York: Pantheon Books.
- O'Hanlon, M., *Closing the Education Gap*, in *The Wall Street Journal*. 2002. p. A20.
- Ogbu, John U. 1978. *Minority Education and Caste: The American System in Cross-Cultural Perspective*. New York: Harcourt Brace Jovanovich.
- Ogbu, John U. 1974. *The Next Generation*. New York: Academic Press Inc.
- Pollard, Diane S. Gender, achievement, and African-American students' perceptions of their school experience. *Educational Psychologist*. Vol 28(4) Fal 1993, 341-356. Lawrence Erlbaum, US
- Phinney, J.S., The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research*, 1992. 7(2): p. 156-176.
- Randall, Robinson. 2000. *The Debt: What America Owes to Blacks*. New York: Dutton.
- Randall, Robinson. 2000. *The Reckoning: What Blacks Owe to Each Other*. New York: Dutton.
- Riordan, Cornelius. 1997. *Equality and Achievement: An Introduction to the Sociology of Education*. New York: Longman.
- Slaughter, D.T., *Black Children, Schooling, and Educational Interventions*, in *Black Children and Poverty: A Development Perspective*, D.T. Slaughter, Editor. 1988, Jossey-Bass: San Francisco. p. 109-116.

- Sowell, Thomas. 1972. *Black Education: Myths and Tragedies*. New York: David McKay.
- Spencer, M.B., et al., Identity and school adjustment: Revisiting the "acting White" assumption. *Educational Psychologist*, 2001. **36**(1): p. 21-30 FTXT: Catchword [http://www catchword.com/cgi-bin/cgi?body=linker&reqidx=0046-1520\(\)36:1L](http://www.catchword.com/cgi-bin/cgi?body=linker&reqidx=0046-1520()36:1L) 21 URL: www.erlbaum.com/Journals/journals/EP/ep.htm.
- Steele, Claude. 1992. "Race and the Schooling of Black Americans." *Atlantic Monthly* 269 (April): 68ff.
- Steele, Claude and Joshua Aronson. 1995. "Contending with a Stereotype: African American Intellectual Test Performance and Stereotype Vulnerability." Seminar on Meritocracy and Equality, University of Chicago, May.
- Watkins, William H. 2001. *The White Architects of Black Education: Ideology and Power in America, 1865-1954*. New York: Teachers College Press.
- Weaver, Roy. 1979. *School organization and Black children's esteem*. R & E Publishing.
- Weinberg, Meyer. 1977. *A Chance to Learn: A History of Race and Education in the United States*, Cambridge: Cambridge University Press.
- Wilson, William J. 1987. *The Truly Disadvantaged: The Inner City, the Underclass and Public Policy*. Chicago: The University of Chicago Press.
- Wimberly, Charles. 1996. Validity of students' teaching evaluation scores: The **Wimberly**-Faulkner-Moxley Questionnaire. *Educational & Psychological Measurement*. Vol 56(2) Apr 1996, 304-314. Sage Publications, US
- U.S. Bureau of the Census. 1977. *Historical Statistics of the United States*. Washington, D.C.: USGPO. Census home page: www.census.gov

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Appendix A: Tables

Table 1. Means and Standard Deviations of Scales by Ethnicity and Gender.

Rewards	5 th grade	8 th grade	10 th grade	12 th grade
African Am.	3.36 (1.95)	2.88 (1.86)	2.90 (1.77)	2.91 (1.53)
Males	3.42 (1.39)	2.98 (0.63)	2.90 (0.51)	2.94 (0.65)
Females	3.30 (0.71)	2.79 (0.65)	2.90 (0.56)	2.87 (0.61)
White	3.33 (1.00)	2.95 (0.51)	2.99 (0.46)	3.00 (0.44)
Males	3.37 (1.10)	2.90 (0.52)	2.98 (0.44)	3.00 (0.43)
Females	3.30 (0.86)	3.00 (0.50)	3.00 (0.48)	3.01 (0.44)
Bonding	5 th grade	8 th grade	10 th grade	12 th grade
African Am.	3.02 (0.72)	2.79 (0.68)	2.69 (0.61)	2.65 (0.71)
Males	2.97 (0.76)	2.81 (0.58)	2.61 (0.63)	2.63 (0.67)
Females	3.07 (0.67)	2.77 (0.73)	2.76 (0.64)	2.67 (0.64)
White	2.86 (0.67)	2.67 (0.59)	2.69 (0.52)	2.63 (0.57)
Males	2.78 (0.67)	2.60 (0.59)	2.65 (0.50)	2.64 (0.57)
Females	2.92 (0.66)	2.75 (0.59)	2.74 (0.54)	2.62 (0.58)

Standard deviations in parentheses.

Table 2 Correlations of Rewards and Bonding at 5th, 8th, 10th, and 12th Grades, and Educational Attainment at Age 24 by Ethnicity and Gender (Females in parentheses)

	Black							
White	REW5	REW8	REW10	REW12	BOND5	BOND8	BOND10	BOND12
REW5		0.13 (0.28)	0.15 (0.04*)	-0.05 (0.12)	0.44 (0.42)	0.19 (0.25)	0.16 (0.1)	0.03* (8.34)
REW8	0 (0.12**)		0.25 (0.22)	0.21 (0.26)	0.26 (0.19)	0.61 (0.62)	0.14 (0.18)	0.2 (0.23)
REW10	-0.09*** (0.08)	0.28 (0.46)		0.57 (0.35)	0.15 (0.11)	0.04* (0.22)	0.47 (0.56)	0.26 (0.18)
REW12	-0.13*** (-0.01)	0.25 (0.26)	0.4 (0.42)		-0.01 (0.12)	-0.08*** (0.3)	0.3 (0.21)	0.59 (0.56)
BOND5	0.18 (0.4)	0.25 (0.16)	0.07 (0.08)	0.13 (0.07)		0.2 (0.44)	0.13 (0.2)	0.05 (0.24)
BOND8	0.11 (0)	0.57 (0.64)	0.18 (0.2)	0.19 (0.16)	0.26 (0.21)		0.23 (0.44)	0.18 (0.44)
BOND10	0.09 (0)	0.13 (0.38)	0.4 (0.58)	0.21 (0.26)	0.12 (0.08)	0.29 (0.47)		0.41 (0.41)
BOND12	0 (-0.06***)	0.22 (0.23)	0.17 (0.21)	0.44 (0.51)	0.18 (0.2)	0.29 (0.37)	0.43 (0.39)	
Educ24	0.02* (0)	0.05 (0.18)	0.1 (0.14)	0.09 (0.26)	0.05 (0.04*)	0.1 (0.18)	0.11 (0.16)	0.11 (0.11)

*** p < 0.001, ** p < 0.01, *p < .05

Table 3. Bivariate Regression of Selected Independent Variables on Highest Degree Obtained at Age 24. Academic Achievement by School Factors.

<u>Degree obtained by age 24</u>	
Free lunch	-0.26****
Socioeconomic Status	0.25****
Female	0.11***
African American	0.21****
Ethnic Id.	1.33
Rewards at 5 th grade	-0.02
Rewards at 8 th grade	0.06
Rewards at 10 th grade	0.08*
Rewards at 12 th grade	0.11**
Bonding at 5 th grade	0.11**
Bonding at 8 th grade	0.08*
Bonding at 10 th grade	0.13****
Bonding at 12 th grade	0.11**

Table 4. Academic Achievement by School factors, Multiple Regressions.

<u>Degree obtained by age 24</u>	
Socioeconomic Status	0.18****
African American	-0.15****
Bonding at 10 th grade	0.15****
Femaleness	-0.10**
Free lunch	-0.11**
R Square = 0.14	

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Appendix B: Items and Scales Used in This Analysis

	5th	8th	10th	12th	Age 24
Rewards related to school					
I like my class this year	likecls	lkcl8	lkcl10	lkclr12	
I feel safe at my school	feelsaf	flsf8	flsf10?	flsfr12	
Other students in class want me to do my best work	stusup	dowl8	dowl10	dowlr12	
My teachers are fair	teafair	tfar8	tfar10	tfarr12	
Bonding to School					
I like school	likesch	lksc8	lksc10	lksc12	
Most mornings I look forward to going to school	lfts	lfts8	lfts10	lfts12	
When I have assignments to do I keep working on it until it is finished	finwrk	fnwk8	fnwk10	fnwk12	
I do extra work on my own in class	xtrwk	xtrw8	xtrw10	xtrw12	
Educational Attainment					
What is the highest education degree or certificate you hold?					QA23

Optical Characterization of Cryptoendolithic Chemical Biosignatures on Antarctic Sandstone Surfaces

Ellen Harju

Abstract

We have used several non-destructive optical techniques to study the distribution of organic molecules on an Antarctic sandstone sample collected at Battleship Promontory. Cryptoendolithic microorganisms have been found to inhabit rocks in the Dry Valleys of Antarctica. These dry deserts are an Earth analog to Mars. Future Mars rovers may search for life in the rocks of Mars with similar instrumentation used in this study. Light microscopy was used to determine five distinct regions and to determine textures on the sample. Deep ultra-violet fluorescence spectroscopy was used to scan the rock for the presence of organic molecules. Organic molecules were present in three of the five regions but not in the crust. There were similarities between each region due to a fluorescence associated to the mineral background, but regions below the crust presented evidence of organics. Raman spectroscopy identified silica as the predominant mineral present. X-ray diffraction was also used to definitively identify the mineralogy of the sample and corroborate the Raman mineral results.

Introduction

The Dry Valleys of Antarctica are of particular interest to astrobiologists because they provide a Martian analog on Earth. [Horowitz *et al.*, 1972]. This is one of the coldest and driest areas on Earth. Temperatures can reach -60°C in the winter in the Dry Valleys. There is very little available water in the Dry Valleys of Antarctica. Snowfall is very occasional and often sublimates to water vapor without producing liquid water. Any life that was to survive in these conditions would need to be extremely resilient.

Microorganisms have been found living inside rocks in Antarctica. These cryptoendolithic communities have been studied in Antarctica since the 1970's [Friedmann and Ocampo, 1976]. The organisms typically consist of fungi and algae living separately or together in a symbiotic relationship as lichen. Cyanobacteria and other bacteria have also been found in the communities.

The rocks these organisms live in must be porous and translucent to visible light. Sandstone meets both of these requirements. Cryptoendoliths have been found to live as far as 10 mm below the surface of sandstone from Antarctica [Blackhurst *et al*, 2003]. It has

been proposed that similar life forms could have lived on Mars and potentially moved into rocks toward the end of their existence as the planet became colder and drier [Friedmann and Weed, 1987].

This work is a controlled, laboratory test of the ability of a new non-destructive optical organic molecule detector to detect organic molecules in Antarctic sandstone. This technology, coupled with Raman spectroscopy, could potentially be used *in situ* on future Mars missions.

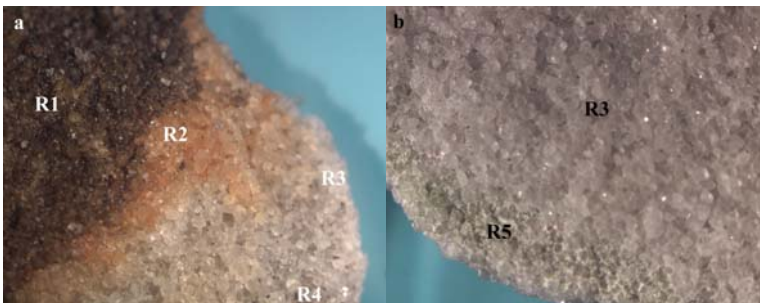
Experimental Procedures

Sample Collection. Sandstone samples were collected from sample site C1 at Battleship Promontory in the McMurdo Dry Valleys of Antarctica (S 76°55.307', E 161° 04.752'). The temperature at site C1 was recorded to be 1.3°C. The samples were stored and shipped at -20°C.

Sample Preparation and Data Collection. The sample required no preparation before data was collected with the fluorescence instruments and microscopes. A small amount of the sample was powdered before it was analyzed with the X-ray diffractometer. The sample was stored in a freezer at -20°C and kept on ice when it was in the laboratory to be analyzed.

Light Microscopy. A Nikon SMZ-10A dissecting light microscope with a Spot digital camera from Diagnostics Instruments was used to identify five distinct regions on the sample. Region 1 is the dark crust, region 2 is the light brown line below the crust, region three is white, region 4 is white with black speckles, and region 5 is green (figure 1).

Figure 1. Regions 1-4 (a) and 3 and 5 (b), each grain is approximately half a millimeter in diameter.

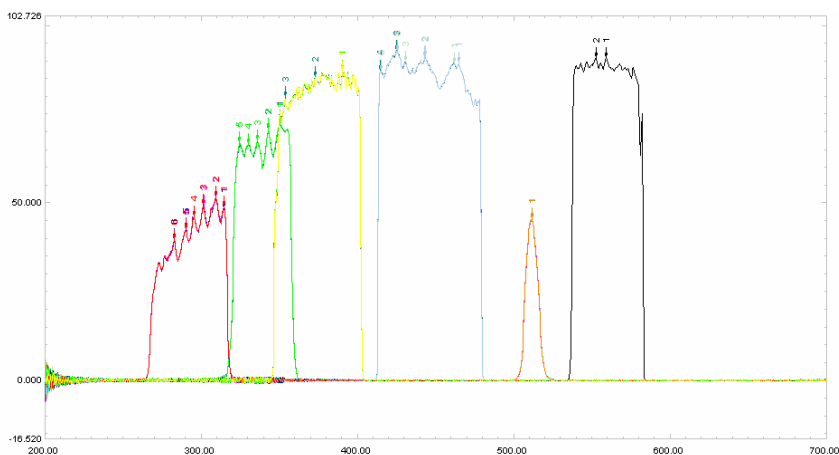


Environmental Scanning Electron Microscopy (ESEM). Images of a similar sample from site C1 were collected with a Philips XL30 ESEM equipped with a field emission electron gun. The sample was kept at approximately 3°C using a Peltier cooling stage. The voltage was set to 20.0 KeV. The ESEM software was used to digitally collect the images.

Energy Dispersive X-ray Spectroscopy (EDS). While the sample was being analyzed by the ESEM, an elemental analysis of the sample was conducted using a Princeton GammaTech energy dispersive X-ray spectrometer optimized for light element detection. X-rays were collected at a voltage of 20 KeV for 100 s.

Optical Organic Molecule Detector. This instrument uses a 248 nm NeCu hollow-cathode laser (Photon Systems) to excite a sample. The fluorescence detector uses six photomultiplier tubes (PMT) (Hamamatsu) to detect the fluorescence emission from the sample. Each PMT channel contains a band pass filter centered at a particular wavelength: 293, 339, 374, 446, 511, and 560 nm (channels 1-6). To accurately analyze the data the spectral range of the filters were each analyzed by a SolidSpec-3700 DUV[®] UV-VIS-NIR absorption spectrometer made by Shimadzu. The width of each filter is from 10-65 nm (figure 2). The software used to run the optical organic molecule detector, UV Hexaspec version 3.0, was developed at NASA's Jet Propulsion Laboratory (JPL).

Figure 2. Transmission spectra of filters.



Data was collected on the optical organic molecule detector using 40 μ s on-time pulses. A customized solarization-resistant fiber

optic heptacable (Ocean Optics) was coupled to the instrument. The end of the heptacable consisted of a probe with six fibers arranged in a circle around the central excitation fiber. An aluminum collar was placed on the probe that provided a 2 mm offset from the sample. The probe was held directly on the sample for data collection. The area of observation was approximately 200 μm . Fluorescence data was plotted with KaleidaGraph 3.5.

UVRS-1 Fluorescence Spectrometer. This instrument uses a 248 nm NeCu hollow-cathode laser (Photon Systems). The laser light epi illuminates the sample by passing through an 8x objective lens creating a spot size of approximately 100 μm . The fluorescent emission is collected by the objective lens. An edge filter is used to block the laser Raleigh scatter from the spectrometer. The fluorescence spectrum is acquired using a Triax 550 Spectrograph with a liquid nitrogen-cooled CCD (2048 x 512 pixels). The CCD has a resolution of 0.2 nm/pixel. The Spectramax/Grams 32 software is used to run the instrument.

Portable Raman Spectrometer. Raman spectra were collected using a Raman Systems RSL Plus that employed a 785 nm semiconductor laser. A 30 second integration time was used. Data were collected from 200 to 2500 cm^{-1} .

X-ray Diffractometer. A Bruker D8 Discover sealed-tube X-ray generator equipped with a General Area Detector Diffraction System (GADDS) was used to analyze the sample. Bruker's EVA analysis software, within the DIFFRAC^{plus} software suite, was utilized to identify the mineral(s) in the sample. EVA takes raw diffraction images generated by the GADDS and converts them to a 2-dimensional plot, which allows the user to match the data with known profiles of minerals stored as Powder Diffraction Files (PDF) supplied by the International Centre for Diffraction Data (ICDD).

Data Analysis. Due to the inconsistent transmissions of the filters, it was necessary to normalize the data. To determine the transmission of each filter, the UV-Probe program was used to integrate the area under the transmission curve. This area was divided by the area of a rectangle which was obtained by multiplying the width of the base of the transmission curve by 100. This ratio was multiplied by 100 to give the percent transmission for the filter. The data was normalized by multiplying each data point by 100 divided by the transmission of the filter. The median wavelength was determined using the full width half max method.

Results and Discussion

An Environmental Scanning Electron Microscope (ESEM) was used to confirm the presence of microorganisms on a similar sample. An elemental analysis using EDS was also conducted to verify the presence of organic molecules. No organic molecules were found on the crust of the rock (figure 3). Organic signatures were found on other regions of the rock including the green region (figure 4). The elemental analysis of the crust (figure 5) showed mainly silica, oxygen, and aluminum. Some iron was also present, which likely gave the crust its dark color. Figure 6 shows the elemental analysis of the organic region (solid line) with the elemental analysis of the rock surface superimposed (dotted line). There was a decrease in silica, an increase in oxygen, the appearance of a carbon peak, and the appearance of several smaller peaks.

Figure 3. Environmental scanning electron microscope image of the rock crust.

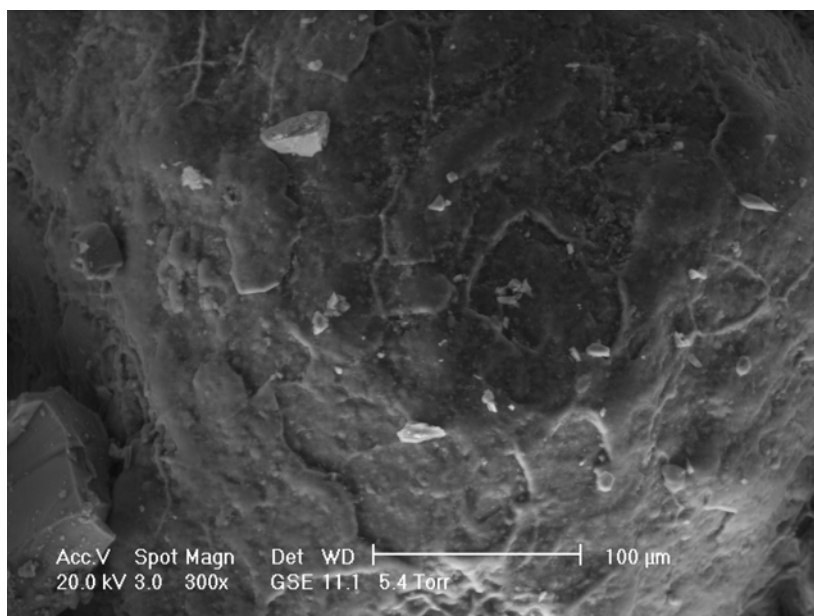


Figure 4. Elemental analysis of areas of the rock containing organics.

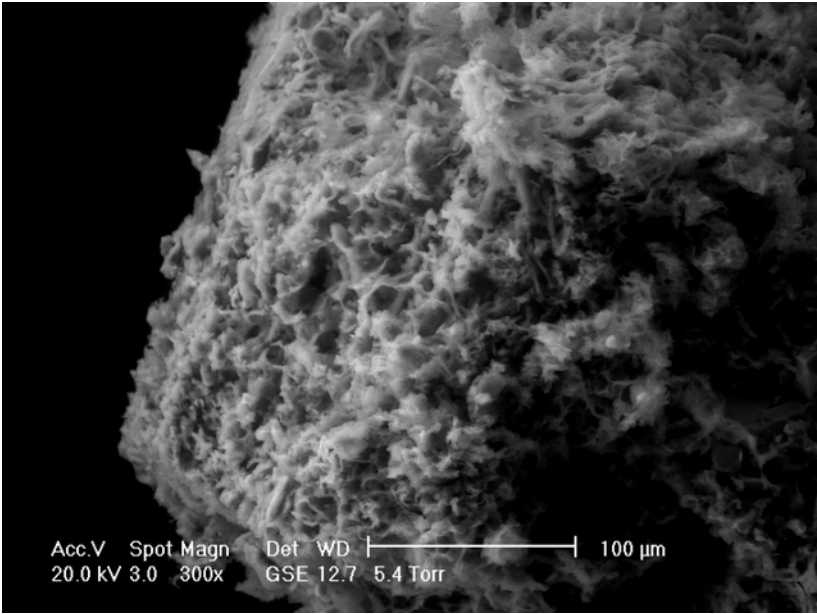


Figure 5. Elemental analysis of the rock crust.

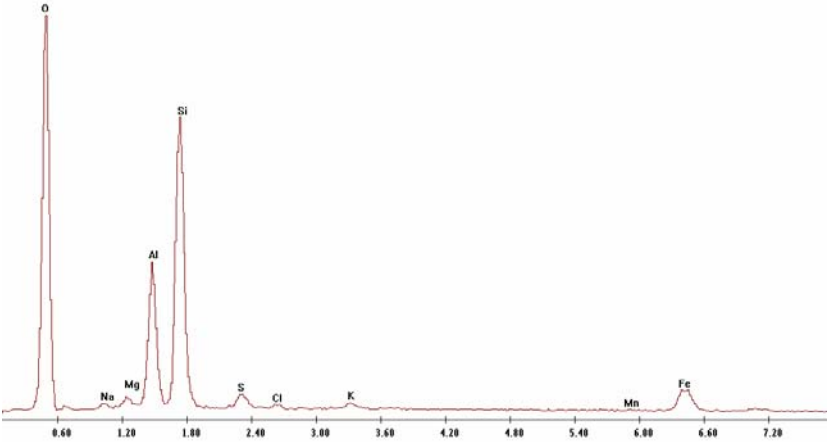
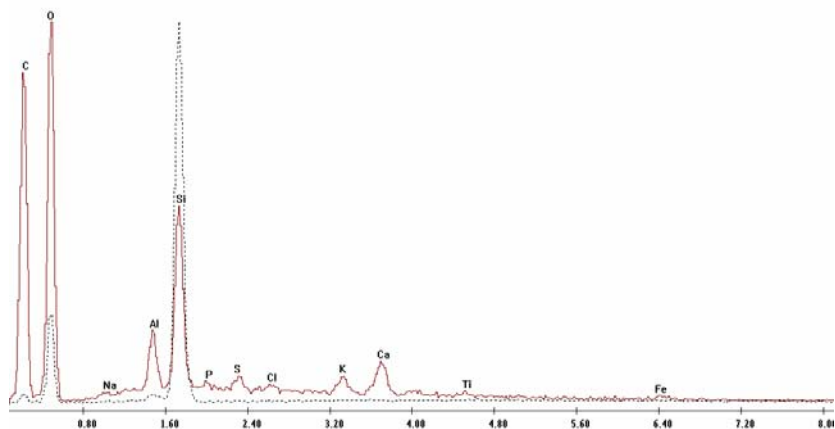


Figure 6. Elemental analysis showing organic molecules (solid line) with the elemental analysis of the rock crust superimposed (dashed line).



Each of the five regions exhibited some degree of laser-induced native fluorescence. The dark brown crust and the light brown line beneath the crust showed very little fluorescence (figures 7 and 8). This may be due to iron absorbing the ultra-violet light, but releasing it as thermal radiation instead of light.

Both the dark and light brown regions showed a similar trend when the intensities were normalized (figures 9 and 10).

The fluorescence of the green and the white region followed a different trend (figures 11 and 12). The second channel showed approximately five times the amount of fluorescence from the green region when compared to the white region (figures 13 and 14). This fluorescence is likely due to organic molecules containing 2 aromatic rings and/or indoles. [Bhartia *et al.*, 2004].

The white-and-black region also likely contains fluorescing organic molecules (figure 15). This region did not follow the trend of either the brown regions or the trend of the green and white regions (figure 16).

Raman spectra were collected from each region. Figure 17 shows one of the spectra obtained from region 2. There is a silica peak at

Figure 7. Region 1 fluorescence data.

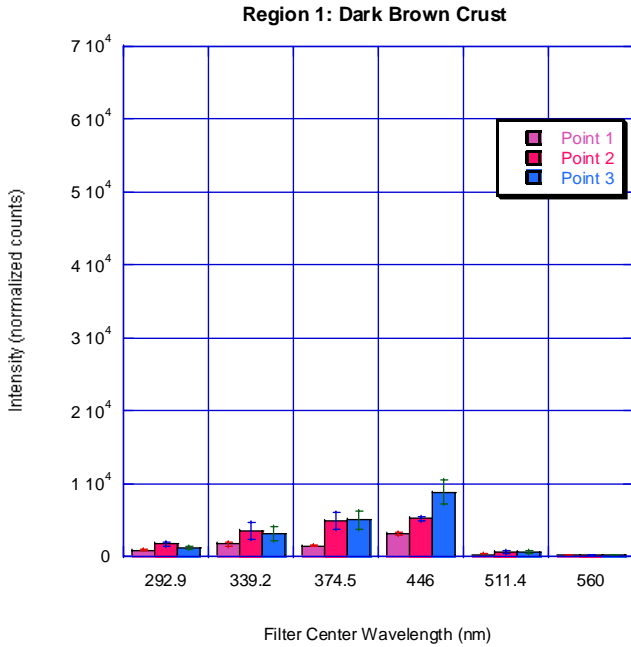


Figure 8. Region 2 fluorescence data.

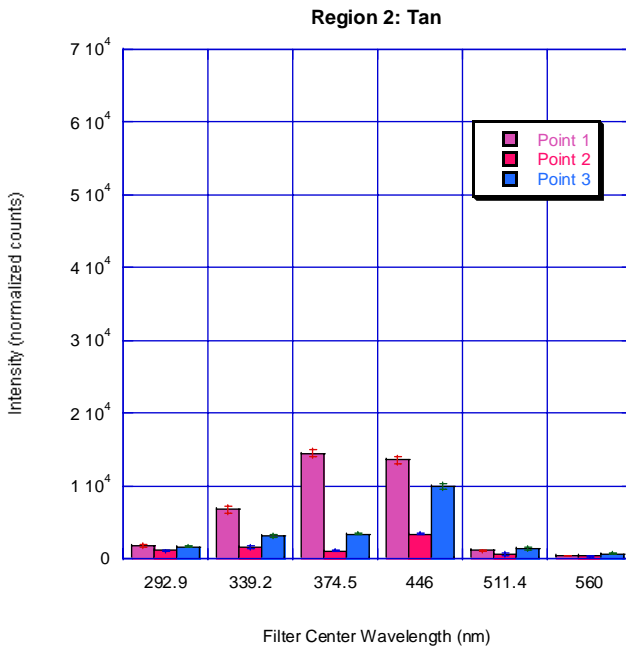
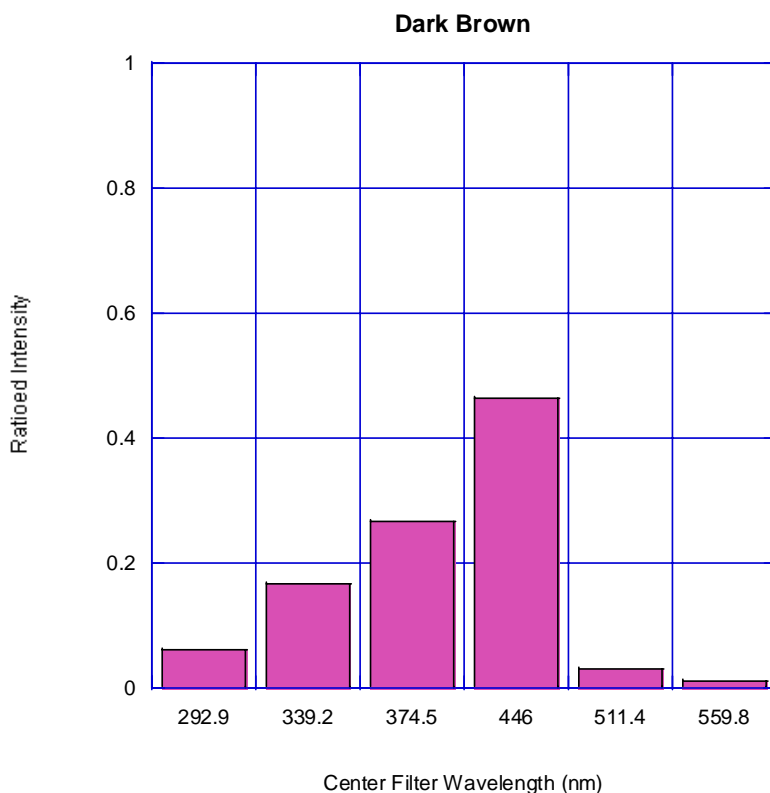


Figure 9. Region 1 fluorescence data with the intensities normalized.



490 cm^{-1} . This peak was also seen on Raman mineral standards obtained from The California Institute of Technology and on the spectra of a quartz standard obtained using the RSL Plus (figure 18). The laser on the RSL Plus caused the sample to fluoresce, which interfered with the Raman spectra after 500 cm^{-1} . No useful information on organic molecules was obtained from the Raman spectra because of this.

Figure 10. Region 2 fluorescence data with the intensities normalized.

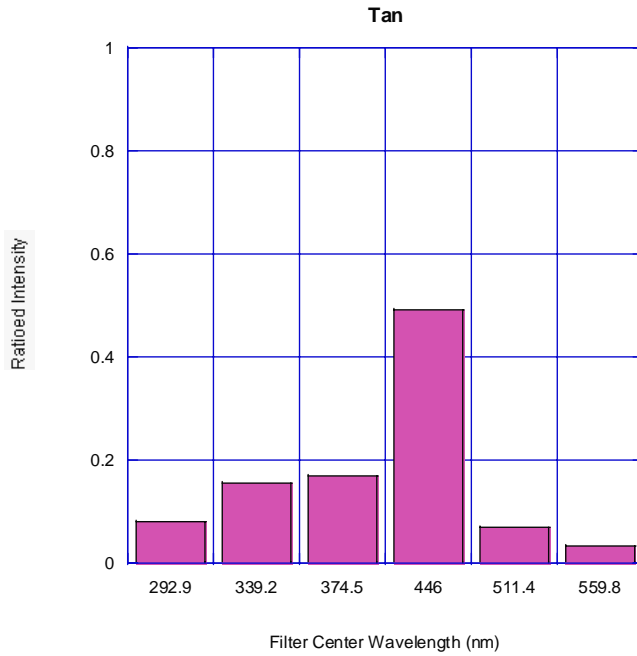


Figure 11. Region 5 fluorescence data.

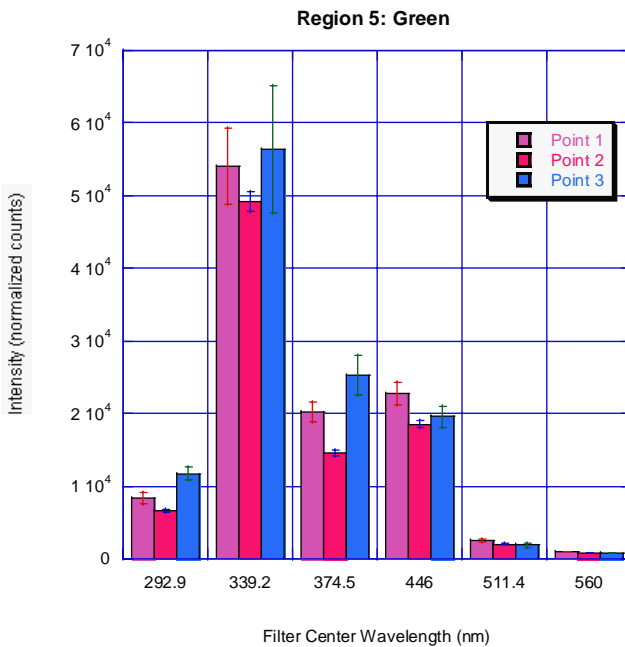


Figure 12. Region 3 fluorescence data.

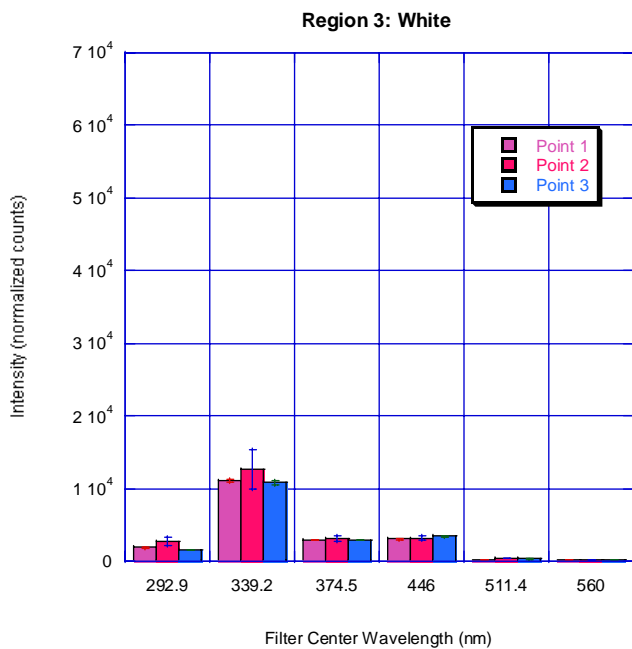


Figure 13. Region 5 fluorescence data with the intensities normalized.

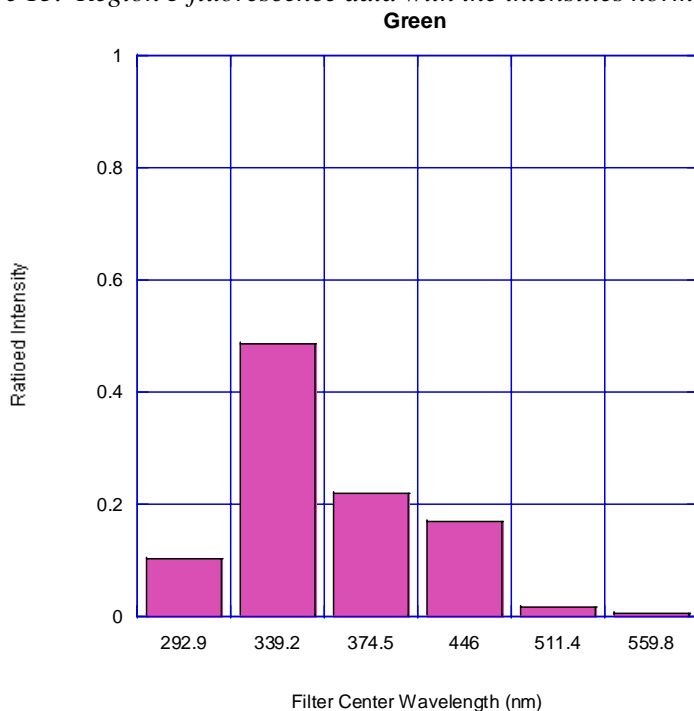


Figure 14. Region 3 fluorescence data with the intensities normalized.

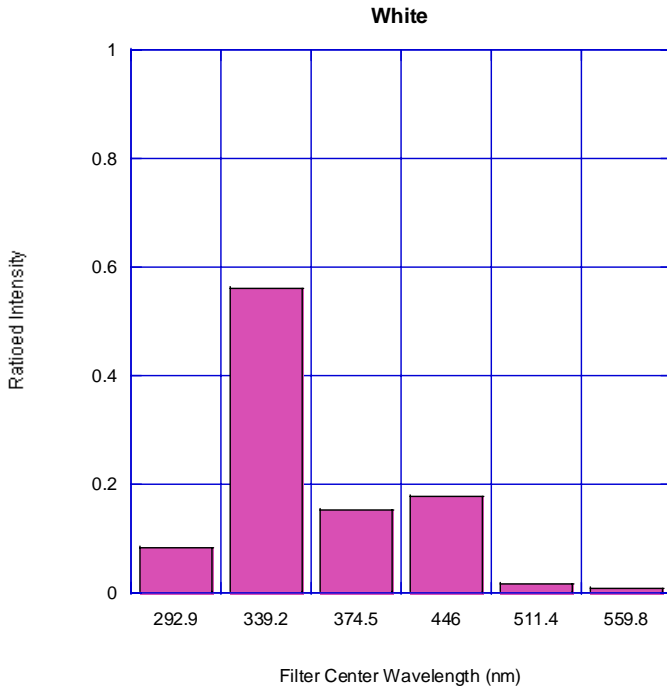


Figure 15. Region 4 fluorescence data.

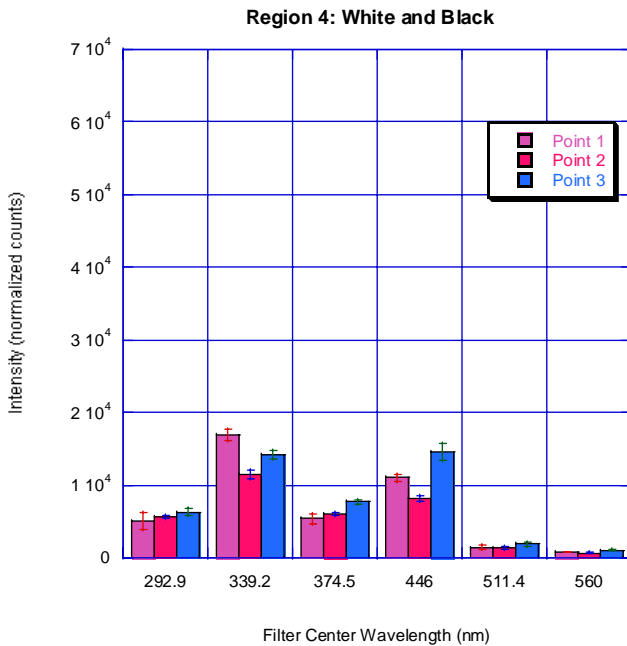


Figure 16. Region 4 fluorescence data with the intensities normalized.

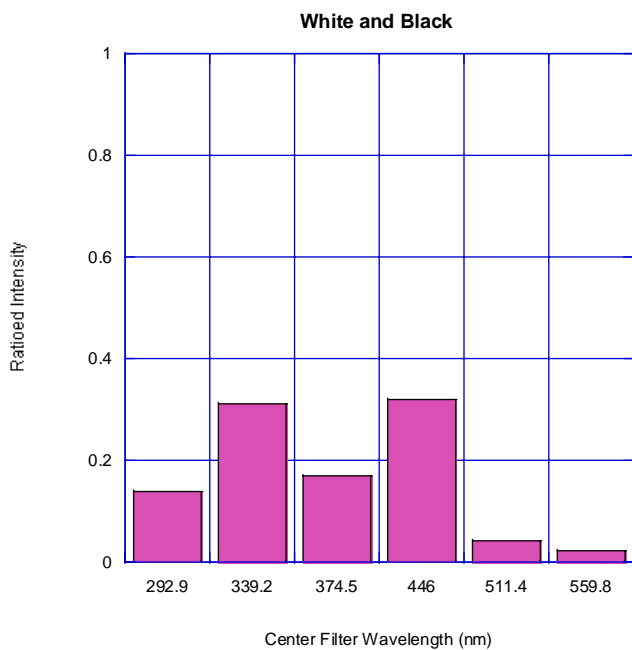


Figure 17. Raman spectra from region 2.

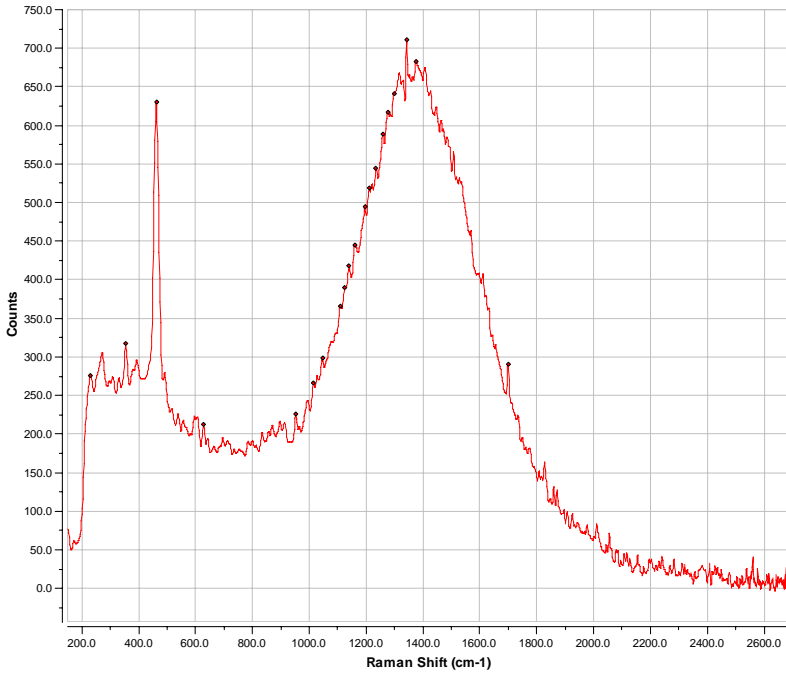
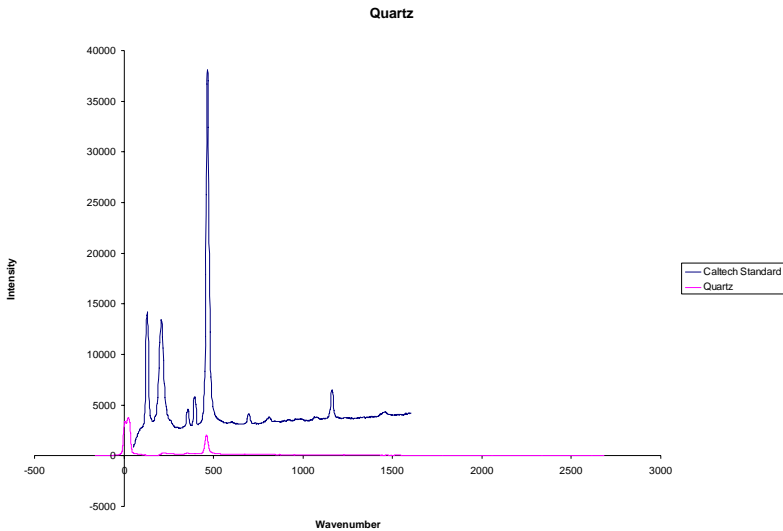
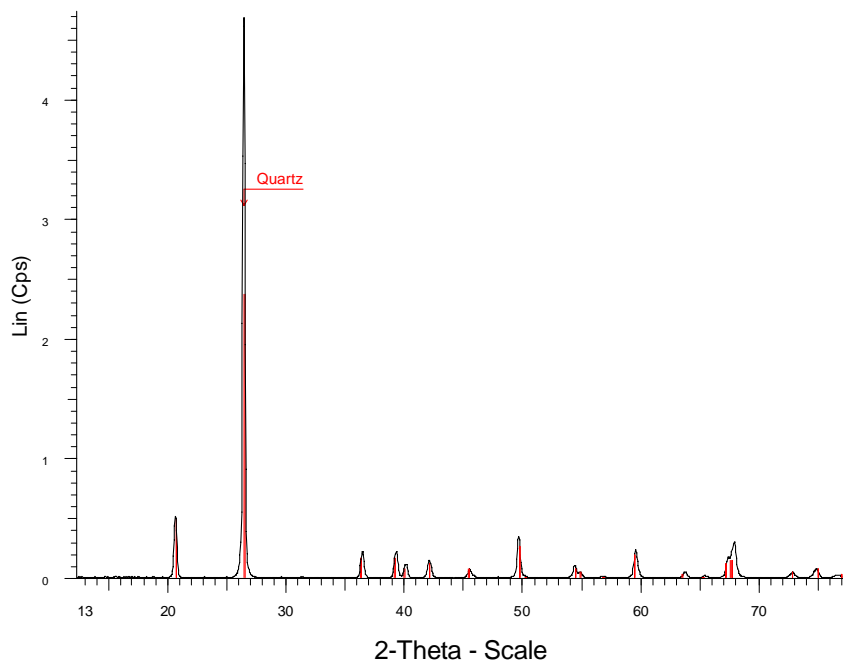


Figure 18. Quartz raman spectra standards.



X-ray diffraction was used to confirm the Raman mineral results. Only quartz was present in the analysis of the X-ray data (figure 19). This is what was expected from the sandstone and corroborates the Raman data.

Figure 19. X-ray diffraction data.



The data from the optical organic molecule detector was corroborated by the data from the UV-RS1. When compared to UV-RS1 data this field-deployable portable fluorescence detector has been shown to be effective at detecting organic molecules. A similar instrument containing a 224 nm laser was previously used in the field to detect organic signatures [Conrad *et al.*, 2004]. The Raman spectra could be improved by using a laser with a different wavelength, such that the fluorescence emission does not overlap the Raman region. Possible wavelengths include lasers emitting at 224, 244, 248, and 532 nm. Another option would be to use a photobleaching method and irradiate the sample until the fluorescence has decreased [Rosch *et al.*, 2005]. This method is destructive and less desirable so other options should first

be explored. With an improved Raman system this technology could one day be used to detect extinct or extant life on Mars.

References

- Bhartia, R., G. D. McDonald, E. Salas, and P. Conrad (2004), Determination of aromatic ring number using multi-channel deep UV native fluorescence, *Lunar Plan. Sci.* XXXV, 2045.
- Blackhurst, R.L., A. Verchovsky, K. Jarvis, and M.M. Grady (2003), Cryptoendolith Communities in Antarctic Dry Valley Region Sandstones: Potential Analogues of Martian Life-forms, *Lunar Plan. Sci.* XXXIV, 1576.
- Conrad, P.G., A.L. Lane, R. Bhartia and G.D. McDonald (2004), The effects of molecular interactions with minerals on the detection of organic chemicals in rock and sediment by laser-induced native fluorescence, *Intl. J. Astrobiol. Suppl.* 1, 117.
- Friedmann, E. I. and R. Ocampo (1976), Endolithic Blue-Green Algae in the Dry Valleys: Primary Producers in the Antarctic Desert Ecosystem, *Science*, 193, 1247-1249.
- Friedmann, E.I., and R. Weed (1987), Microbial Trace-Fossil Formation, Biogenous, and Abiotic Weathering in the Antarctic Cold Desert, *Science*, 236, 703-705.
- Horowitz, N.H., R.E. Cameron, and J.S. Hubbard (1972), Microbiology of the Dry Valleys of Antarctica, *Science*, 176, 242-245.
- Rosch, P, M. Harz, M. Schmitt, K. Peschke, O. Ronneberger, H. Burkhardt, H. Motzkus, M. Lankers, S. Hofer, H. Thiele, and J. Popp (2005), Chemotaxonomic Identification of Single Bacteria by Micro-Raman Spectroscopy: Application to Clean-Room-Relevant Biological Contaminations, *Applied and Environmental Microbiology*, 71, 1626-1637.

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Impact of Early Pubertal Timing on Family Relations: Psychosocial or Hormonal?

Cindy Meerim Kim

Abstract

Early pubertal timing for girls is associated with a variety of negative psychological and health outcomes. In particular, early pubertal timing is often associated with problematic family relations. Previous research indicates that girls who experience high-for-age level of estradiol, a female sex hormone, show increased rate of pubertal development and greater family discord. The present study examined the association between the girls' estradiol levels and family conflict. Sixty-two intact, two-parent families with girls, ages nine to eleven, from the greater Puget Sound area in Washington State participated in the study. The rate of pubertal development for the girls was assessed by estradiol level. Family conflict was measured using the Family Global Behavioral Coding system during a ten minute problem discussion between the girls and their two parents. We hypothesized that families of girls with higher levels of estradiol would exhibit greater family conflict during a ten minute discussion, compared to girls with lower levels of estradiol. There was partial support for the hypothesis. In general, when girls had higher levels of estradiol, there were more problematic parenting behaviors. When girls had higher levels of estradiol, their parents exhibited significantly lower levels of parental cohesion during the problem-solving task ($r = .42, p = .01$), fathers exhibited less parenting behaviors ($r = .40, p = .01$), and mothers' engagement decreased during the problem-solving task ($r = .37, p = .02$). The present study found no association between girls' levels of estradiol and their behavior during the ten minute problem solving discussion. The results suggests that pubertal transition in girls may be associated with poor parental behaviors and cohesion.

Introduction

Pubertal maturation is a dynamic biological process punctuated by visible and significant changes in the body composition, rapid physical growth, and development of secondary sexual characteristics, accompanied by major social and cognitive changes (Feldman & Elliot, 1990). These critical changes culminate in the transition from the pre-productive to the reproductive phase of women's life cycle.

In the past decades, much of the research on female adolescent development has been focused on this pubertal transition that defines and

shapes the experiences of adolescents and their social interactions (Steinberg, 1987). In particular, variation in the timing of pubertal maturation in levels of physical and sexual development of girls has received considerable research attention.

The most consistent finding to emerge from the extensive literature on pubertal maturation in girls is the association of early pubertal timing with a variety of negative psychological and health outcomes. Research indicates that early maturing girls are at a greater risk later in life for unhealthy weight gain (Adair & Gordon Larsen, 2001), breast cancer and a variety of other cancers of the reproductive system (McPherson, Sellers, Potter, Bostick & Folsom, 1996). Aside from the negative health outcomes, early maturing girls tend to show more disturbances in self-esteem and distorted views of self body image, report more emotional problems such as depression and anxiety (Graber, Lewinsohn, Seeley & Brooks-Gunn, 1997), and engage in more problematic behaviors such as aggression, early dating, substance abuse (Rose, Viken & Kaprio, 2000) and sexual promiscuity (Flannery, Rowe & Gulley, 1993). Furthermore, studies indicate that early maturing girls also have higher rates of teen pregnancy (Manlove, 1997), spontaneous abortion, stillbirths and low birth-weight babies (Udly & Cliquet, 1982).

In addition to the negative psychological and health outcomes, pubertal timing is also associated with a number of parent-child interactions and family dynamics, such as family structure and family conflict (Campbell & Undry, 1995). Previous studies of adolescents and their parents consistently indicated that pubertal maturation is associated with increased aloofness, conflict and dissatisfaction in the parent-child relationships reported by both parties (Steinberg & Hill, 1978). For example, early onset of menarche has been associated with fewer blood-related siblings (Tanner, 1968), father absence (Surbey, 1990), and conflicted and problematic family relations (Steinberg, 1988). Archer, Caspi and Moffitt's (1991) research with early maturers showed that early maturing girls report more family conflict, problems with authority figures, social isolation and absence of satisfaction in everyday life. Moreover, studies have also indicated that early maturers are given more autonomy and are monitored less by parents as well as teachers (Silbereisen & Kracke, 1997). Untimely autonomy and lack of attention derived from their early maturing image can make early maturing girls feel neglected and confused about their age appropriate behavior. Given this disturbing array of outcomes, it is critical to examine the parent-child relationships of early maturing girls during pubertal maturation.

Various theories have been offered concerning the mechanisms by which early menarche increases negative health outcomes and parent-

child conflict. The most predominant theory applied to this issue is the psychosocial model. The psychosocial model of pubertal timing focuses on the role of familial and environmental stressors in provoking early onset of pubertal development (Chisholm, 1993; Wilson & Daly, 1997). Belsky, Steinberg and Draper (1991) were the first to propose a life history model of the role of psychosocial stressors in accelerating timing of puberty in girls. Belsky et al. (1991) theorized that girls whose experiences with their family are characterized by relatively high levels of stress such as, scarcity or instability of resources, father absence, as well as negative and coercive family relations, are hypothesized to develop in a manner that speeds rates of pubertal maturation and sexual activity. This theory, linking psychological stress to earlier puberty suggests that low-quality parental care may signal an environment in which parental care and resources are not closely linked to child's reproductive success. Under these conditions, the developing child should accelerate reproductive maturation. For example, Blanchard, McKittrick and Blanchard (2001) showed that there are stress-specific neuroendocrine pathways and circuits within the central nervous system that are affected by different types of stressful events on both physiology and behavior. The specific stressors variables that were found to be correlated with girl's pubertal timing are physical stressors (e.g. malnutrition, physical strain), socioeconomic stressors (e.g. harsh and neglecting family relations), and father absence (Ellis & Garber, 2000).

Another linkage between pubertal change and parent-child relationship in the psychosocial model of pubertal maturation is the effects of the development of secondary sex characteristics and other physical changes of puberty (Brooks-Gunn & Zahaykevich, 1989; Collins, 1988). For girls in particular, timing of menarche and the concomitant changes in secondary sex characteristics has consistently been the focus of the research (Paikoff & Brooks-Gunn, 1991). These physical changes are salient to both adolescent and parent and signal the reproductive capability as well as the social maturity of the child. Considering the significance of menarche, parent-child interaction can easily become sensitive to the physical changes of the child, which in turn can alter the parent-child expectations, increase assertiveness from the child's end and increase confrontational parent-child interactions (Paikoff, Brooks-Gunn & Carlton-Ford, 1991; Silverberg & Steinberg, 1990). Corroborative questionnaires and observational studies by Hill (1988) as well as Steinberg (1987), show compelling evidence of change in parent-child interactions during puberty and supports the negative outcomes of early pubertal timing. While the increases in parent-child conflict during puberty can be expected as a function of change in power

structure in family dynamics, one must consider the effects of early onset of puberty and its psychological and social impact on young girls who are psychologically not ready for such changes. That is, the difficulties experienced by early maturing girls may be partially rooted in the fact that others attribute greater maturity to them than is warranted by their chronological age, which results in expectations that are difficult to satisfy.

A second model that can be applied to understand the potential association between a child's pubertal changes and characteristics of parent-child relationship is a model that includes a role of increased concentration or fluctuation in hormonal levels. Studies of the impact of pubertal hormones on adolescent feelings and behaviors are more recent compared to research using questionnaire and observation measures which started in the 1970's (Paikoff & Brooks-Gunn, 1990). This model focuses on the changes in hormone concentration or variability, which can heighten adolescent's arousal and emotional reactivity and result in more negative and unpredictable parent-child interactions (Chrousos & Gold, 1992). In terms of young adolescents, in particular, there are many potential ways in which emotions or affective states are expected to reflect the rise in hormone levels at puberty. One approach to conceptualizing the mechanisms, through which hormones may indirectly effect emotions, and thus behavior, is in terms of the hormone's activation of affective states. It is important to recognize that emotions or affective states are expected to reflect the levels and activation of such hormones. Therefore, disturbances in emotions and thus, behavior also may reflect dis-equilibrium in biological processes stemming from the rapidly increasing hormone levels during puberty (Inoff-Germain, Arnold, Nottelmann, Susman, Cutler & Chrousos, 1988). Before puberty, levels of estrogens are relatively low and the emotional and behavioral functioning of the child may reflect this basal, non-stimulated state. With the onset of puberty and continuing throughout the later stages of adolescence, hormone levels rise dramatically and the preexisting biological equilibrium is apt to be disturbed to varying degrees. Behaviors and emotions of young adolescence going through this transition may also reflect this disturbance. The pubertal hormone theory suggests that the extent to which the behavioral effects of rising hormone levels throughout puberty are dependent on variety of factors, such as individual sensitivity to the hormones in question. Additionally, because estrogens rise dramatically during pubertal development for girls, one would expect that estradiol is of central importance in effecting behavioral changes that are a function of pubertal change (Williams, 1981).

A good example of hormones directly accelerating pubertal development is the activation of the Hypothalamic-pituitary-adrenocortical (HPA) axis due to stress. An extensive literature documents that psychological factors influence the HPA axis, which regulates the release of cortisol, an important hormone associated with psychological, physiological and physical health functioning (Dickerson & Kenedy, 2004). First, psychological stressors affect physiology by activating specific cognitive cues and their central nervous system. The thalamus and frontal lobes integrate the sensory information and evaluate the meaning of the stressor. These cognitive appraisals trigger the generation of emotional responses through the limbic system. The limbic structures connect to the hypothalamus and serves as a primary pathway for the activation of HPA axis. The activation of HPA axis is initiated by the hypothalamic release of corticotropin releasing hormone, which stimulates the anterior pituitary to secrete adrenocorticotropin hormone, which in turn releases cortisol from the adrenal cortex (Lovallo & Thomas, 2000).

Applying the theoretical framework of stress, HPA axis and release of cortisol, one can speculate that girls with greater levels of stress are correlated with increased secretion of adrenal androgens and thereby have acceleration of adrenarche (Ellis, 2004). Not surprisingly, research by Dorn, Hitt and Rotenstein (1999) has shown that girls with premature adrenarche have more than twice the elevation of salivary cortisol levels relative to same-age peers. More importantly, the results are consistent with research documenting high levels of behavioral and mental health problems in children with premature adrenarche (Dorn et al, 1999). Furthermore, research indicates that high levels of estradiol and cortisol levels are associated with greater sexual motivations, depressive symptoms and aggressive behaviors in girls (Brooks-Gunn & Warren, 1991; Inoff Germain, Nottemann, Susman, Cutler & Chrousos, 1988). Based on these findings, one can predict that more dramatic the change in hormone levels, the greater the correlation between the impact of puberty on family relations and psychological functioning for girls.

Although the evidence for the distancing impact of pubertal changes on adolescents' relations with their parents is quite compelling, the literature on early maturing girls cited above still leaves open a question of fundamental importance. Variability between families in effects of pubertal changes on parent-child interaction still remains in question (Peterson & Crockett, 1985). For instance, families that were highly conflicted prior to puberty are more likely to show more negative parent-child interactions post puberty when compared to families with low conflict. Moreover, the majority of studies have examined pubertal

status or timing without regard to the rate of development or to the salience of particular pubertal events, such as sexual abuse and domestic violence (Steinberg, 1987). For instance, the high level of cortisol recorded in sample during research could be the result of a salient event that occurred in school. One must question whether or not the level of cortisol, and thus stress, is related to parent-child interaction itself.

Another area that merits further investigation is the nature of the questionnaire and observation data that use self or parent report of pubertal status and does not contain direct measures of pubertal development (Brook-Gunn & Warren, 1985). Although self-report measures of pubertal status are non-invasive for adolescents, the validity and consistency of self-report measures of pubertal timing and status is questionable. Therefore, issues of measurement and conceptualization of the underlying issue behind parent-child conflict remain a missing gap in the literature of early onset of puberty for girls.

The present study will test the two predominant models of research, psychosocial and the pubertal hormone model, and has two primary objectives: (a) can the impact of puberty for early maturing girls be measured explicitly only in terms of the parent-child relations and (b) what measures can be taken to accurately indicate the rate of pubertal development as well as stress level of early maturing girls? Thus, as amount of estradiol indicates sexual maturity in early maturing girls, the impact of puberty on parent-child relations will be measured against psychosocial variables, such as marital satisfaction and parent income and education.

To summarize, Hormonal theory's measure will include level of estradiol, an estrogen of a group of endogenous sex hormones responsible for growth of the breast and reproductive organs, and development of the secondary sexual characteristics in girls. Psychosocial theory's measure will include a questionnaire regarding parental relationship called Locke Wallace Marital Adjustment Test (Locke & Wallace, 1959) as well as demographic measures such as education level of both parents and household income. Both theories will be compared for family conflict outcome measures via Family Global Behavioral Coding System. Family Global Behavioral Coding System will assess parenting style, family cohesion, and the emotional tone of the family's interaction via 5 dimensions: (a) Problem solving, (b) Family cohesion, (c) Parental Cohesion, (d) Engagement, (e) Parenting Style. There are 4 emotion subscales: (a) Emotion awareness, (b) Emotion acceptance, (c) Emotion coaching, (d) Emotion competency.

The purpose of the present study was to examine the impact of puberty on parent-child relations of early maturing girls. Is there a

hormonal or psychosocial correlation between pubertal timing and levels of stress during parent-child interaction? The present study will challenge the strength of the two predominant models of research, Psychosocial and Hormonal theories, in predicting family conflict outcomes.

Research Design and Methods

Participants

In order to accurately detect pubertal maturation effects, the design will include 62 different families with nine-year old girls from the greater Puget Sound area in Washington State. All girls will be from intact, two-parent biological families, or blended families.

Minority Composition of the Sample

The sample reflects the City of Seattle's data on the minority composition of the Greater Seattle region: 10% African-American, 12% Asian American and Pacific Islander, 4% Hispanic American, 1% Native American, 2% Inter-racial, and 72% Euro-American.

Recruitment, Subject Screening, and Selection Criteria

Recruitment occurred through local schools, recreational facilities, mental health clinics, primary healthcare providers, libraries, and advertisements in local newspapers. The sample is constructed so that there is an even (rectangular) distribution of marital satisfaction (i.e. the upper and lower ends of the marital satisfaction population will be over sampled to have equal power across levels of marital satisfaction). The mean marital satisfaction will be equivalent to the normative mean on the Marital Adjustment Test. Girls will be excluded from the study if they have endocrine disorders.

Social Economic Status, neighborhood, and racial and ethnic matching considerations

Marital satisfaction has been used as a criterion for splitting the sample in half, with one group representing greater marital satisfaction and the other group representing lower marital satisfaction. The two halves were matched on racial and ethnic variables, parents' education and income level, and crime statistics for the family's neighborhoods to better consider the social context within which the families live.

Procedures and Research Data

Naturally Occurring Dinnertime Home Visit

Previous literature on early pubertal maturation mainly examined the underlying mechanism of pubertal timing and its effects on parent-child interaction through questionnaire measures and laboratory visits. The study of naturally occurring parent-child communication through observational methods would make a valuable contribution to understanding how parent-child interaction is altered, how the family dynamics shifts during this transition period and the impact on the girls themselves. The present study attempted to examine the way the parent-child interaction occurs in a natural setting by visiting the family's home when the girls are aged from 9-10 and developing secondary sex characteristics and gaining autonomy. The purpose of this visit is to learn about how the families function in their normal day to day interactions. The naturally occurring visit occurred during dinnertime by visiting the family in their home.

The research team, consisting of a graduate nursing student and a research assistant, came to the home approximately one hour prior to the time the family makes dinner. At the beginning of the home visit, a nurse conducted a health screen with the child including assessment of oral health, teething, recent injuries or oral problems, as well as the taking of temperature (ear canal method). The home visits were rescheduled if the child was running a temperature over 102 F or if there was oral bleeding. All prescription and other medications taken within the past 48 hours was recorded. The visit with the families took place at approximately the same time of day (approximately 5:30-7:30 pm) to minimize the effects of circadian variation. Urinary sample of the girl's catecholamine were taken, as were salivary measures of cortisol and estradiol during this time period.

Parent-child Problem Solving Laboratory Visit

In order to assess the emotional coaching, family cohesiveness and child's emotional competency during parent-child interaction, participants were invited to the laboratory. The child and parents participated in a problem solving interaction. Parents and child were interviewed to identify two issues of disagreement. The child and her parents were asked to discuss the conflict topic for 10 minutes while the interaction was videotaped for observational coding.

Measures and Coding

Hormonal Theory Measures

Endocrine Measures

The hormones chosen for the proposed study reflect both the importance of their role in physiological processes of interest in this study (emotional regulation, stress, and sexual maturation) and the ability to index them in a noninvasive, valid manner. Of special consideration was the ability to index the hormones associated with sexual maturation at the relatively low levels found in middle and early adolescence. The endocrine measures in this study were taken during the dinnertime home visit with the families and took place at approximately the same time of day to minimize the effects of circadian variation. The protocols for the saliva biomarkers (sample collection, handling, and assay procedures) were designed in consultation with Douglas A. Granger, Ph.D., (Associate Professor and Director of the Pennsylvania State University Behavioral Endocrine Laboratory; President, Salimetrics).

Salivary Measures

Monitoring biomarkers in saliva has distinct advantages over doing so in other biological fluids. Sampling saliva represents a less-invasive method for repeated sampling schedules. Salivary levels of hormones accurately reflect the unbound, biologically active, fraction in the general circulation. These biomarkers in the saliva are very stable once collected and can be stored frozen for up to at least 2 years at -20 C without compromising sample integrity.

Studies caution that the application of salivary markers in behavioral research must be conducted with care to ensure valid results. The literature warns that substances put into subjects' mouths to collect samples very easily lower or raise the pH of saliva. Performances of salivary immunoassays become compromised as the pH of samples to be tested drops below 4 or exceed 9. Blood can leak into the oral mucosa because of lesions in the oral cavity. When blood is present in saliva samples, quantitative estimates of salivary markers are invalid. Some food substances contain animal products (e.g. bovine hormones in milk products) that cross-react with the antibodies used to estimate hormone levels in immunoassays. Increase in hormones in blood and saliva can be reliably detected following consumption of protein-rich major meals. It is also widely known that systematic infection (i.e. as indicated by body temperature above 102 F) is associated with activation of the HPA axis.

An initial salivary sample was collected from the target child after the health screening is completed. A second salivary sample was collected just prior to dinner. A third and final saliva sample was collected one hour after the completion of the dinner meal, to avoid contamination of the sample by food consumed. Intake of milk or any dairy products were prohibited for 20 minutes before each sample

collection. Subjects rinsed their mouths with water, waited 5 minutes, and then expectorated 6-10 mls of saliva through a short plastic straw into a collection vial. After collection, all samples were kept on ice until brought to the University of Washington. The samples were then stored at -20°C until shipped to the Salimetrics Laboratory at the Pennsylvania State University campus, a research facility directed by Dr. Douglas Granger. Highly sensitive assays were used that require minimal sample test volumes.

There is a clear advantage of taking multiple saliva samples at different points during the home visit. Primarily, the difference in the level of cortisol measured in each sample will show the difference of stress levels before and after the parent-child interaction during dinner. Therefore, the increase or decrease of cortisol levels will accurately measure the amount of stress that occurred only during the immediate parent-child interaction at dinner and eliminate the possible effect of salient events that might have occurred prior to dinner. Moreover, the sample taken during the visit will be analyzed for the level of estradiol in girls to precisely determine the rate of pubertal development. Using amount of estradiol in the saliva sample as an indicator of sexual maturity is a direct measurement of pubertal development and eliminates many issues concerning measurement of pubertal development.

Urinary Measures

Urinary measures will include urinary epinephrine, norepinephrine, and dopamine during the dinnertime home visit. These samples were taken during the same period of time for all children (approximately 5:30 to 7:30 p.m.). Urinary measures are a relatively non-invasive technique for indexing biomarkers, an important consideration when working with children. Children were asked to void their bladders at the beginning of the home visit and this was not collected. The child's total urine output was then collected during the home visit. The child was asked to void his/her bladder at the end of the home visit to complete the sample.

Total volume of the urine was measured and used for estimation of catecholamine produced (ng/ml per hour). Samples were preserved with hydrochloric acid and kept on dry ice until brought to the laboratory. Once at the laboratory, samples were frozen until assayed. The catecholamine levels were measured by using standard high performance liquid chromatography procedures. The creatinine levels in the urine is a correction factor for the catecholamines. All catecholamine assays were conducted in the Department of Biobehavioral Nursing

Laboratory at the University of Washington, under the supervision of laboratory director, Dr. Margaret Heitkemper.

Cortisol

All samples were assayed for salivary cortisol using a high-sensitive enzyme immunoassay (Salimetrics, PA). Prior to immunoassay for cortisol, samples were screened for the presence of blood proteins not normally in concentrations above 1.0 mg/dl in saliva, and the sample's pH was corrected if outside the acceptable range.

Dehydroepiandrosterone (DHEA)

DHEA was assayed using a double antibody radioimmunoassay (Salimetrics, PA). The assay's range of sensitivity captures 100% of developmental and individual differences in DHEA levels in the saliva of females, of ages 7 to 45 years of age.

Estradiol

All samples were assayed for salivary estradiol using a double antibody radioimmunoassay (Salimetrics, PA). Values from matched serum and saliva samples show the expected strong linear relationship for females.

Psychosocial Theory Measures

Questionnaires: Lock-Wallace Marital Adjustment Test

Marital quality, health and general demographic questionnaires were given to each spouse to complete during their visit to the laboratory. Marital quality was assessed via Locke Wallace Marital Adjustment Test (Locke & Wallace, 1959). Parent education and household income was also collected via self-report at this time.

Family Conflict Measures: Family Global Coding

The Family Global Coding System is a coding system designed to analyze the general patterns of family interaction during a 10-minute problem solving task involving the husband, wife and child. Each family member is given a list of topics that frequently come up in families (i.e., chores, homework, bedtime) and asked to individually rate how much of an issue each one is in their own family. The two issues that are most meaningful for the family are selected as topics for the problem solving task.

The Family Global Coding System assesses parenting style, family cohesion, and the emotional tone of the family's interaction. The coding system examines the family problem solving task via 5

dimensions: Problem solving, Family cohesion, Parental cohesion, Engagement, Parenting style. The 5 dimensions allow variability and specific coding according to each member or members of the family. Within the 5 dimensions, there are 4 emotion subscales: (a) emotion awareness, (b) emotion acceptance, (c) emotion coaching, (d) emotion competency, 2 parental subscales: (e) parental cohesion, (f) parenting style, 2 overall family subscales: (g) family cohesiveness, (h) family problem solving, and lastly, (i) engagement subscale for all family members. Each of the 9 subscales were utilized appropriately to each family member. For example, the child was evaluated upon subscales; emotional competency and engagement while the parents were assessed upon subscales; emotional acceptance, emotional awareness, emotion coaching, parent cohesion, parenting style and engagement.

The response set for the Family Global Coding system consists of a 'present' or 'not present' scale for each statement in all dimensions. Each response is assigned a value of 1 or 0. The items are then summed to give a total for each dimension.

Results

Of the 62 families, 44 (71%) girls met criteria for presence of estradiol in their endocrine samples. The reasons behind the absence of estradiol can be contributed to systematic errors during data collection and loss of samples during to transfer. In order to maximize statistical power and to accurately measure the sexual maturity in the girls via level of estradiol, only the 44 girls with estradiol samples were analyzed.

Psychosocial Theory

The first aim of the study was to challenge the psychosocial model of pubertal timing, which focuses on the role of familial and environmental stressors in provoking early onset of pubertal development. The Psychosocial Theory was examined by using a one-way ANOVA with psychosocial variables such as marital quality, general demographic, such as parent education and household income in comparison to family conflict outcomes such as (a) emotion awareness, (b) emotion acceptance, (c) emotion coaching, (d) emotion competency, (e) parental cohesion, (f) parenting style, (g) family cohesiveness, (h) family problem solving, and lastly, (i) engagement.

Consistent with previous literature, ANOVA yielded a significant main effect for paternal influence on the impact of puberty on family relations. In particular, increase in father's income x family conflict outcome variable showed greater engagement by the father in the problem-solving task $F= 14.187$, $p < .001$, better parenting behaviors by

the father $F= 14.187$, $p < .001$, more emotional coaching for the child by the father $F= 15.601$, $p < .000$, as well as more cohesion between the parents during the problem-solving task $F= 7.581$, $p < .009$. Secondly, increase in father's education also yielded significant effect with more engagement of the father during problem-solving task $F= 5.573$, $p < .001$ and greater child's emotional competency during problem-solving task $F= 3.313$, $p < .020$. No significant correlations were found with mother's income and education.

Hormonal Theory

The second aim of the study was to challenge the hormonal model, which focuses on the changes in hormone concentration or variability and its effects in creating a more negative and unpredictable parent-child interactions. Pearson 2-tailed correlational analysis between level of estradiol in girls and the family conflict variables such as (a) emotion awareness, (b) emotion acceptance, (c) emotion coaching, (d) emotion competency, (e) parental cohesion, (f) parenting style, (g) family cohesiveness, (h) family problem solving, and lastly, (i) engagement, were done to examine the influence of rise in estradiol. When girls had increased levels of estradiol, parents exhibited significantly lower levels of parental cohesion during the problem-solving task ($r = .42$, $p = .01$), exhibited less parenting behaviors by fathers ($r = .40$, $p = .01$), and engagement during the problem-solving task decreased for mothers ($r = .37$, $p = .02$).

Conclusion

The present study attempted to challenge the strength of the two predominant models of research, Psychosocial and the Hormonal theories, in predicting family conflict outcomes. In this report, the distancing impact of puberty on family relationships was examined through endocrine analysis and behavioral coding as well as questionnaire data. The findings were generally consistent with the hypothesis that pubertal maturation increases emotional distance between girls and their parents. In terms of predicting negative impact of puberty on family relations, there was more support for the Psychosocial Theory than the Hormonal Theory. Surprisingly, the impact of puberty on conflict in family varied drastically across different relational dyads. There was much strength in Psychosocial Theory in predicting family conflict in terms of father's psychosocial variables compared to that of mother's.

The findings from this research have several implications regarding the paternal influence over girl's rate of sexual maturity. First,

the results are consistent and extend Belsky's (1991) psychosocial theory. The central and most intriguing hypothesis proposed by Belsky et al. (1991) is that timing of pubertal development in girls is influenced by early family experiences that are characterized by father absence and discordant male-female relationships, and ultimately will lead to accelerated pubertal timing as a component of reproductive strategy. As predicted by the Psychosocial Theory, the influence of paternal care on girl's sexual maturation was clearly demonstrated through father's income and education, considering that all of the families in the study were intact. More financial stability of fathers and higher education level achieved by fathers predicted later pubertal timing in their nine-year old daughters as well as better family conflict outcomes during a problem solving task.

Although not as consistent in predicting family conflict outcomes, when girls had greater sexual maturity (higher estradiol levels), there were greater family conflict outcomes in terms of parental cohesion and engagement of parents during the 10 minute problem solving discussion. While current knowledge supports the view that hormone levels affects the behavior of adolescents, present study was unable to draw firm conclusion regarding particular hormone-behavior relations displayed by the girls. Moreover, analysis of hormone relations to family conflict outcomes only demonstrated poor parental behavioral outcomes during the problem solving task.

The research literature suggests several explanations. Generally, decreased supervision of early maturers may allow them increased opportunities to engage in independent and defiant behaviors, leading to more conflict during family encounters. An alternative explanation is evolutionary in nature. Although mothers form the primary foundation of parental care in all societies, the contribution of fathers to the family dynamics has always been widely variable. Over the course of human evolution, this variability in male reproductive strategies must have afforded young girls with important cues to the reproductive opportunities and constraints they were likely to encounter later in life. Drawing on this logic, Draper and Harpending (1988) posited that girls have evolved to experience early socialization in terms of father's role in the family and that different paternal roles bias girls toward the acquisition of different reproductive strategies. The present data showing an association between early paternal psychosocial variables and subsequent timing of puberty and family conflict outcome is consistent with this theory. Another possibility is a result of economic stressors associated with fathers being financially unstable provoking negative family conflict outcomes.

These analyses raise important issues about studying and understanding factors that contribute to the development of behavioral patterns, with implications that extend beyond the relationship between pubertal timing and family conflict outcome. Experimental research designs are needed to test for the causal influence of paternal family relationships on pubertal timing. Without such experimental data, one must be cautious about attributing causal status to the observed relations between family environment and pubertal timing. With this limitation in mind, further experimental research can be used to investigate the relationship between alternative psychosocial variables in comparison to family conflict outcome. Further research can consider neighborhood crime statistics as an additional psychosocial variable as well as a teacher's rating of a child's behavior. Conducting self-esteem and self-image questionnaires to girls with high levels of estradiol would also bridge the gap between causal statuses to the observed relations.

References

- Adair, L.S. & Gordon-Larsen, P. (2001). Maturation timing and overweight prevalence in US adolescent girls. *American Journal of Public Health*, 91, 642-644.
- Archer, J., Caspi, A. & Moffitt, T.E. (1991). Individual differences are accentuated during periods of social change: The sample case of girls at puberty. *Journal of Personality and Social Psychology*, 61, 157-168.
- Belsky, J., Steinberg, L., & Draper, P. (1991). Childhood experience, interpersonal development, and reproductive strategy: An evolutionary theory of socialization. *Child Development*, 62, 647-670.
- Blanchard, R.J., McKittrick, C.R., & Blanchard, D.C. (2001). Animal models of social stress: Effects on behavior and brain neurochemical systems. *Physiology and Behavior*, 73, 261-271.
- Boyce, W. T. & Jemerin, J. M. (1990). Psychobiological differences in childhood stress response: I. Patterns of illness and susceptibility. *Developmental and Behavioral Pediatrics*, 11, 196-206.

- Brooks-Gunn, J. & Warren, M.P. (1985). Measuring physical status and timing in early adolescence: A developmental perspective. *Journal of Youth and Adolescence*, 14, 163-189.
- Brooks-Gunn, J. & Zahaykevich, M. (1989). Parent-child relationships in early adolescence: A developmental perspective. In K. Kreppner & R.M. Lerner (Eds.), *Family systems and life-span development* (pp. 223-246). Hillsdale, NJ: Erlbaum.
- Campbell, B.C. & Undry, J.R. (1995). Stress and age at menarche of mothers and daughters. *Journal of Biosocial Science*, 27, 127-134.
- Chisholm, J.S. (1993). Death, hope and sex: Life-history theory and the development of reproductive strategies. *Current Anthropology*, 34, 1-24.
- Chrousos, G. P. & Gold, P.W. (1992). The concepts of stress and stress system disorders. Overview of physical and behavioral homeostasis. *Journal of the American Medical Association*, 267, 1244-1252.
- Collins, W.A. (1988). Developmental theories in research on the transition to adolescence. In M.R. Gunnar & W.A. Collins (Eds.), *Minnesota symposia on child psychology* (Vol. 21, pp. 1-15). Hillsdale, NJ: Erlbaum.
- Dickerson, S.S. & Kenedy, M.E. (2004). Acute stressors and cortisol responses: A theoretical integration and synthesis of laboratory research. *Psychological Bulletin*, 130, 355-391.
- Draper, P. & Harpending, H. (1988). A sociobiological perspective on the development of human reproductive strategies. In K. B. McDonald (Ed.), Sociobiological perspective on human development (pp. 340-373). New York: Springer-Verlag.
- Ellis, B.J. (2004). Timing of pubertal maturation in girls: An integrated life history approach. *Psychological Bulletin*, 130, 920-958.
- Ellis, B.J. & Garber, J. (2000). Psychosocial antecedents of variation in girls' pubertal timing: Maternal depression, step-father presence, and marital stress. *Child Development*, 71, 485-501.

- Feldman, S. & Elliot, G. (1990). *At the threshold: The developing adolescent*. Cambridge, MA: Harvard University Press.
- Flannery, D.J., Rowe, D.C. & Gulley, B.J. (1993). Impact of pubertal status, timing and age on adolescent sexual experience and delinquency. *Journal of Adolescent Research*, 8, 21-40.
- Graber, J.A., Lewinsohn, P.M., Seeley, J.R. & Brooks-Gunn, J. (1997). Is psychopathology associated with the timing of pubertal development? *Child and Adolescent Psychiatry*, 36, 1768-1776.
- Hill, J. (1988). Adapting to menarche: Familiar control and conflict. In M. Gunnar, (Eds.), *21st Minnesota symposium on child psychology*, (pp. 43-77). Hillsdale, NJ: Erlbaum.
- Inoff-Germain, G., Arnold, G., Nottelman, E., Susman, E., Cutler, G., Chrousos, G. (1988). Relation between hormone levels and observational measures of aggressive behaviors of young adolescents in family interactions. *Developmental Psychology*, 24, 129-139.
- Lovallo, W.R., & Thomas, T.L. (2000). Stress hormones in psychological research: Emotional, behavioral and cognitive implications. In J.T. Cacioppo, L.G. Tassinary, & G.G. Berntson (Eds.), Handbook of psychophysiology (pp. 342-367). Cambridge, England: Cambridge University Press.
- Manlove, J. (1997). Early motherhood in an intergenerational perspective: The experience of a British cohort. *Marriage and the Family*, 59, 263-279.
- McPherson, C.P., Sellers, T.A., Potter, J.D., Bostick, R.M. & Folsom, A.R. (1996). Reproductive factors and risks of endometrial cancer. The Iowa Women's Health Study. *American Journal of Epidemiology*, 143, 1195-1202.
- Paikoff, R.L. & Brooks-Gunn, J. (1990). Physiological processes: What role do they play during the transition to adolescence? In R. Montemayor, G. Adams, & T. Gullotta (Eds.), *Advances in adolescent development: Vol. 2. From childhood to adolescence: A transitional period?* (pp. 63-81). Newbury Park, CA: Sage.

- Paikoff, R.L. & Brooks-Gunn, J. (1991). Do parent-child relationships change during puberty? *Psychological Bulletin*, 110, 47-66.
- Paikoff, R.L., Brooks-Gunn, J. & Carlton-Ford, S. (1991). Effect of reproductive status changes upon family functioning and well-being of mothers and daughters. *Journal of Early Adolescence*, 11, 201-220.
- Peterson, A.C. & Crockett, L. (1985). Pubertal timing and grade effects on adjustment. *Journal of Youth and Adolescence*, 14, 191-206.
- Rose, R.J., Viken, R.J. & Kaprio, J. (2000). Pubertal timing and substance use: Association between and within families across late adolescence. *Developmental Psychology*, 36, 180-189.
- Silbereisen, R.K. & Kracke, B. (1997). Self-reported maturational timing and adaptation in adolescence. In J. Schulenberg, J.L. Maggs, & K. Hurrelmann (Eds.), *Health risks and development transitions during adolescence* (pp. 85-109). Cambridge, England: Cambridge University Press.
- Silverberg, S.B. & Steinberg, L. (1990). Psychological well-being of parents with early adolescent children. *Developmental Psychology*, 26, 658-666.
- Steinberg, L. & Hill, J. (1978). Patterns of family interaction as a function of age, the onset of puberty, and formal thinking. *Developmental Psychology*, 14, 683-684.
- Steinberg, L. (1987). Impact of puberty on family relations: Effect of pubertal status and pubertal timing. *Developmental Psychology*, 23, 451-460.
- Steinberg, L. (1988). Reciprocal relation between parent-child distance and pubertal maturation. *Developmental Psychology*, 24, 122-128.
- Surbey, M. (1990). Family composition, stress, and human menarche. In F. Bercovitch & T. Zeigler (Eds.), *The socioendocrinology of primate reproduction* (pp. 71-97). New York: Liss.

Tanner, J.M. (1968). Earlier maturation in man. *Scientific American*, 218, 21-27.

Udry, J.R. & Cliquet, R.L. (1982). A cross-cultural examination of the relationship between ages at menarche, marriage and first birth. *Demography*, 19, 53-63.

Williams, R.H. (1981). *Textbook of endocrinology*. Philadelphia, PA: W.B. Saunders.

Wilson, M. & Daly, M. (1997). Life expectancy, economic inequality, homicide, and reproductive timing in Chicago neighborhoods. *British Medical Journal*, 314, 1271-1274.

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Determining Muller Glia Progenitor Potential

Tess Lang

Abstract

The retina develops as an outgrowth of the neural tube known as the optic vesicle which gives rise to five basic types of neurons and the Muller glia. Several studies indicate that Muller glia share a common lineage with retinal neurons. Past studies have shown that lower vertebrates such as fish and amphibians are able to regenerate a considerable amount of neural retina following retinal damage, while higher vertebrates like birds and mammals cannot regenerate. In spite of a considerable amount of research, the reason for an absence of regeneration in mammalian adults has not been found. The mature retinas possibly lack necessary factors that allow the progenitor proliferation and differentiation into neurons and glia. It has been shown elsewhere in the CNS that when immature spinal glia are placed into the hippocampus, new neurons are able to grow from the glia. This is an example where a change in environmental factors was able to change the fate of glia to neurons. The goal of this study is to determine whether mice Muller glia have precursor potential and will form neurons given an appropriate environment. This study would help to provide evidence for the hypothesis that muller glia have regenerative potential.

Introduction

The Thomas Reh lab at the University of Washington is currently researching retinal development and regeneration. The retina develops as an outgrowth of the neural tube known as the optic vesicle. The optic vesicle gives rise to five basic types of neurons and Muller glia.(3) Several studies indicate that Muller glia share a common lineage with the retinal neurons.(3) The mammalian retina is thought to be incapable of regenerating.(1) Past studies have shown that lower vertebrates such as fish and amphibians are able to regenerate a considerable amount of neural retina following retinal damage, while higher vertebrates like birds and mammals cannot regenerate. Even though adult chicken retina is incapable of complete regeneration, they retain the capacity to regenerate some retinal neurons after neurotoxin injury. The source of the regenerating cells was identified as Muller glia, which reenter the cell cycle and de-differentiate to make new neurons.(1) The purpose of this project is to study the regenerative potential of Muller glia in the mammalian retina.

In spite of a considerable amount of research, the reason for an absence of regeneration in mammalian adults has not been found. It could be possible that there are environmental restrictions in the adult retinas. The mature retinas possibly lack necessary factors that allow the progenitor proliferation and differentiation into neurons and glia. Support for this theory comes from past work elsewhere in the CNS. It has been shown that when immature glia from the spinal cord are placed into the hippocampus, a site of constant neuronal regeneration even in adults, new neurons are able to grow from the glia. This result is an example where a change in environmental factors were able to change the fate of glia to neurons. (2)

The goal of this study is to determine whether mouse Muller glia have precursor potential and will form neurons given an appropriate environment using an *in vitro* experimental set up. Since newborn mice eyes have retinal progenitors constantly forming neurons, this environment is suitable for looking into the regenerative capacity of Muller glia. If the mammalian retina were to undergo regeneration, the most likely candidate would be the Muller glia due to their direct descendants of neuronal progenitors as well as common lineage with neurons. We co-cultured wild type embryonic retinas with Muller glia from GFP transgenic mice at postnatal day 7 (P7) for varying time intervals and analyzed for cell infiltration and trans-differentiation. Cell from P7 mice was taken as by this day all retinal cells are differentiated.

Material and Methods

Animals:

All experiments were done in accordance with approved protocols and the animals were housed and bred in the Department of Comparative Medicine at the University of Washington. Wild type as well as global GFP expressing mice (Jackson Labs) were used for *in vitro* explant co-culture experiments.

In Vitro Explant Co-Culture Experiments:

Newborn retinas were cultured on a nitrocellulose membrane for up to 7 days *in vitro*, in a method modified from Caffé et al., 1989. Briefly, retinas from mice were dissected free from the lens, pigmented epithelium and extra-ocular tissue in Hanks's balanced salt solution (HBSS), four small incisions were made in the peripheral retina to allow better flattening, and retinas were placed on a Millicell-CM 0.4 μ M filter insert. Filters were placed into a 6-well plate containing 1 mL of expant media (DMEM:F12 (Gibco), 0.6% glucose, 5 nM Hepes, 0.11% NaHCO₃, 25 μ g/mL insulin, 100 μ g/mL transferrin, 60 μ M putrescine, 30

nM selenium, 20 nM progesterone, 800 nM L-Glutamine, penicillin and streptomycin (Gibco), N2 supplement, and 10% FBS (Gibco). Explants were cultured at the gas-liquid interface at 37°C, 5%CO₂ and media was replaced every other day. BrdU was added to the media to identify proliferating cells. The day following placement of explants onto the nitrocellulose membrane, cells from GFP mice were taken from P7 mice following trypsinization and a suspension of the cells were gently dropped onto the surface of the explant. (See **Figure 1**) The explants were maintained for 7 days on the nitrocellulose membrane. For immunohistochemical analysis, the explants were fixed with 4% PFA and gently lifted off the membrane. They were subsequently embedded in OCT and cryo-sectioned.

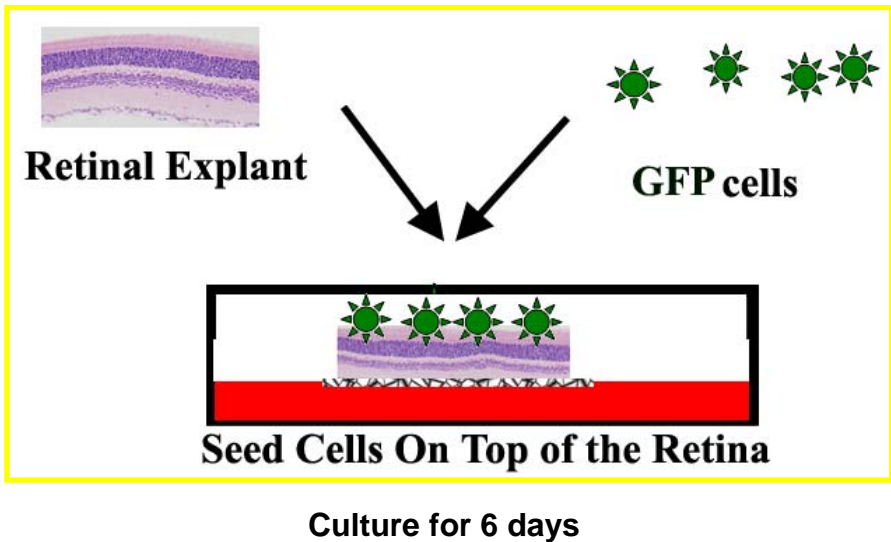


Figure 1: In vitro co-culture experimental set up showing the seeding of P7 GFP mouse retinal cells onto P0 wild-type retinal explants.

Immunohistochemistry:

For immunohistochemistry, the retinas were fixed by exposure to 4% paraformaldehyde in PBS for 60 minutes at 4°C. The retinas following wash-up were embedded in OCT (Miles Inc.) and sectioned using a cryostat. The sections were subsequently stained with the below mentioned primary and secondary antibodies. Sections were fixed at weekly intervals by exposure to 4% paraformaldehyde (Fischer Scientific) in PBS for 30 minutes at 4°C. Cells were analyzed with the following antibodies: rabbit anti-recoverin, mouse anti-Tuj-1, mouse

anti-Hu C/D, mouse anti-Rho-4D2, mouse anti-Cyclin D3, mouse anti-NeuN, rat anti-BrDU and mouse anti-glutamine synthetase. Secondary antibody staining was done using the corresponding Alexa-488, Alexa-568 and Alexa-350 fluorescent-tagged antibodies (Molecular Probes).

Results

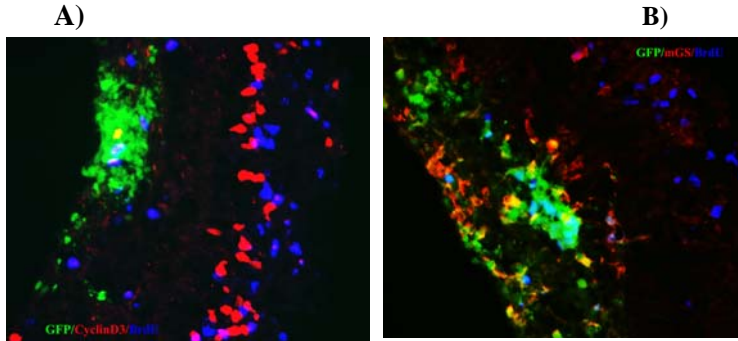


Figure 2: Glial Staining A) The staining with CyclinD3 (red) for the presence of glia in P7 GFP mouse retinal cells on P0 chicken retina. B) mGS (red) staining of retinal glia from P7 GFP mouse cells on P0 wild-type mouse retina. Co-Staining for BrdU is shown in blue to look for proliferation of transplanted glia.

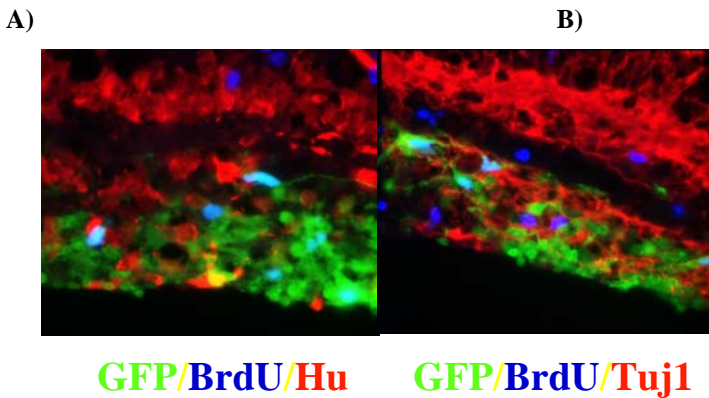


Figure 3: Neuronal stainings A) Hu neuronal marker staining (red), BrdU nuclear staining (Blue), and GFP staining on P7 mouse retinal cells on P0 wild-type mouse retina to identify overlap of all three stains indicating transdifferentiation of P7 mouse muller glia. B) Tuj1 neuronal marker staining, BrdU nuclear staining, and GFP staining on P7 mouse retinal cells on P7 wild-type mouse retina to identify overlap of all three stains indicating transdifferentiation of P7 mouse Muller glia.

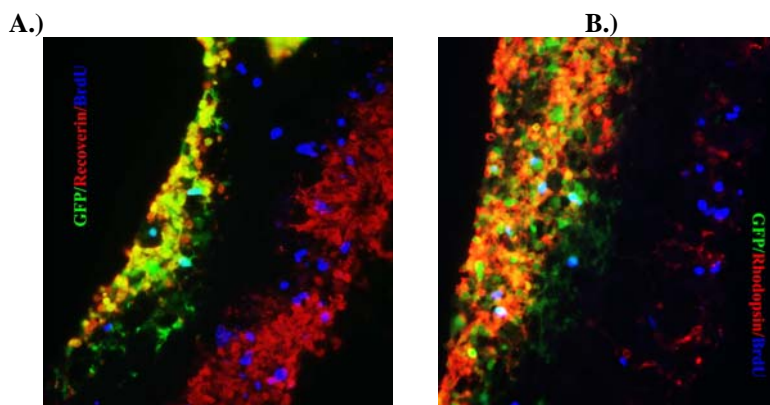


Figure 4: Photoreceptor Staining A) Recoverin photoreceptor marker staining (red), BrdU nuclear staining (blue), and GFP staining on P7 mouse retinal cells on P0 wild-type mouse retina to identify overlap of all three stains indicating trans-differentiation of P7 mouse Muller glia to photoreceptors. B) Rhodopsin photoreceptor marker staining (red), BrdU nuclear staining (blue), and GFP staining on P7 mouse retinal cells on P0 wild-type mouse retina to identify overlap of all three stains indicating trans-differentiation of P7 mouse Muller glia to photoreceptors.

Discussion

After the seeding of GFP P7 mouse Muller glia onto P0 wild-type mouse retina and cultured at 37°C, the infiltration of GFP cells were found by carrying out immunohistochemical staining with a GFP marker. CyclinD3 and mGS staining was used for glia as can be seen in **Figure 2**. By staining for glia, we were able to confirm that the seeding procedure was successful and that the P7 mouse glia had been placed in a supportive environment of trans-differentiation for 24 hours. BrdU co-staining shows that Muller glia proliferation following transplantation.

By using neuronal markers: Hu and Tuj1, the stained transplant results as seen in **Figure 3** were analyzed for a triple staining of GFP that were marked with BrdU, and one of the neuronal markers. The GFP indicates that the cells are from the P7 GFP mouse and not the P0 wild-type mouse, while the BrdU shows proliferation by division of the cell, and the neuronal marker identifies the presence of retinal neurons. The overlap between all three in addition to confirmation with glial markers from figure 1 classifies a GFP cell from the P7 wild-type mouse as undergoing proliferation based on the BrdU staining, to trans-differentiate to a neuron based on the neuronal markers. On

immunohistochemical analysis we found that the transplanted cells had infiltrated into the cellular layers of the newborn mouse retina. These cells however had not yet shown evidence of neuronal trans-differentiation. P0 wild type cells did co-stain for BrdU and Tuj/Hu indicating the mouse in-vitro environment is suitable for neural differentiation. Because there was no overlap found, the intrinsic nature of Muller glia is believed to not allow for the trans-differentiation into retinal neurons given a supportive environment.

Lastly, immunohistochemical staining specific to photoreceptors was used against these transplants to investigate whether the Muller glia were using trans-differentiation properties to form photoreceptors which do not stain for Tuj or Hu. **Figure 4** illustrates the great deal of photoreceptors that were able to survive. The formation of new photoreceptors was, however, not found. Because the formation of photoreceptors occurs between P0 and P7, it was a positive finding that the environment was able to support photoreceptor survival. This restores confidence in the environment itself and makes the finding of no trans-differentiation by Muller glia not a consequence of extrinsic factors in the environment.

Conclusion

Retinal regeneration occurs in lower vertebrates. If the mammalian retina were to undergo regeneration, the most likely candidate would be the Muller glia due to their direct descendents of neuronal progenitors as well as common lineage with neurons. This study provides evidence that although local retinal tissue was shown to undergo neurogenesis under explant conditions, transplanted Muller glia do not undergo a lot of proliferation and do not undergo trans-differentiation. The factors that permit trans-differentiation may be intrinsic to Muller glia. It was found that transplanted photoreceptors survive very well after transplantation. This indicates that *in vitro* environment is primarily a supportive environment. Although *in vitro* experiments were not inductive for P7 GFP mouse Muller glia, an environment more similar to the native retinal environment of a P0 mouse may be more successful in interacting with Muller glia. For these reasons, in the near future we will inject mouse GFP glia into eyes of newborn wild type mice.

References

1. Muller glia are a Potential Source of Neural Regeneration in the Postnatal Chicken Retina. Andy J Fischer, Thomas A. Reh Nature Neuroscience Vol 4 no 3 march 2001.
2. Astroglia induce neurogenesis from adult neural stem cells. Hongjun Song, Charles F. Stevens & Fred H. Gage Nature Vol 417 2 May 2002.
3. Potential of Muller Glia to Become Neurogenic Retinal Progenitor Cells. Andy J. Fischer, Thomas A. Reh, Glia 43:70-76 2003

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Domestic Violence and Poverty: Examining Causes & Effects among Black Women

Natasha Rivers

Abstract

My goal is to assess the relationship between structural power and domestic violence as a link to the poverty of Black women and children. I chose to focus on Black women because women of color affected by domestic violence and placed into a system of shelters or domestic violence abuse centers experience more hardship and discrimination once in those situations. After leaving an abusive partner, these Black mothers must find resources to provide for children quite differently in comparison to White women. This difference is most visible in terms of experience, available help and aid assistance. Many low-income communities of color lack diverse representation in domestic violence fields and resource centers. They are lost and alone. Many are just recycled through a housing system in which gender bias, racial exclusivity, and lack of accommodation to the working poor are commonplace. They remain in poverty and financial debt which greatly influences the paths of their children's lives. There are many factors that are responsible for the causes and consequences of abuse. I use a feminist methodology incorporating interviews with professionals, researchers, domestic violence counselors and police department representatives assigned to domestic violence matters in Seattle, on reasons behind women's decisions to leave abusive partners. I also use discourse analysis in this study in order to understand the ways that community and legal advocacy programs as well housing and domestic violence laws in the state of Washington contribute to the experiences of homeless women and their children in general and homeless Black women and their children in particular.

Introduction

My research project is entitled "Impacts of Domestic Violence on the Poverty of Black Women." My goal is to assess the relationship between structural power and domestic violence and how they link to poverty for Black women and children. I chose to focus on Black women because women of color affected by domestic violence and placed into a system of shelters, or domestic violence abuse centers experience more hardship and discrimination once in those situations. I believe Black women's experience with domestic violence is compounded through racism and discrimination. After leaving an abusive partner, these Black

mothers must find a way to provide for children quite differently in comparison to White women. This difference is mainly in terms of experience, available help and aid assistance. Many low-income communities of color lack diverse representation in domestic violence fields and resource centers. They are lost and alone. Many are just recycled through a housing system in which gender bias, racial exclusivity, and lack of accommodation to the working poor are commonplace. They remain in poverty and financial debt, which greatly influences the paths of their children's lives. There are many factors to the causes and consequences of abuse. There is the question of the law, the question of how to reach women who are inaccessible, the problem of homelessness after women and children have been forced from their residence and the problem of making services more relevant to this population.

My study is assessing domestic violence as a path leading to poverty for Black women, aged 18-45 years old, and living in Washington State, with a special focus on King County and the greater Seattle area. The women I refer to in this study live in poverty as a direct result of their experience with domestic violence. Most of these women have children and also serve as the main care providers. Thrown into poverty after suffering physical abuse at the hands of their husband or boyfriend, are left with the financial burden of raising children by themselves without adequate food and shelter. In many instances these women are too afraid to leave their abusers for fear of not being able to sustain a standard of living on their own, and of raising children without a father. They are afraid they would be unable to keep the family together and that others would know her personal business. The history of racism and discrimination with law enforcement and other legal systems within the Black community adds to Black women's vulnerability. They do not want to dishonor their men or further marginalize their communities. The role of race plays an important role in my research.

Historically, Black women have been burdened with being double minorities. Being both Black and female comes with a lot of baggage of isolation and inequality based on skin color and gender. Although racism is less overt than in the past, it remains subtle and is heavily ingrained in many American institutions. This racism has created marginalized communities for many people of color. For Black communities, it has led to their degradation and disconnect to certain realities, ways of living and from the overall acceptance into dominant White society's framework of success and assimilation. It can also be seen as a cause for the voluntary distancing and mistrust of this

community toward American social structures of legal systems and social services.

My research fits into the bigger picture because of its connection to broader social problems lived out in the United States. The impoverishment of women and children is a growing epidemic. The United States' divorce rates are higher than ever before and lead to more single parent households headed by women. Changes in the economy and the end of social welfare programs have led to more hungry mouths. The group I am studying represents rising numbers of the working poor, Black women. Through my research I am paying personal respect to the importance of this information. I want to shed light on these women's hardships because their experiences should be acknowledged and heard. This topic is a part of the big picture of how to move towards greater social justice and equality because it is relevant and affects everyone.

I want to increase academic knowledge on domestic abuse as a path leading to understanding the poverty of Black women. I also hope that, through this research, those affected by domestic violence will feel more comfortable about speaking up or leaving an abusive relationship. Hopefully, this research will be designed to answer the questions: What steps must these women take to become financially and emotionally stable? what are the resources available and have they proved efficient? What obstacles/problems do they encounter in search of shelter and food? What impact does domestic violence have on the self-esteem, dignity and self-actualization process for Black women affected? And furthermore, how are children impacted in their relationships to family and to the outside world because of observing domestic violence within the home?

Literature Review

Domestic violence or battering is defined as a pattern of behavior used to establish power and control over another person through fear and intimidation (NCADV 2005). It is also described as being destructive behavior intended to control others by repeatedly punishing or victimizing a person. It is often stated that without intervention, abuse will escalate in frequency and intensity (Bellevue Police Dept. 1990). There are four main types of domestic violence. The first is physical/harmful abuse, which consists of pushing, shaking, slapping, and the use of weapons. This type of abuse can eventually lead to murder. The second type is sexual abuse which is usually experienced in the form of rape; third is emotional or mental abuse, and the fourth type is social abuse. Social abuse is when "the support of rigid roles of women and men precedes to community resources who do not address

the abuse or who blame the victim” (Bellevue Police Dept. 1990). This means that when a woman becomes isolated from her family, she then becomes solely dependent on her abuser. The most common form of domestic violence is men abusing women.

Some of the primary theories behind male violence against intimate partners include: family dysfunction, inadequate communication skills, provocation by women, stress, chemical dependency, lack of spirituality and economic hardship (NCADV 2005). These are only a few causes for battering in theory, and are not proven to be absolutely true. Violence is an effective way of gaining and maintaining control over another. Perhaps this is why it is used in intimate relationships in order to establish roles and responsibilities within the family unit. Historically, violence against women has not been treated as a “real crime” (NCADV 2005). This actuality is realized in the obvious “lack of severe consequences, such as incarceration or economic penalties, for men guilty of battering their partners” (NCADV 2005). Domestic violence is seen as a family problem, not in need of any outside intervention. It is also important to note that batterers come from various personality groups and backgrounds. However, there are some common traits theorized to fit into a general profile for batterers. These traits include: objectifying women, low self-esteem, feelings of powerless and ineffectiveness in the world, externalized behavior, and unpredictable in actions. In addition, one of the most common behaviors that women hate is the changing of personality from violent behavior to charming behavior (NCADV 2005). After noticing these warning signs, why is it still hard for women to leave their abusers?

Women stay with their abusers for many reasons. Sometimes, women are blamed and told they must like the abusive treatment or else they would leave. In actuality, it is the emotional state of these women that keeps them from leaving an abusive relationship. In many cases it is more dangerous for a woman after leaving her abuser. Men continue to be violent even when they are an ex-husband or ex-boyfriend. In the article “Prevalence of Intimate Partner Violence and Injuries-WA, 1998” found in the Journal of the American Medical Association (JAMA), “approximately 20% of emergency department visits for trauma and 25% of homicides of women involve intimate partner violence (IPV)...women were more likely than men to experience IPV in their lifetime and more than three times more likely than men to experience injuries from IPV (p559 JAMA 2000).” Women who were separated or divorced compared to married women were associated with an almost 95% increase in the risk for reported IPV, four times more likely to be injured and almost half of women who report IPV are no longer in a relationship to the

abuser (JAMA 2000). There exists a well-documented syndrome of what happens to women once the battering starts. Aside from battered women experiencing shame, embarrassment and isolation, she may not leave for fear of intensifying the violence and possible fatality. Other reasons for not leaving consists of being rejected from friends and family, having to deal with single parenting, and the possibility that she may not have access to safety and support once she leaves.

The impact of domestic violence on victims and children is mostly related to the lack of social and economic resources and traditional ideology. Most battered women have at least one dependent child, are not employed outside of the home, are without property of their own, lack access to bank accounts, and lack the ability to maintain their standard of living (NCADV 2005). Because domestic violence is overwhelmingly viewed as a family problem and not as a crime, the role of religion helps reinforce beliefs that families should stick together. Religion is a primary factor because in most doctrines one is taught to forgive and endure suffering in order to overcome. In terms of traditional ideology, women tend to rationalize male problems of abuse. Divorce becomes the last option because the thought goes “even a violent father is better than no father at all” (NCADV 2005). As stated earlier, the abuser switches from being violent to charming and often times the battered woman makes excuses for her abuser and focuses on the good in the relationship.

There are predictors of domestic violence. These predictors consist of signs that occur before actual abuse and/or also serve as clues to potential abuse. They include whether or not the abuser grew up in a violent family. If so, the abuser may have grown up learning that violence is normal behavior. Another would be if he decides to use force or violence to “solve” his problems. Another sign of an abuser can often be noticed by the individual’s drug or alcohol abuse, and if he holds strong traditional ideas about what a man should be and what a woman should be to reflect a sexist or demeaning attitude. Other predictors include: jealousy, access to guns or lethal instruments, unpredictability and whether or not he treats his partner roughly (NCADV 2005). There are always signs, but sometimes love and the presence of fear keep women in a dangerous cycle of abuse. Another prominent factor that keeps women with their abusers is the misperception of domestic violence as a single event versus being viewed as larger social problem. In assessing Black women’s reasons behind staying with an abusive partner, I had to determine the internal and external barriers specific to their ethnic culture.

Internal and External Factors

In the case of domestic violence and its impact on battered Black women, there exist both external and internal barriers to seeking help. For Black women, the external cultural barriers consist of not being aware of services available to help them, dealing with those in a position to help who believe the false racial stereotyping that violence among African Americans is normal and inevitable, the short supply of support services in African American communities, the feeling that women are going against Black men and leadership, and the internalized stereotypes about themselves. Additional barriers include their preference for staying with family members out the fear of appearing homeless. They also believe they are misunderstood in shelters outside of their immediate communities (Family Violence and Prevention Fund 2005).

The internal cultural barriers for Black women consist of misunderstanding the parameters of domestic violence, the stigma associated with domestic violence in communities, and their belief that it is their responsibility to maintain the family “regardless of the cost” (Family Violence and Prevention Fund 2005). Black women are taught to “mind their own business” (Family Violence and Prevention Fund 2005). Through the literature, it became clear just how often Black women are told to maintain their family, ask God to resolve family matters, and never to draw attention to her domestic violence situation. These cultural barriers are specific to battered Black women; other ethnicities also suffer culturally specific barriers. In the Black community, often times, one member is held to be a representative of the whole race.

Washington State initiated a research project titled “Cultural Issues Affecting Domestic Violence Service Utilization in Ethnic and Hard to Reach Populations” conducted by Kirsten Senturia, Marianne Sullivan, Sandy Ciske and Sharyne Shiv-Thornton. In the final report there is a section stating key findings across cultural groups in the case of domestic violence. “Domestic violence in these communities often takes place against the back drop of social and economic marginalization” (Senturia, Sullivan, Ciske; 2000; p3). The women in this study were of non-majority ethnic groups: African American, Latino, Asian minority groups and non-English speaking/immigrant populations. The women in this report often times discussed their domestic violence within the context of racial, sexual and economic expression (Senturia, Sullivan, Ciske; 2000). The common realities found between all of these women were that they had all experienced many forms of domestic abuse including emotional, physical, sexual and psychological. They lacked access to financial resources and were isolated from friends and family,

which usually resulted in women staying with their abuser. These women felt “personal feelings of shame and humiliation, the belief that abuse was normal and a commitment to keeping the family together” (Senturia, Sullivan, Ciske; 2000; p3). In response to the abuse, many participants shared that it was difficult to leave abusers due to constant threats against them and their children, a lack of material resources and that the most common reason for escape was when they reached their “breaking point.” Reaching this point meant that these battered women could no longer sustain the abuse, and left for their own safety and the safety of their children.

When battered women leave their abuser they usually leave with their children and very few necessities, such as clothing but without material wealth. They are usually in need of social services and support at this point. There were four needs most frequently stated by these battered women; affordable housing, childcare, transportation and the education necessary to acquire skills for independent living (Senturia, Sullivan, Ciske; 2000; p4). The women had a tendency to believe there were too many rules in the shelter, that they lacked privacy, and there was never enough space available. I will do a content analysis focusing on the experience and needs of African American women in terms of their community awareness and attitude toward dealing with domestic violence.

Although this community admits to being aware of domestic violence, many felt “the issue is not talked about openly, is often not taken seriously, and for some who have experienced violence in their own families of origin, violence against women can be seen as normal or expected in a marriage or relationship” (Senturia, Sullivan, Ciske; 2000; p20). Some of the reasons behind the reluctance to discuss domestic violence within their communities were: it is taboo to talk about severe family problems, there is a cultural norm to keep the family together, the religious ideal of a marriage, and the discrimination of law enforcement toward the Black male and the Black community (Senturia, Sullivan, Ciske; 2000). The final report draws from the testimonials of Black women whose lives were personally impacted by domestic abuse.

The testimonials of these Black women reinforce the internal and external barriers stated earlier. One woman stated her opinion on domestic violence: “keep it in the home. Don’t let anybody else know your business. Shut it down. It didn’t happen. It didn’t exist. That’s just a part of our culture” (Senturia, Sullivan, Ciske; 2000; p20). This statement signifies the strong efforts she made to avoid drawing attention to her abusive relationship and to that of others. It also alludes to her possible feelings of shame and embarrassment over her belief that she

failed to make her marriage work. Another woman interjects with “I’ve done it for years, I’m not doing it now, but I did it. Because like she said, you’re embarrassed, or you know we was raised up people that are in their 30s and 40s now, you mind your business” (Senturia, Sullivan, Ciske; 2000; p20). This woman is so absolute in her tone and message that domestic violence is not to be discussed, which implies more Black women are keeping this painful secret.

Many of the women who have experienced domestic abuse were witness to it in their early childhood. Over time, they began to normalize abuse, and remain unclear about how to solve a problem they have already normalized. The women agreed about the fact that the church played a major role in their choice not report their abuse. They were repeatedly told “you got to pray, you got to put your family first and forget how you feel because God’s going to take care of you,” the women ended this sentence with “and that is confusing” (Senturia, Sullivan, Ciske; 2000; p21). It is confusing to be given such conflicting advice about a serious situation from a source you trust and regard with respect. Marriage is viewed as honorable and these women often waited for God to stop the abuse.

One woman pointed out the lack of media concern and attention using the coverage on the O.J. Simpson trial as an example. She states, “Black women have been dying for years and it was not sensationalized. It was not on the news daily...It was just another Black woman who got killed” (Senturia, Sullivan, Ciske; 2000; p21). She was frustrated in her perception of the trial in which a Black man abused his wife, a White woman, and was accused of murdering her. The racial dynamic fueled controversy and media attention. I believe this woman objects to the coverage given to that case, because O.J. Simpson is a famous athlete who may have killed his White spouse, yet had it been a Black woman the news coverage would have been different. For example, domestic violence has been experienced within the Black community long before this trial and no media attention has been used to bring attention to the problem.

Another interesting topic brought up in these testimonials is the idea that domestic violence is recursive in certain family profiles. For those that witnessed domestic abuse in childhood they may now be suffering from abuse, but are confused about what action to take if it continues and worsens. Domestic violence often leads to single parent households and is the direct result of the impoverishment of women and children. Poverty comes in many forms and faces and it may also have been the cause for the onset of abuse or at least helped in provoking it.

Domestic violence in the form of physical and or mental abuse destroys many families. I want to understand the degree to which domestic violence causes and contributes to the poverty of Black women. What happens to the couple before they are legally separated and what are the consequences when they are eventually apart? Children of poverty see and are witness to the affects of domestic violence and how it acts as a vehicle sending families into a housing system in which gender bias, racial exclusivity, and lack of accommodation to the working poor are commonplace. So, where does the abuse of these women end? Are poverty and domestic violence recursive and indicative of a vicious cycle? What type of legal, child support, educational and housing reforms can be made toward domestic violence and what are the options left for Black women without their male counterparts in the American city?

Domestic Violence: Isolated Incidents or Larger Social Problem?

In the article “Coverage of Domestic Violence Fatalities by Newspapers in Washington State” written by Cathy Ferrand Bullock and Jason Cubert from the University of Washington, the authors discuss how the portrayal of domestic violence does not always reflect the reality. Bullock and Cubert explore how domestic violence, an arguably big social problem, is illustrated to be a part of isolated incidents. Domestic violence is a problem in need of more research and media coverage (Bullock and Cubert; 2002). Most of the research performed is on husbands abusing wives, and the increasingly noted reaction to this abuse is now the violence women take out on their abusers. “Women kill their husbands, a high proportion act in self-defense or in reaction to a history of domestic violence by the husband” (Bullock and Cubert; 2002; p476). In the video “Defending Our Lives,” a Cambridge DocuFilm, the testimony of battered women speaks out about their abuse and how it led to their life sentencing in prison. One woman stated she had to “protect myself. It was going to be me or him.” Battered women who kill their husbands are given longer sentences and a higher bail. The courts blame the women and accuse them of having intentionally killing their abuser. This is in direct opposition to acknowledging the “battered women’s syndrome,” which refers to being driven to your breaking point while trying to survive by any means necessary. In getting back to Bullock and Cubert’s article, domestic violence is not nearly as explored a social problem as it should be. It is very complex and affects people on varying scales.

Bullock and Cubert make the claim that courts treat families in domestic disputes as sacred entities needing to be preserved (Bullock and

Cubert; 2002). “When police and prosecutors encounter these ‘normal people’ in domestic violence situations, they often view arrest and prosecution as unsuitable” (Bullock and Cubert; 2002; p477). According to this article, the police department had “hands off policies” and insisted upon letting domestic disputes work themselves out. They also tended to focus on the offender and not the victim (Bullock and Cubert; 2002). This implies women are at a disadvantage, and reduces the likelihood that state laws will be enacted to better deal with domestic violence.

American mass media can bring awareness to domestic violence, they are able to “provide a picture of events people do not experience directly, teach people about their society, and help structure how people see the world” (Bullock and Cubert; 2002; p477). With all of its power, why do the media continue to portray certain frames of reality while excluding others? Studies indicate the media creates misrepresentative depictions of domestic violence. These authors are arguing that this is intentional and speaks to larger social structures and the formation of gender roles (Bullock and Cubert; 2002). Domestic violence is often covered by journalist sources and labeled in ways that is misleading. In their findings, Bullock and Cubert notice when violence related incidents are reported on television there is a lack of identifying or announcement of the role of domestic violence. By isolating incidents, it appears that everything is under control rather than illuminating a greater social problem.

In the role of media, Black women view the media as a biased source of information sharing. Stated earlier, Black women believed the problem of domestic violence within their communities is not depicted as an important matter. One woman mentioned the O.J. Simpson trial that brought attention to domestic violence within the homes and lives of Black people. The media has the power to be biased and selective of stories told, events covered, and which social problems will be given recognition. Domestic violence affects many types of people with varying socio-economic characteristics. Those whose stories are told reflect the general population as a whole. But what about the absence of media coverage in marginalized communities? Marginalized groups’ experience with larger social problems are discounted and looked over with little mention of specific incidents and situations unless it involves someone famous.

What is Being Done?

What is being done to combat and prevent domestic abuse in Washington State? To answer this question I have read and analyzed the “Domestic Violence Legal Advocacy Program Evaluation for

Washington State,” the “Final Report of the Washington State Domestic Violence Task Force,” and the “Update: Domestic Violence Report and Preliminary Plan for the City of Seattle.” These three sources on the status of domestic violence compliance, law, and understanding provided me with great insight into this social problem. In my assessment of “Domestic Violence Legal Advocacy Program Evaluation for Washington State,” I was able to examine the status of community-based legal advocacy in 1996. The data collected for this source indicated that community-based legal advocacy provided a much needed service to the community, especially to victims of domestic violence. An advocate is a “person committed to the premise that legal justice is the right of those who have been victimized” (1996). Legal advocates differ from community advocates in that they “assist the victim [in helping them to] regain personal power and control” while working with victims in the criminal justice system (1996). Of course, aside from the positive attributes, there are also problems that hinder the domestic violence advocacy program. First, community-based legal advocates did not have adequate recognition in the courts; second, victims of domestic violence were not afforded adequate safety in courts; third, abusers were not consistently prosecuted; and fourth, abusers were not sufficiently held accountable for violations of protection orders against them.

According to the Domestic Violence Advocacy Program Evaluation, in 1995 there were at least 20,210 domestic violence related offenses reported to law enforcement agencies in the state. At least 13,582 domestic violence harassment protection order cases were filed in municipal and district courts, and 41,531 domestic violence cases in supreme court (1996). Other alarming facts were those referring to the type and degree of domestic violence cases reported. For instance; assaults, simple (85%) and aggressive (97%) were the majority of domestic violence related offenses, followed by larceny (2%) and burglary (2%) in the overall scheme of crime committed during this time. Most domestic abuse cases were solved without a trial (97%), and the remaining 3% were dismissed by legal court (1996). In this report, legal advocates came primarily from telephone hot line calls or walk-ins at the agency, 37% from the police and the prosecuting attorney, 22% from court clerk referrals, and 23% from shelter clients (1996).

The program’s evaluation discovered what works and what did not work in terms of providing advocacy for battered women. The procedures that improved the services provided by legal advocates and their agencies for domestic violence victims consisted of victims being introduced to police, given knowledge about police report forms, knowledge about police response, alarm and police ride along, all of

which are detailed in the report's manual. The criminal justice system was accused of stereotyping the victims, lack of care or knowledge about domestic violence and various types of victims, lack of consistency in complying with procedures, and the difficulty with courtroom personnel (1996).

Cultural values were also determining factors for how domestic violence cases were handled in the community, particularly among ethnic groups. "On the one hand, the clients were suspicious of the system's ability to help them, on the other hand, the legal advocates were concerned about the rights of the victim for protection" (p29 1996). Cultural values of family cohesiveness challenged the legal advocate's ability to help maintain protection orders, which are used to separate the abuser from family. There also loomed the problem that there was a lack of legal representation for economically disadvantaged women. Often times, legal advocates were "torn between serving people with on going needs and brand new people who needed protection orders and emergency services" (1996; 29).

In my assessment of the "Update: Domestic Report and Preliminary...", the update's mission is to provide the city council with a status report on the city's 1991 projects, involvement in regional planning through the next year. In 1991, the Seattle Times reported that every 16 minutes somebody calls the King County Police Department to report they have been beaten or threatened by domestic violence. To combat domestic violence, in 1989 the city council directed the Seattle Office for Women's Rights (SOWR) to "develop a needs assessment for domestic violence and provide services both locally and regionally" (1991; 1). They came up with these six recommendations: 1) regional planning 2) shelter expansion 3) community and legal advocacy 4) batterer's treatment 5) public education and 6) system's protocol for education and training. In adopting this domestic violence plan, Seattle has "increased services to battered women, principally special populations, planned a model hospital intervention project... [remained] actively involved in regional planning and implementation" (1991; 13). The purpose of this update was to ensure safety for women and children in and outside of their homes.

Lastly, I assessed the "Final Report of the Washington State Domestic Violence Taskforce" to examine the effectiveness and accountability of the taskforce in combating domestic abuse in Washington State. According to this study, the domestic violence taskforce was mandated in 1990 by legislature to study domestic violence issues in the criminal justice system and to make recommendations for reform (1991). The project's main goals were to

evaluate criminal court issues in domestic violence cases, review specific recommendations of the taskforce on gender and justice in the courts with respect to civil court issues in domestic violence, and to study current status for domestic violence victims and interventions for offenders. Their purpose was to provide recommendations for an effective criminal justice response to domestic violence (1991).

Over the past 25 years there has been a growing awareness of and concern about domestic violence in Washington State. "Domestic violence has been cited as the major healthcare problem in the United States affecting more individuals and families than any other single health care problem" (1991; 1). It has also been recognized as the core of other major social problems: individual alienation, child abuse, abuse against property and alcohol and drug abuse (1991). Domestic violence destroys families and communities. The crisis lies in the ongoing efforts to stem the epidemic through coordinated, comprehensive community based funded programs. A few efforts working towards ending domestic violence are the Washington Coalition Against Domestic Violence, King County Human Services Roundtable, and SOWR.

Whether victim's lives are diminished or lost, domestic violence costs communities, individual family members and others. Domestic violence contributes to the systematic destruction of individuals and family, who are the foundation of our society. Abusers are perpetrators and strike fear in victims and others, such as family members, social workers and law enforcement. There is also a financial cost in terms of lost productivity, healthcare, criminal justice and social services (1991). Domestic violence is the leading cause of injury to women in the United States. The FBI estimates that an intimate partner will assault one in two women at least once. The single most common reason women go to the hospital emergency rooms is domestic violence, 25% to 35% of battered women are pregnant which commonly results in miscarriage or harm being done to the unborn child. Over 50% of homeless women and children are fleeing domestic violence. Domestic violence is a leading cause for divorce, which leads to singly-headed households surviving on one income.

In 1979, Washington State passed the Domestic Violence Act. This act emphasized the criminal nature of domestic violence and established domestic violence as a priority. This law is recognized nationally as "one of the toughest domestic violence laws in the country." The statutes cover criminal remedies and civil remedies. The civil provisions of the law provide for orders of protection. Victims can petition the court for protection without legal counsel. Judges order conditions in protection orders to: prohibit any future acts of domestic

violence, share residence or leave, award temporary custody and establish temporary visitation of children, and order law enforcement agencies to enforce the provisions in the protection order and enter such information into a statewide computer system (1991).

Women and Poverty

Consequences of domestic violence on the family unit are mostly evident in the growing phenomenon of the feminization of poverty, changes occurring in the family structure, decreasing welfare and state benefits and an economy offering low and minimal wages. The poverty level of Black women with children is steadily increasing in direct response to these changes as well as the larger social problems of racism, discrimination and abuse within intimate relationships. Diana Pearch coined the phrase “feminization of poverty” in 1976 in response to the alarming growth of women in poverty and the economically disadvantaged (Northrop; 1994). The feminization of poverty is determined by the poverty of women relative to the poverty of men. The feminization of poverty focuses our attention on the gender separation in the poverty rate and the fact that it has grown in the last fifty years (Pearch; 1978, McLanahan and Kelly). This term describes both the unequal state of men’s and women’s poverty rates and the processes by which women’s risk of poverty has increasingly exceeded that of men’s. Over the past few decades women and children have come to constitute the largest group of poor people in America (Pearch; 1978, McLanahan and Kelly). The large rise in the percentage of all households headed by women is the crucial reason for increase in the feminization of poverty (Northrop; 1994). There are three major explanations for the growing amount of women living in poverty: changes in family, changes in the economy and changes in the welfare state.

Changes in the family are related to the delay in first marriage and the rise in divorce rates. High divorce rates are a crucial reason for the increasing proportion of adult women living separately from men and the reliance on themselves for economic support. High divorce rates diminish the effects of economic growth on reducing aggregate poverty by expanding the group that traditionally has suffered higher rates of poverty: female headed households (Jones, Kodras; 1990; Northrop; 1994). Women, in 85% of all divorce cases, take custody of children and take on the financial burden that comes along with this huge responsibility (McLanahan and Kelley, Northrop; 1994). Changes in the economy affect female income levels because more mothers are required to work outside of the home and their experience increases in the labor market. The problem with this is that there is still a wage gap between

men and women. Men are still making a comparably higher wage on the dollar than women doing the same types of work.

Women are the world's poor. In terms of social welfare and the feminization of poverty, wage inequality and the lack of opportunity within the labor market are the reason why the "majority of working women are in low paying, low-skilled service jobs with inadequate and costly" alternatives to daily living. Examples of costly daily duties include childcare, transportation costs and providing food for their families' sustenance. According to 2000 census data 24.1% of Black families live below the poverty line in Washington State.

Women and Welfare

The changes in public benefits and welfare mean that many Americans that can no longer receive income from government transfers (Jones and Kodras; 1990; Lord; 1993 and Spain; 1995). These government transfers are supposed to serve as a "buffer against the risk of poverty and economic insecurity." There are three main government transfers discussed in these critiques, they are US Aid to Families with Dependent Children (now known as TANF), Supplementary Security Income, and Old Age Survivors, Disability and Unemployment Insurance. As a result of these changes in government support, the changes in poverty rates and sex differences in poverty have occurred in two major periods, from 1950 to 1970 and from 1970 to 1996, a time in which the political climate was surrounding issues of welfare reform (Murray; 1984 and Moffit; 1997).

Welfare reforms have in many ways perpetuated the number of families living below the poverty line. Politicians use welfare reform to divert public attention from the most critical problem facing women and children in America today, poverty. Most of the poor in America do not receive federal cash welfare benefits. When Reagan was president, during the welfare reform period of the early 1980s, the public viewed welfare reform as a "long overdue means to force lazy freeloaders back to work" (Lord; 1993; 61). Lord references a book titled *Losing Ground*, written in 1984 by Charles Murray. In the book, Murray contended that government assistance programs that began during the War on Poverty encouraged the poor to remain on welfare. In this process, Murray and Reagan followers, helped reinforce myths of dependency, avoidance of work (Lord 1993). Their overarching goal was to eliminate all government assistance programs for the able-bodied poor of working age including Aid to Families with Dependent Children (AFDC), Medicaid, food stamps, unemployment insurance, worker's compensation, subsidized housing and disability insurance (Lord; 1993).

The research on data trends and poverty do not support Murray's claim that social welfare encourages single-parent families. Their solution to ending poverty through the end of government programs was employment, aimed at getting these people to go out and find jobs. Employment as a solution is difficult for women heading households, especially those without skills, because the types of jobs available do not pay enough, which results in more hours away from home with less pay. The majority of the women left in the system were unskilled, uneducated or illiterate. The decrease in public support contributes to the rising number of poor families in the American city. Single headed households, of women more so than men, struggle to get by on only one income. This income is usually not enough to provide sufficiently for both the parent and the child. There are now a larger percentage of children living below the poverty line than ever before. Women and children are the world's fastest growing group of people experiencing severe levels of poverty.

Isabel V. Sawhill, author of *Welfare Reform: An analysis of the issues* explores the ways in which welfare reform has led to more poverty and less financial stability. Welfare reform occurred in 1988, when Congress enacted the Family Support Act. It combined an emphasis on moving people into jobs with the necessary increased funding for the education and training believed to make this possible (Sawhill; 1995). The education and training were to be provided by a new program called Job Opportunities and Basic Skills (JOBS) in which most welfare recipients would be required to participate. This act was supposed to put an "end to welfare as we know it (Sawhill on President Clinton; 1995)." The plan was introduced in 1994 as the Work and Responsibility Act. Sawhill discusses how the plan was built on the Family Support Act philosophy by investing more in education and training, but set a two-year time limit, after which welfare recipients would either have to work or lose their benefits (1995).

Welfare to Work was meant to help families escape poverty but in many cases their financial situations worsened as a result of the program. For instance the amount of food stamps given to a family was limited regardless of need, and it placed a strain on emergency food providers. In addition, the policy shifted the source of control from the federal government to the individual states and from federal entitlements to state's choice (Schwartz-Nobel; 2002). It was now up to the state to disperse aid at its own discretion. Many people were able to find jobs but joined the working poor and became many times poorer than they had been on welfare (Schwartz-Nobel; 2002). This program indirectly contributes to the rise of homelessness. In response to the government cutbacks, many social movements have been organized to gain social

justice and social change. The focus of the progressive feminist social welfare movement has been to propose a new agenda for welfare in which families will be guaranteed a minimal standard of living and healthcare by establishing policies of equal income, opportunity, and reimbursement in the labor market and in the household (Lord; 1993).

Black women are amongst the poorest of the working poor. Among those who were in the “labor force for 27 weeks or more in 2000, the proportion of women classified as working poor (5.5 percent) was higher than that of men (4.0 percent)” (US Department of Labor, 2002). Both rates continued their downward trend from 7.3 percent for women and 6.2 percent for men in 1993. Black and Hispanic workers continued to experience poverty at much higher rates than did Whites (USDL, 2002). According to Bureau of Labor Statistics, in 2000, 4.0 percent of White labor force participants were classified as working poor, compared with 8.7 percent of Blacks and 10.0 percent of Hispanics. “Among Whites and Hispanics, rates for men and women were comparable; in contrast, the rate for Black women (11.4 percent) was twice that of Black men (5.6 percent). One explanation for this is that a relatively large proportion of Black women maintain families on their own” (USDL, 2002). Nearly 30 percent of Black women maintained families in 2000, compared with only about 10 percent of White women (USDL, 2002). Clearly, women maintaining families are far more likely to be among the working poor than married women.

Domestic Violence & Link to Poverty

An American Psychological Association (APA) report claimed “Poor women are often battered women” (2001). This report states that violence has a direct impact in keeping poor women especially those on welfare from holding jobs and becoming self sufficient. “Sixty-five percent [of welfare recipients in Massachusetts] were victims of violence by a current or former boyfriend or husband, and one fifth had been victimized in the past 12 months (APA 2001). Similar results were discovered in a survey of welfare recipients in Washington State (APA, 2001). The Seattle City Attorney asserts that domestic violence by an intimate partner accounts for approximately 21 percent of the violent crime experienced by women. Another fact stated by the City of Seattle Attorney Domestic Violence Unit claims that domestic violence is the leading cause of injury to women between the ages of 15-45; more than car accidents, muggings, and rape combined. Domestic violence affects many women crossing racial and class lines.

Although domestic violence occurs across lines of color and class, the literature suggests that “women from communities of color

experience more barriers to accessing and utilizing the systems in place to respond to domestic violence and child abuse” (WOCN, 2003). For instance Black and Latino women experience more barriers when it comes to keeping families together compared to White women. After leaving violent relationships, women find themselves alone and with less money. This obstacle of financial instability leads others to see these mothers as incapable of being self sufficient and want to take their children away from them. Many battered women with children are left to fend for themselves, especially women from communities of color. They become engaged in “systems with high levels of mistrust, stereotyping and confusion about the process and their rights, often with no one there to represent their interest” (WOCN, 2003).

The Women of Color Network’s (WOCN) constituency is primarily domestic violence and sexual assault activists from racial and ethnic communities. In 2003 they found that few programs are available to support women in maintaining their homes and families and for the women choosing to stay with their abuser, options are even more limited (2003). Secondly, there are not enough services that shadow a battered woman’s journey to becoming self-sufficient. Lastly, WOCN discovered most domestic violence programs are struggling with issues of cultural competency and outreach to communities of color. It is difficult for WOCN to train staff on issues of discrimination and marginalization. The difficulty partly results from the large gap between the numbers of White vs. Black/women of color leaders in the domestic violence field (2003). Cultural and racial representation is important for women who have been through hardship. Having someone who looks like them in appearance and perhaps life experience give an added comfort to women trying to overcome their immediate adversity. It has more to do with symbolism, rather than expertise.

The biggest fear of most women leaving their violent partner is the lack of options and resources afforded to them to support themselves and their children. Children are greatly affected by domestic violence. The National Victim Assistance Academy (NVAA) 2000 Text stated that children, who often suffer from diminished self-esteem, shame, and feelings of worthlessness, may learn that violence towards a loved one is acceptable. They can also experience depression, fear or phobias and begin to display aggressive behavior, which is seen more in male than in female children. A number of studies concluded that “domestic violence contributes to homelessness, particularly among families with children” (NVAA; 2000). The lack of funds and long waiting list for affordable housing may require a victim to choose between either staying in the relationship or living on the streets (NVAA;

2000). Victims of domestic violence feel scared, isolated and like there is no place to go.

Domestic violence may have a direct link to poverty experienced by Black women. Violence is a key factor in destroying unions between men and women, married or single. In this paper I want to assess the ways in which women fare, single or with children, once alone and away from their violent partners. In most cases, the women do not fare well and often accumulate more debt, financial responsibilities and hardship when having to support themselves and their children (Wilcox; 2000). These women usually leave home without any assets and merely grab what they can carry. They do, however, leave with half of the debt of their husbands or significant others. Debt becomes one of the long term stresses of families on low-income (Wilcox; 2000).

Depending on the status or security of social networks, some women can rely on their family and friends to combat poverty but many can not. For others it is not so easy. Many women after leaving their male counterpart desperately look for shelter or housing. In many instances emergency shelter units like Broadview and the YWCA take in women leaving situations of domestic abuse. These women rarely go alone, they are usually with children. "Seven out of ten persons who enter domestic violence shelters are children" (NVAA; 2000). However, these shelters can only offer temporary housing, which places added pressure on single mothers to find a permanent home for their families.

The United States Census Bureau measures poverty as an indicator of the number and proportion of people with inadequate family incomes for needed consumption of food and other goods and services. According to the 2000 United States census data on Washington State's population, there are 190,267 African Americans in absolute number, 3.2 percent and 12.3 per cent in the greater region of the United States. Within this African American community, there is a relatively high number of people living below the poverty level, specifically Black women with children. In the United States, in absolute numbers, there are 52,290 Black female householders without a husband present, 24.1 percent live below the poverty level (Census 2000.DP3.Profile of Selected Economic Characteristics). Out of 48,358 families who have children under the age of 18 years, 30.8 percent live below the poverty level and for those with related children under 5, a population with an absolute number of 24,089, 45.6 percent of them live below the poverty level (Census 2000.DP3. Profile of Selected Economic Characteristics). Of course, this is census data collected across time and space and will reflect some degree of error. Regardless of absolute numbers, and even if

the figures are slightly larger or smaller, there is a significantly large population of Black single mothers with children living in poverty.

Looking more closely at Washington State, specifically in Seattle, there are a large number of Black families living in poverty aside from the city's economic successes. In Seattle, Black families with female households and no husband present make up 3,930 in absolute numbers with 19.2 per cent living below poverty level (Census 2000.P160B. Poverty Status). Out of 3,405 Black female-headed households with children under 18 years, 26.8 per cent of them live below poverty level (Census 2000.P160B.Poverty Status). The number of those living with children under 5 years both in absolute number is 1,563 with 37.8 percent living below poverty. These statistics show there are more women with small children living in poverty than there are single persons without children. The numbers also suggest there are socio-economic hindrances at play.

According to the Census 2000 data, Black women aged 18-44 years of age are amongst the highest impoverished within this group. In 1999, Black women living in Washington State, had median income earnings of \$28,553 for full time work year around. For the statistics displaying gross rent as 50 per cent or more of income for Black households in 1999 there were 8,851 in absolute number (HCT39B. Gross Rent as a Percentage of Household Income in 1999) compared to White families with 110,303 paying over 50% of income on rent (HCT39A. Gross Rent as a Percentage of Household Income in 1999). Out of a total of 42,329 in Washington State only 2,012 Black single householders gross rent was less than 10% of their income in 1999 (HCT39B.Gross Rent as a Percentage of Household Income in 1999). The statistics show that these single parent headed households are living above the poverty line, but how accurate are these numbers in the daily lives of these people?

These statistics indicate that there are more families having difficulty with paying rent than there are those able to pay without the interference of other financial obligations. One must also take into account the type of work, hours, salary, and education completed because these are all factors influencing the outcome of these statistics. For those living in Seattle, although statistics show the accessibility to having a good quality of life, many do not experience the privileges afforded to people or families with additional financial support or dual incomes. For many Black women, their poverty status plagues their lives and the lives of their children. Some never escape poverty and see what life is like not worrying about the lights and heat working throughout the year. Domestic abuse and poverty are interconnected outcomes that both

lead to the marginalization of women. Poverty is cyclical and detrimental to many sectors of society, notably Black female headed households.

Question of Affordable Housing

In the discussion of poverty within Washington State and the greater Seattle area, it is obvious that the state lacks affordable housing. Aside from wanting someone of their own ethnic background to talk to and understand their domestic violence situation, battered Black women, desire an affordable place of their own to raise their children. Here, I will use Hopelink as a case study. Hopelink serves homeless and low-income families, children, seniors, and people with disabilities. Their main goal is to help families move out of crisis and into self-sufficiency. Domestic violence causes families to become homeless and is a crisis that leaves families without homes. Hopelink works to provide shelter and affordable housing for people especially those with dependent children. Some of the benefits offered through their services are free rent or financial assistance for families on the verge of self-sufficiency. Most shelters are for short-term living and so they offer help in finding more permanent housing. Trained case workers help families set a plan of action to gain support and resources needed (Hopelink; 2005). Transitional housing programs are offered as well. The stay time for transitional housing is usually anywhere from 3 months to one year. According to Hopelink, most of these programs and services provide single mothers with credit repair, budgeting, and managing finances, writing resumes, finding a job, obtaining parenting skill classes, and most importantly finding permanent housing (2005).

The problem with affordable housing is that there simply is not enough available. There are long waiting lists for housing, and it does not usually reach those in desperate need in time. The most urgent situations refer to acts of domestic violence that displace many women and children. The pressing issue for more housing speaks to the agenda for community and legal advocacy. Educating the surrounding community on domestic violence and its devastating impact on the socio-economic status of victims will hopefully encourage the community to play a role in achieving affordable living and housing. Without disclosing personal information or identifiers, the women and children can remain anonymous knowing their community supports them. The community should be aware of shelters and transitional housing in order to realize the problem of poverty where they live. With realization and understanding there will be change either through sympathy or empathy.

Affordable housing is when a household pays no more than 30% of its annual income. When a family is forced to pay over this amount it

usually correlates to not being able to buy proper necessities such as food, clothing, transportation and medical care. Most impoverished people live in poverty because they are forced to use 50% or more of their income to pay the rent. If a family is burdened with barely being able to pay their rent, they often can not afford to save any money for future expenses like buying a home or paying for college. The lack of financial resources can also lead to bad diets without adequate nutrition and eventually poor health.

People need an adequate, affordable place to live so that they may rest and nourish their bodies and participate in a give and take relationship with the earth. The earth naturally provides us with nourishment and resources, yet the power of distribution determines the allotment of these necessities. Impoverishment resulting from these abuses of power is a backlash to the lack of affordable housing available. To live within the borders of the United States, most families need a dual income, especially if they are without higher education, social networks or financial resources. Usually, households headed by single women are in desperate need of developing community support to help aid their transition from financial need to financial security.

Community development can be achieved through the collective efforts of concerned and informed individuals within our society. There remains much ignorance about the many faces of poverty and homelessness. Those in financial need depend on the support of others more stable. A developed community should provide resources for equitable housing, financial education programs and grants for shelters and low-income housing on public land. Development is about building from the bottom up; most specifically integrating the most degraded and temporarily deprived populations back into a supportive community. True development is also about growth and the possibility for real change. Affordable housing can be achieved through careful planning, the support of the surrounding community and eliminating inequality in rural and urban housing sectors in America.

Methods

I use a feminist methodology incorporating interviews with professionals, researchers, domestic violence counselors and police department representatives assigned to domestic violence matters in Seattle on reasons behind women's decisions to leave abusive partners. I also use discourse analysis in this study in order to understand the ways that community and legal advocacy programs as well housing and domestic violence laws in the state of Washington contribute to the

experiences of homeless women and their children in general and homeless Black women and their children in particular.

In my discourse analysis, I created a literature review reflecting domestic violence, law and services for Washington State. More specifically, I am interested in understanding domestic violence in the King County, greater city of Seattle area. I am looking at this state in particular because I grew up all over Seattle and have been witness to certain neighborhood disparities in reference to housing and single parent headed households, usually without enough resources to survive. I am interested to find out if these two factors affect the placement or treatment of these impoverished women and their children. I would also like to shed light on domestic violence and its effects on Black women in comparison to White women in terms of Black women's added burden such as feeling like a representative of her race or further stigmatizing the Black community.

I informally interviewed a domestic violence counselor from Broadview, a homeless shelter for battered women and children, located on First Hill near the Central District. I would like to interview a Seattle police department representative from the domestic violence unit for Seattle, Washington. The domestic violence counselor is experienced with many cases and individual experiences of women affected. The police department is specialized in addressing domestic violence calls and cases and possesses the background to adequately inform someone on the protocol and outcomes. Although I have literature stating facts, I would like to hear about their experience with domestic violence cases and calls. I composed a letter informing faculty, counselors and police department representatives about my project objectives and goals. They can choose or refuse to do an interview by simply e-mailing me or calling me. I disclosed my direct phone number and e-mail address. The domestic violence counselor disclosed a good amount of information on the topic, hopefully others will allow for an informative conversation to take place. I have to keep in mind that other interviewees may not agree with my intentions or efforts made in my research project.

In terms of my positionality, growing up poor, Black, and homeless gave me a lens of being witness to poverty and degradation within my community. My mother, affected by domestic violence, raised all of her children on her own. She was without financial resources afforded to her while married. The lack of financial resources, social networks and formal education led to her poverty and therefore mine as well. Like many other women affected by domestic violence, my mother tried her best to support a family with one income. Moving from shelter

to shelter, motel to low-income housing is a common reality for battered women across Washington. In many case scenarios, these women sacrifice their own well being and health to create a better life for their children. My interests and intent for this project is to demonstrate how life is after domestic violence when the result is poverty.

In the literature review of this paper, I explore the discourse on domestic violence, Washington law, advocacy programs, and domestic violence as a link to poverty. I also examine the consequences of domestic violence on the family unit and other paths leading to the poverty of women through changes in family structure, welfare state, and economy. Later in the review, there is a section speaking to the need for affordable housing. Throughout the literature I am trying to exemplify the link between domestic violence and poverty.

Through statistical analysis of various Washington State socio-economic data sets from the census and city government sites, I hope to paint a picture of poverty as a major problem. The poverty that results from domestic violence is detrimental because it restricts progress of family unity and affects the children of women abused. The prevalence of poverty hurts society. Society is only as strong as its weakest member, which is currently the world's poor. A change is needed now to create affordable housing and opportunity for all people regardless of their individual race, class, gender and socio-economic related hardships.

Findings/Limitations

Black women affected by domestic violence expressed the need for more Black counselors, specifically if they have been abused and have an experienced, professional background. They expressed reasons for wanting Black counselors in terms of their own comfortability, and need for symbolism and representation. There simply are not enough of them, and so another way to combat domestic abuse is to talk about it in the community, educating the churches and schools where these women and their children attend, and creating a dialogue alerting others on the resources available for these battered women. Cultural values, norms within the Black community were most often centered on the idea of minding one's own business and praying to God for strength to maintain the marriage and keep the family together. Single Black women are disproportionately represented in homeless shelters across Seattle and those with children are increasingly living below the poverty line. In my assessment of Broadview shelter in Seattle, there are more White women battered, but proportionally there are more Black women thus reinforcing

the stereotype of the problem of domestic violence and its prevalence in their community.

The major limitation experienced for this project is going through the process of gaining approval from Human Subjects to conduct interviews. I want to tighten my argument to better illuminate domestic violence and its link to poverty, but can not until the Human Subjects review committee says that I can do so. My sources on Washington State's laws, legal and community advocacy updates were all from the 1990s, 2000 data could have been more sufficient. I believe my interests are biased for this project, because I believe domestic violence leads to poverty. I know first hand and quite possibly reflect my positionality in an obvious way. If I had more time and the approval, I would have liked to organize and operate a focus group to record testimonials of Black women rather than use someone else's data and interpretation on the conversation of domestic violence and poverty. Or even perhaps have done an ethnography with battered Black women over a longer period of time.

Summary & Conclusion

Domestic violence is not only a family problem; it extends past that and affects individuals within the family unit. For many women it destroys their security, dignity and self-esteem. When families separate, children are often sent to live with the mother, and in most cases she is not equipped with the social and financial resources to adequately provide for both herself and her children. Domestic violence leads to poverty.

The effects of domestic violence and poverty on Black children and mother are often times detrimental. Children are witness to their mother's suffering, discrimination, marginalization and instability. As a result these children internalize their socio-economic condition as a direct link to their race, behavior, opportunities and abilities, which can also lead to a downward spiral as far as self-esteem and motivation to stage their socio-economic status is concerned.

It is risky for women in the United States to leave an abusive husband or boyfriend especially if there are children involved in the separation. Women are not on the same level playing field as men as far as income, education, training, hiring or in having access to credit for owning property. Women are discriminated against, marginalized and suffer from unequal opportunity. In the case of domestic violence, many women stay with their abuser for many cultural, social and economic reasons and limitations. Those brave enough to leave, experience a journey of hardship, isolation and struggle to provide for themselves, and

often times their children, without the financial support of any male partners. As a result, poverty is deepened for this population and the cycle continues.

Fair and affordable housing needs to be both accommodating and attainable to the working poor, which now constitutes a large proportion of the world's population. Until changes are made in housing policies and rulings for divorce cases dealing with domestic violence provide substantial support for a single parent and their dependents, things will not change for this target group. Facing discrimination is even harder when done alone and unfortunately many Black youth and now adults have experienced it their whole lives in many socio-economic arenas of American society. There needs to be unity, compliance and plans created to curb rates of poverty within communities of color to better accommodate differences across race, gender and class lines for the well-being of all mankind.

References

Primary Sources:

Census.gov. Census People: Poverty
DP3. Profile of Selected Economic Characteristics: 2000
Data set: Census 2000 Summary File 3(SF3)
Geographic Area: Washington

DP3 Profile of Selected Economic Characteristics: 2000
Data set: Census 2000 Summary File 3 (SF3)
Geographic Area: Seattle City, Washington

P160 B. Poverty Status in 1999 of Families by Family Type by Presence of Related Children Under 18years-Universe: Families with a householder who is Black or African American Alone
Data Set: Census 2000 Summary File 3(SF3)

PCT74B. Median Earnings in 1999 (Dollars) By Work Experience in 1999 by sex for the population 16 years and over with earnings (Black or African American Alone) [6]
Universe: Black or African American Alone population 16 years and over with earnings in 1999
Data Set: Census 2000 Summary File 3 (SF3)

HCT39B. Gross Rent as a Percentage of Household Income in 1999
(Black or African American Householder [11])

Universe: Specified renter-occupied housing units with a householder
who is Black or African American Alone

Data Set: Census 2000 Summary File 3 (SF3)

Seattle.gov. Seattle City Attorney: Domestic Violence

Municipal Court of Seattle: Domestic Violence, Economy, Employment
by Economic Sector, Quality of Life, Housing, Rentals, Median Family
Income, Shelters. 2000-2001

US Department of Labor: Bureau of Labor Statistics.

A Profile of the Working Poor. 2000

Secondary Sources:

Anderson, J. and J.E. Larsen. "Gender, poverty and empowerment."
Critical Social Policy. 1998; 18(2): 241-258

Barrington, L. and C.A. Corrad. "At what cost a room of her own?
Factors contributing to the feminization of poverty among prime
age women, 1939-1959" *Journal of Economic History*. 1994.
54(2): pp342-357

Blaricom, D.P. Van. "Domestic Violence: a new beginning for an old
problem." Bellevue, WA Police Department 1984

Bullock, Cathy Ferrand and Jason Cubert. "Coverage of Domestic
Violence Fatalities by Newspapers in Washington State." *Journal
of Interpersonal Violence*, Vol 17 No. 5, May 2002 475-499

Carter, Nita. "Forging New Collaborations between Domestic Violence
Programs, Child Welfare Services & Communities of Color." A
report from the focus groups conducted by the Women of Color
Network (WOCN). National Resource Center on Domestic
Violence 2003

"Cultural Barriers for African American Victims of Domestic Violence."
Family Violence and Prevention Fund 2005

"Defending Our Lives", Video by Cambridge DocuFilm

- Dizon, Jesus. "Domestic Violence Legal Advocacy Program Evaluation." August 1996
- Domestic Violence*. Government Publications Division, prepared by Bellevue, WA Police Department. 1990, March 30
- "Final Report of the Washington State Domestic Violence Task Force"
June 1991
- Gordon, Linda "How welfare became a dirty word" *The Chronicle of Higher Education*. July 20, 1994 v40 n46 p31 (2)
- Jones, Ill., P. and J.E. Kodras "Restructured regions and families: the feminization of poverty in the U.S." *Annals, Association of American Geographers*. 1990.80(2): pp163-183
- Kelly, Erin L. and Sarah McLanahan. "The Feminization of Poverty: Past and Future." MacArthur Networks Report. Research project done over time, no specific dates listed on the paper. Cited many authors; Casper 1994, Castro Martin, Bumpass, 1989, Bumpass and Sweet 1989, Garfinkel and McLanahan 1986, Bianchi and Spain, 1996; Blau, 1997, Wetzels, 1995, Murray 1984, Ruggles 1994, Moffitt 1997 and Paula England 1997.
- Lord, Shirley *Social Welfare and the Feminization of Poverty*. Garland Pub., Inc. NY & London 1993
- Marcoux, A. "The feminization of poverty: claims, facts and data needs" *Population and Development Review*. 1998, 24(1): 131-139
- Moller, Stephanie "Supporting poor single mothers: gender and race in the U.S. welfare state" *Gender & Society*. August 2002 v16 i4 p465 (20)
- Northrop, Emily *The Diminished Anti-Poverty Impact of Economic Growth, the Shift to Services, and the Feminization of Poverty*. Garland Pub., Inc. NY & London 1994
- NVAA. National Victim Assistance Program. NVAA 2000 Text. Ch9 Domestic Abuse.

- “Prevalence of Intimate Partner Violence and Injuries-Washington, 1998.” *Journal of the American Medical Association*, Vol. 284 No. 5, August 2, 2000; 284:559-560
- Sadasivam, B. “The impact of structural adjustment on women: a governance and human rights agenda” *Human Rights Quarterly*. 1997. 19(3):630-665
- Sawhill, Isabel V. *Welfare Reform: An Analysis of the Issues*. Introduction. 1995
- Schwartz-Nobel, Loretta. *Growing Up Empty: How Federal Policies are Starving America’s Children*. 2002
- Seattle Washington Office for Women’s Rights. “Domestic Violence Report and Preliminary plan for the City of Seattle: Update for City of Seattle Office for Women’s Rights” July 1991
- Senturia, Kirsten, Marianne Sullivan & Sandy Ciske. “Cultural Issues Affecting Domestic Violence Service Utilization in Ethnic and Hard to Reach Populations.” Final Project Report. US Dept. of Justice, Office of Justice Programs. 2000, November 1. p: 2-8, 20-34
- Simonsen, K. “Urban division of space: a gender category! The Danish case” *Scandinavian Housing and Planning Research*. 1990.7(3): pp143-153
- Spaights, Ernest, & Ann Whitaker. “Black women in the workforce: a new look at an old problem.” *Journal of Black Studies*. January 1995. v25 n3 p283 (14)
- Spain, Daphne. “Direct and default policies in the transformation of public housing” *Journal of Urban Affairs*. 1995. V.17 n4 p357 (20)
- Toponzis, D. “The feminization of poverty” *Africa Report*. 1990. 35(3): pp60-63
- Townsend, Bickley. “The unsheltered woman: women and housing in the 80s” *American Demographics*. April 1986 v8n4 p8 (2)

United Nations General Assembly Special Session “Women 2000: Gender Equality, Development and Peace for the Twenty-first Century”, New York, 5-9 June 2000 Suzallo Govt. Stacks UNOPI no. 2035

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Searching for the Molecular Basis of Nocturnality and Diurnality in Non-human Primates

Veronica Marie Vasquez

Abstract

Circadian rhythms are circa-24-hour biological oscillations present in virtually all organisms. In mammals, circadian rhythms are governed by a central biological clock located within the hypothalamic suprachiasmatic nucleus (SCN). Past studies have identified so-called clock genes whose expression constitutes the basis of the SCN's clock function. New World monkeys are predominantly diurnal, with the exception of owl monkeys (genus Aotus), which are nocturnal. The molecular and/or neural basis for this phylogenetic difference is unknown.

Our goal was to perform sequence analysis and study clock gene expression within monkeys that are phylogenetically related but differ in their diurnal and or nocturnal activity patterns. The study of clock gene expression within the SCN is unattainable in most non-human primates but an alternative has emerged from studies showing that fibroblasts have similar circadian clock molecular machinery as the SCN.

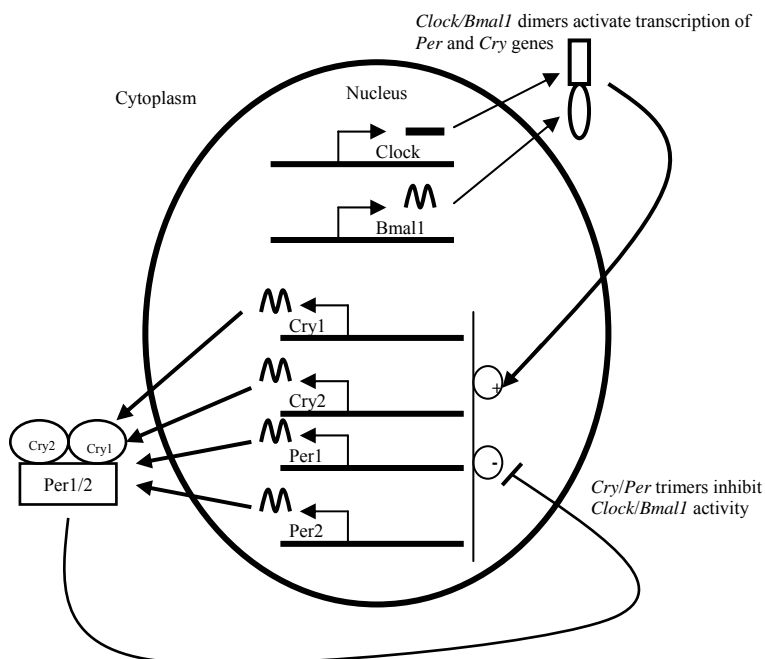
For this study we cloned homologs of the human clock genes Per1 and Per2. The cloning and sequencing of these genes will allow us to perform clock gene sequence analysis to determine whether the nocturnal and diurnal activity patterns in non-human primates may be due to phylogenetic differences in the molecular clock components. Additionally, we will be able to develop the tools necessary to assess whether fibroblast clock gene expression patterns differ between nocturnal and diurnal species.

Introduction

The basis of studying circadian rhythms was established with the knowledge that both physiological and behavioral processes in mammals, such as rhythms in temperature and locomotor activity, are controlled by a central pacemaker known as the hypothalamic suprachiasmatic nucleus (SCN) (i, ii), located at the base of the brain's hypothalamus.

From past research it has been determined that there are specific genes whose rhythmic expression constitutes the basis of the SCN's clock function. The expression of these so called clock genes is controlled by transcriptional and translational feedback loops that result

in a twenty-four hour oscillation in the levels of these genes' products (iii).



In order to activate the transcription of *Per* and *Cry* genes *Clock* and *Bmal* dimers must be created. After the activation of clock genes *Cry1*, *Cry 2*, *Per1* and *Per2* has occurred, their mRNAs can then be transported out of the nucleus and into the cytoplasm for translation. The gene products later form trimers to then inhibit their own mRNA transcription once sufficient amounts of the gene product have been made. The study of SCN clock gene expression has become a useful tool in studying the neural basis of physiological and behavioral circadian rhythmicity.

Although in some species, such as laboratory rodents, it is feasible to study gene expression within the SCN, this is not possible in some non-human primate species particularly in those that are endangered. An alternative to the study of SCN gene expression has emerged from the demonstration that peripheral tissues also contain the circadian clock molecular machinery (i). Specifically, it has been shown that in cultured fibroblasts there exists clock gene activity similar to that of the SCN (iv). Not only does clock gene expression oscillate but the phase relationship between the expression of the different genes is the

same. This finding has provided a new way to approach the study of mammalian circadian systems in a non-invasive way. Fibroblast cultures can be derived from skin biopsies of living animals, and the expression patterns of clock genes can be analyzed in vitro.

Most non-human primates are predominately diurnal with the exception of owl monkeys (genus *Aotus*) which are nocturnal primates with habitats in Central and South America. In order to better understand the molecular bases of the switch from a diurnal to a nocturnal behavioral pattern, we are cloning clock genes of owl monkeys and of their diurnal phylogenetically close relatives. Here we present the first cloning of homologs of clock genes *Per1* and *Per2* in *Cepus apella*, a diurnal species closely related to owl monkeys.

Methods

In order to clone clock genes *caPer1* and *caPer2* degenerate primers were designed for these genes based on extensive homology across several species, such as chimpanzee and *Homo sapiens*. Due to the fact that the actual sequences of *caPer1* and *caPer2* are unknown, the degenerate primers created were used to pull out part of these genes' sequences from known clock gene sequences in related organisms. Once a region that contained a high degree of homology across several species was found, the sequences of the degenerate primers were established.

With the primers created, total cellular RNA was then isolated from liver samples of the Capuchin monkey (*Cebus apella*), a diurnal non-human primate species, and reverse transcribed into cDNA. Fragments of *caPer1* and *caPer2* were PCR amplified using the degenerate primers. The final degenerate primers that showed positive results with our Capuchin samples are as follows:

5'-TGTGATCGAACTTCTCAACC-3' and
5'-AGACCACTGAGAGCAGCAA-3' for *caPer1* and
5'-TGCCAAAATCTTACTCTGCTG-3' and
5'-ATGATTTGTTGAGCCTTGC-3' for *caPer2*.

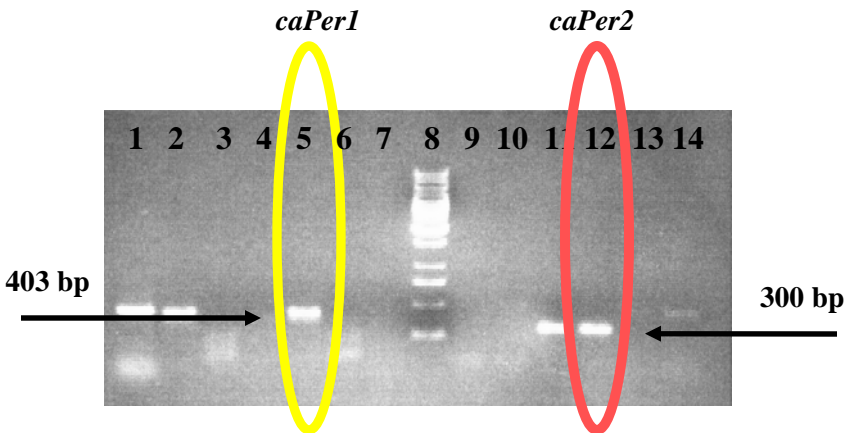
A TA Cloning Kit was then used to ligate the positive bands of *caPer1* and *caPer2* into pCR 2.0 vectors. The ligation reactions were then incorporated into *E. Coli* by electroporation and plated on ampicillin with X-gal agar plates. Using sterile technique, colonies of the three genes were cultured over night and plasmid DNA from each gene's clones were then isolated using Eppendorf's FastPlasmid Mini prep. Each clone's plasmid DNA was then examined for correct expected size, about 403 base pairs for *caPer1* and about 300 base pairs for *caPer2*, by EcoR I restriction enzyme digest. The sequences of

caPer1 and caPer2 were then compared to hPer1 and hPer2 in order to determine the percent homology.

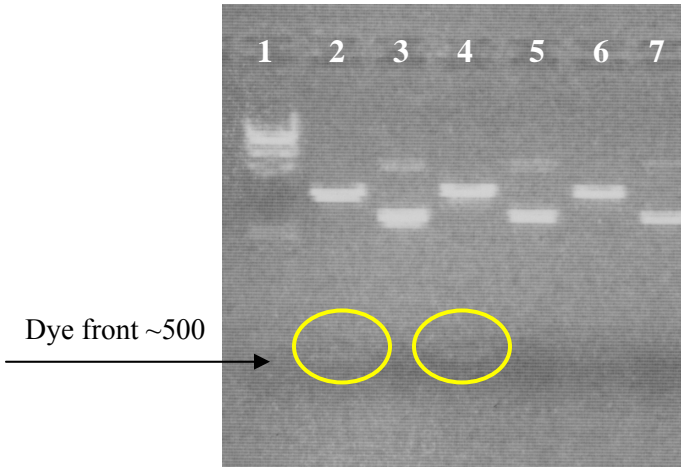
Results

The PCR amplification of *caPer1* and *caPer2* with the designed degenerate primers produced positive bands of expected sizes: about 403 base pairs for *caPer1* and about 300 base pairs for *caPer2*. The resulting PCR amplified products chosen to complete the cloning of *caPer1* and *caPer2* are highlighted in yellow (lane 5) and red (Lane 12) respectively.

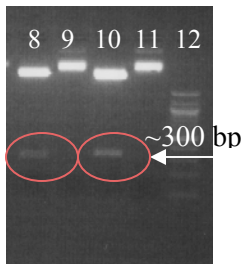
Lane	Gene PCR Product
1	Actin Contol
2	<i>caPer1</i> U1/L1
3	<i>caPer1</i> U2/L2
4	<i>caPer1</i> U1/L2
5	<i>caPer1</i> U1/L1
6	<i>caPer1</i> U2/L2
7	<i>caPer1</i> U1/L2
8	1Kb DNA Ladder
9	<i>caPer1</i> U1/Poly A
10	<i>caPer1</i> U2/Poly A
11	<i>caPer2</i> U1/L1
12	<i>caPer2</i> U1/L1
13	<i>caPer2</i> U5/L5
14	<i>caPer2</i> U5/L5



After the cloning of each gene was complete, the EcoR1 restriction enzyme digest performed to ensure each gene was still the same product proved positive.



Lane	EcoR1 Digest Reactions
1	Lambda DNA HindIII Ladder
2	caPer1 U1/L1 Sample B1a
3	control
4	caPer1U1/L1 Sample B1b
5	control
6	caPer1U1/L1 Sample B1c
7	control



Lane	EcoR1 Digest Reactions
8	CaPer2 U1/L1 Sample B5a
9	control
10	CaPer2U1/L1 Sample B5b
11	control
12	100 bp DNA ladder

With each clone verified for correct expected size, sequence analysis was performed on each clone's plasmid DNA to confirm its identity. The clones' sequences were then inputted into NCBI's blast program to determine percent homology.

The overlapping nucleotide sequence of *Per1* in the Capuchin monkey and in *Homo Sapiens* is as follows:

caPer1

TGTGATCGAACTTCNCATNNCTCAGAGACTTAGATCTTCCACC
TCGCTCCC GCAGCCAGGCCTCCAGGCCCCCTCCTGCATCCGTG
GTGGCTCTCCGCCTTCCCTGTTCTATTCTCCCCATGGCCTAGA
CATGAGTGGCCCCCTAGAAGGGGCAGATGGGGGAGGGGACCC
CAGGCCTGGAGAATCCTTTTGTCTGGAGGAGTCCCATCCCCT
GGGCCTCCACAGCACC GCCCTTGCCCAGGCCCCAGCCTGGCCG
ATGACACCGATGCCAACAGCAATGGTTCAAGCGGCAATGAGT
CCAATGGGCATGAGTCCAGGGGTGCGTCTCAACGGAGCTCAC
ACAGCTCCTCCTCAGGCAACGGCAAGGACTCAGCCCTGCTGG
AGACCACTGAGAGCAGCAA

hPer1

TGTGATCGAACTTCTCAACCCTCAGAGACTTAGATCTTCCACC
TCACTCCCTCAGCCAAGCCTCCAGGCCCCCTCGTGCATCCGTG
GTGGCTCTCTGCCTTCTCTGTTCTGTTCTCCCCATGGCCCAGA
CATGAGTGGCCCCCTAGAAGGGGCTGATGGGGGAGGGGACCC
CAGGCCTGGGGAATCATTTTGTCTGGGGGCGTCCCATCCCCT
GGGCCCCACAGCACC GCCCTTGCCCAGGCCCCAGCCTGGCC
GATGACACCGATGCCAACAGCAATGGTTCAAGTGGCAATGAG
TCCAACGGGCATGAGTCTAGAGGCGCATCTCAGCGGAGCTCA
CACAGCTCCTCCTCAGGCAACGGCAAGGACTCAGCCCTGCTGG
AGACCACTGAGAGCAGCAA

The overlapping nucleotide sequence of *Per2* in the Capuchin monkey and in *Homo Sapiens* is as follows:

caPer2

GCAAGGCTCAACANCTCTTCACACAAACTCTGAGAGCTTATTT
ACATATCTTTTTAGGAATATATTA AAAANGAAGGCTCAGTTTAA
AATAGAGAAAAAGTGTTTAACACCTGTGTAAGCACACACACT
AAAGAAAACGTGACTTGATGCTTGGCACCATGTAAACAAATT
CACAAGATGATTCTATTAAGTCAACTGCTTGGCACGCGCTGAA
GCTACACAGTTAACAAATCAATAAGCATATATTAATAATAAAA
ATAATGCTGATGGTAAACACTCATAA

hPer2

GCAAGGCTCAACAAATCATCACAGAAACTCTGAGAGCTTATTT
ACATATCTCTTCGGGAATATATTA AAAANGAAGGCTCAGTTTAA

AATAGAGAAAACTGTTTAAACACCTGTGTAAGCACACACACT
AAAGAAAACATGACTTGATGCTTGGCATCACGTAAACAAATT
CACAAGATGATCCTATTAAGTCAACTGCTTGGCACGCGCTGAA
GCT--

ACAGTTAACAATCAGTGAGCACATATTAATGATAAAATAAT
GCTGATGGTAAACATTCATAA

Discussion

The cloning of clock genes *Per1* and *Per2* of the Capuchin monkey was successful in that the sequence analysis showed a 93% homology of *caPer1* and a 92% homology of *caPer2* to known and documented *Homo sapiens*' clock genes *Per1* and *Per2*.

The next step in determining whether there are differences in clock gene sequences and expression patterns between diurnal and nocturnal non-human primates will call for, first, the cloning of *Per1* and *Per2* of the nocturnal Owl monkey (genus *Aotus*), after which, 5'- and 3'-RACE techniques will be used to obtain the full sequence of *Per1* and *Per2* from both the Owl and Capuchin monkeys.

Then, utilizing the recent discovery that peripheral tissues contain circadian clock molecular machinery, fibroblast cell cultures derived from skin biopsies of the Capuchin monkey and the Owl monkey will be established using a protocol designed by Tom Norwood, MD (University of Washington, Department of Pathology).

The following steps will entail the application of a "serum shock" to both the Owl and Capuchin monkey fibroblast cultures. It has been found that the treatment of cultured rat fibroblasts with media containing 50% fetal bovine serum for two hours (i) will induce and reset the circadian clock gene expression. An assay of clock gene expression in fibroblasts will be harvested at different times throughout the day and the specific mRNA levels will be measured by real time reverse transcriptase PCR.

The circadian oscillations in expression of the different genes will then be compared according to the amplitude, phase and period to correlate with the known overt locomotor activity rhythms for each species.

The importance of this study is based on the fact that, thus far, the biological basis for nocturnality and diurnality in mammals is unknown. The possibility of having different circadian modalities in a group of non-human primates that inhabit the very same habitat makes for an ideal model to approach this question. Additionally, the knowledge elucidated from this study could possibly be applied to

understanding the basis of human circadian systems and determining what makes humans a diurnal species.

References

- (i) Balsalobre, A, Damiola, F, and Schibler, U (1998) “A Serum Shock Induces Circadian Gene Expression in Mammalian Tissue Culture Cells.” Cell (93): 929-937.
- (ii) Best, J, Maywood, E, Smith, K, Hastings, M (1999) “Rapid Resetting of the Mammalian Circadian Clock.” The Journal of Neuroscience 19(2):828-835.
- (iii) Van Gelder, Rn, Herzog, ED, Schwartz, WJ, Tahgert, PH (2003) “Circadian rhythms: in the loop at last.” Science 300(5625):1534-5.
- (iv) Yagita, K, et al. (2001) “Molecular Mechanism of the Biological Clock in Cultured Fibroblasts.” Science (292): 278-288.

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Politics of Punishment: The Death Penalty Debate in Post-Apartheid South Africa

Alexis M. Wheeler

Abstract

In June 1995, the newly formed Constitutional Court of South Africa rendered judgment in its first case, in which it unanimously ruled to abolish the death penalty despite significant public support for the practice. Contrary to public opinion trends in other countries where capital punishment has been abolished, support for the death penalty over the past decade in South Africa has not only remained strong, but has apparently risen across most racial and economic strata of the population. Why is this the case?

Conventional wisdom attributes the high and rising pro-death penalty sentiment to the extraordinarily high violent crime rate in post-apartheid South Africa and the accompanying perception that the new government is unable or unwilling to control the crime situation. However, those most victimized by violence and crime, namely the poor, blacks, and Coloureds, consistently express less support for the death penalty than the upper classes, whites and Indians, so the levels of victimization and pervasiveness of crime alone cannot account for the extraordinarily high demand for the return of capital punishment in South Africa.

Based on first-hand observations of social life and relations in South Africa and examinations of death penalty polls, crime victim surveys, random samples of newspapers, and secondary literature on the crime situation, it appears that, while violent crime plays a substantial role in generating support for capital punishment, pro-death penalty sentiment also arises from the conjunction of several other factors. Chief among these factors are the introduction of crime into the predominantly-white suburbs, the slow pace of social transformation in the post-apartheid era, the sensationalist treatment of crime by the media, and the use of the death penalty as a political weapon by opposition parties in parliament.

Introduction

In June 1995, the newly formed Constitutional Court of South Africa rendered judgment on its first case, in which it unanimously ruled to abolish the death penalty despite significant public support for the practice. Contrary to public opinion trends in other countries where capital punishment has been abolished, support for the death penalty over

the past decade in South Africa has not only remained strong, but has apparently risen across many of the racial and economic strata of the population. Why is this the case?

Conventional wisdom attributes the high and rising pro-death penalty sentiment to the extraordinary violent crime rate in post-apartheid South Africa and the accompanying perception that the new government is unable or unwilling to resolve the crime situation. However, those most victimized by violence and crime, namely the poor, blacks, and Coloureds, consistently express less support for the death penalty than the upper classes, whites, and Indians, so the levels of victimization and pervasiveness of crime alone cannot account for the extraordinarily high demand for the return of capital punishment in South Africa.

Through direct observations of social life in South Africa and the examination of death penalty polls, crime victim surveys, random samples of newspapers, and secondary literature on the crime situation, it has become apparent that, while violent crime plays a substantial role in generating support for capital punishment, pro-death penalty sentiment also arises from the conjunction of several other factors, of which enduring racial and class conflicts from the apartheid years appear to be the most significant.

Methodology

The data for this study was obtained through numerous methods. Secondary literature played a significant role in providing background information about historical developments in South Africa and the issue of the death penalty. Much of the information obtained from secondary sources was also confirmed through personal experiences and observations made during a three-month visit to Cape Town, South Africa, a location that has been greatly influenced by all the nation's major groups. South Africa's media coverage of the death penalty debate served as the third and primary source of data collection for this project. Because of the difficulty of analyzing visual media sources and the near impossibility of obtaining copies of television news broadcasts for the past decade, this study focuses on the coverage of the capital punishment debate in South Africa's print media.

To further narrow my analysis, I limited this study to a sample of three South African newspapers - *The Star*, the *Mail & Guardian*, and the *Cape Times*. The *Mail & Guardian* and *The Star* are based out of Johannesburg, South Africa's largest and most influential city and one of the nation's three official capitols. *The Star* is a daily paper, which had an average issue circulation of 216,000 in October 1993, making it one

of the most heavily read papers in South Africa.¹ The *Mail & Guardian* is a significantly smaller paper with a circulation of about 30,000, and it is distributed on a weekly basis.² The third paper - the *Cape Times* - is based in Cape Town, has a medium-sized circulation, and was selected for this study in order to add geographic diversity to the newspaper sample. In terms of readership, the *Cape Times* is disproportionately read by whites and Coloureds, while *The Star* is widely read by both blacks and whites.³ There was no demographic information available on the readership of the *Mail & Guardian*.

Since a full review of all articles related to the death penalty over the past ten years is practically impossible, particularly given the lack of electronic newspaper archives in South Africa, specific time periods were selected for analysis in this study in order to generate a sample of the media's coverage of the debate during the past decade. The first two weeks of June and December in the years 1995, 1998, 2001, and 2004 were chosen as the periods for examination. The years under examination in the study were selected because they evenly partition the past decade into three equal time periods, and thus facilitate the tracking of death penalty coverage over the full ten year span.

The perspectives presented in these articles fall into three categories, which, for the purposes of this study, will be labeled neutral, retentionist, and abolitionist. Neutral means the death penalty was referenced in the article but no position was taken on the issue by the article's author or people reported on within the article. Retentionist means the author or people featured in the article favored the return of capital punishment, and abolitionist means the author or people in the article were opposed to the return of capital punishment.

Historical Background

The current state of the death penalty debate has its roots in the historical development of relations between the country's four dominant ethnic groups - the English, the Afrikaners, the native Africans, and the Coloureds. From the arrival of the first Dutch settlers in 1652 to the demise of the apartheid state in 1994, the inhabitants of South Africa were highly divided along the lines of race, color, and ethnicity. Allister Sparks, a prominent South African journalist of British descent, referred to these divisions as the "bitter-almond hedge" and noted how Jan Van Riebeeck, the leader of the initial Dutch expedition to modern-day South

¹ *Marketing Mix*, 44.

² *Ibid.* 44.

³ *Ibid.* 44.

Africa, sought from the very beginning to inhibit interactions between the earliest white settlers and the native Khoisan peoples.⁴ Van Riebeeck struggled in vain to enforce the division between natives and colonists by demarcating a limited area in which whites could officially settle and by sending for Chinese laborers whose presence would subvert the need to draw upon captured natives for labor.⁵

However, interactions inevitably developed, to the detriment of the Khoisan, who were despoiled of their lands and forced into virtual slavery under the Dutch settlers.⁶ These early interactions between the natives and the settlers also produced the first offshoots of the Coloured “race” - a racial classification subsequently developed to encompass all those who were neither wholly black nor white. As the settlers spread further afield, they lost almost all contact with their distant European homeland and “became, surely, the simplest and most backward fragment of Western civilization in modern times,” forever rooted in “an even more elementary existence than the seventeenth-century Europe their forbearers had left.”⁷ But time did not stand still for the rest of Europe, and when the English arrived on the eastern coast of South Africa’s Cape region over a century and a half later, the Boer descendants of the original Dutch settlers suddenly discovered the nineteenth century bursting in on them in the form of the most industrially and militarily advanced empire in the world.⁸

The century following the arrival of the English in 1820 proved to be a baptism by fire for the Boers. Forever on the move in search of the beloved autonomy they had formerly known, the Boers found themselves repeatedly thwarted in their efforts by the steady advance of the British, who eventually laid claim to the whole of South Africa in an effort to swallow-up the rich gold and diamond deposits discovered in the northeastern part of the country in the 1870s and 1880s.⁹ Through the expansion of English influence, the Boers were ultimately reduced to second-class citizens in a land they considered theirs by divine right. Most traumatizing of all, the Boers, who gradually assumed a national identity as Afrikaners, were forced to endure the humiliation of a certain degree of *gelykstelling*, or equality with the black natives. Deprived of their last independent territories by the English victory in the Boer War (1899-1902), the Afrikaners were obliged to join the urban labor market,

⁴ Sparks, 30, 38.

⁵ Ibid. 30, 72.

⁶ Ibid. 38-39.

⁷ Ibid. 42.

⁸ Ibid. 45.

⁹ Ibid. 119-125.

competing with blacks and Coloureds for unskilled jobs at the English-owned mines and living near non-whites in squalid urban ghettos.¹⁰

The presumed indignity of living and working in close proximity to those long considered to be natural inferiors provided the final impetus for the creation of a politically conscious Afrikaner nation.¹¹ Although a degree of segregation had always divided blacks, whites, and Coloureds, these divisions were largely *de facto*, not *de jure*, and they were at times breached by the creation of Coloured or black enclaves in predominantly white areas. It was against these symbols of racial equality and intermingling, both real and imagined, that the embittered Afrikaner nation acted out in the mid-twentieth century.

Seizing control of the national government through the narrow 1948 electoral victory of Daniel Malan, the first Prime Minister from the National Party, the Afrikaners formed an apartheid system that established absolute segregation between the races in order to ensure that the threat of *gelykstelling* would never again arise.¹² The English, who retained control of the South African economy, remained socially distinct from the Afrikaners but shared the same social and political privileges. The Coloured group, which was comprised predominantly of mixed-race peoples and Indians, was classified as a distinct racial category, granted exemption from the pass laws that affected blacks, and permitted to live on the urban fringes. The blacks, though comprising roughly three-fourths of the national population, were denied suffrage, officially barred from the cities, and forced to live in overcrowded ethnic “homelands” in the worst parts of the country.¹³

During the apartheid era, the death penalty was “inextricably linked with South Africa’s policy of institutionalized discrimination and its catastrophic socio-economic consequences for people of colour.”¹⁴ The racial double-standard was especially evident in the case of rape. Between 1947 and 1966, 288 whites were convicted of raping black victims, and 844 blacks were convicted of raping white victims. Of those convicted, 121 blacks were executed for this crime, while not a single white went to the gallows for committing the same offence against a person of colour.¹⁵ It is also noteworthy that “of the 2,740 persons

¹⁰ Ibid. 131-133, 148.

¹¹ Ibid. 134.

¹² Ibid. 181.

¹³ Devenish, 14.

¹⁴ Devenish, 5.

¹⁵ Ibid. 19.

executed between 1910 and 1975 less than 100 were white . . . and only about six whites have been hanged for the murder of blacks.”¹⁶

Furthermore, in 1958, ten years after the dawn of apartheid, the penal code governing the application of the death penalty was expanded to include eight new capital crimes, in addition to murder, rape, and treason, which had always been capital offences. This new list of capital crimes included participation in communist activities, involvement in terrorist activities, and the “advocating abroad [of] economic or social change in South Africa by violent means.”¹⁷ Each of these offences was raised to the capital level in order to intimidate and, if necessary, eliminate black dissidents involved in the struggle against apartheid. Through all these means, the death penalty served as a means of keeping non-whites, and blacks in particular, in “their place,” and today, nearly ten years after the official abolition of the death penalty, this racial double-standard, though more subtly expressed, continues to influence the debate surrounding the reinstatement of capital punishment.

Findings

Statistics

Under apartheid, support for the death penalty was high among whites, particularly during periods of crisis,¹⁸ though little is known about the opinions of the black and Coloured populations. However, a Markinor survey conducted in June 1993 found that while 82% of whites favored the retention of capital punishment, only 24% of blacks shared this view. Indeed, the majority of blacks (57%) opposed the retention of the death penalty, as did only 12% of whites.¹⁹ However, less than two years later, shortly before the abolition of capital punishment, a survey found that 62% of the population favored the retention of capital punishment,²⁰ and another poll showed that this sentiment was shared by 49% of blacks and 80% of whites.²¹ In the months immediately after abolition, support for the death penalty surged higher still, peaking at 77% of the total population according to one survey administered in December of that year.²² When the responses for the December survey were broken down according to race, the figures showed that 69% of

¹⁶ Ibid. 19.

¹⁷ Van Vuren, 8.

¹⁸ Horak, & van As, 421. See also Seleane, 69.

¹⁹ Seleane, 69-70.

²⁰ Garland, 6.

²¹ Ibid. 6.

²² “77% in SA want Executions Back,” 1995. See also, “77% of South Africans want Death Penalty Reintroduced,” 1995.

blacks, 85% of mixed-race Coloureds, 91% of whites, and 92% of Indians supported the death penalty.²³ The survey also found, in concurrence with all other surveys on the death penalty issue,²⁴ that support for capital punishment was positively linked to an individual's income.²⁵

The surge in support for capital punishment in 1995 was accompanied by an unprecedented amount of media coverage of the death penalty debate. Of the thirty articles on the death penalty that appeared during the sample periods of this study, seventeen of them were run in 1995. This figure represents more than half (57%) of the total death penalty-related articles run during the time periods under analysis in this study. Also, not only was the number of death penalty-related articles unusually high in 1995, but they disproportionately favored the death penalty. Of the seventeen death penalty-related articles run in 1995, ten were retentionist, five were neutral and only two supported the abolition of capital punishment. It should also be noted that the June 1995 editions of *The Star* were unavailable for this study. Since the majority of this study's death penalty-related articles (60%), and pro-death penalty articles (74%), for that matter, were run by *The Star*, the proportion of death penalty articles appearing in 1995 would undoubtedly have been even higher if the June articles of *The Star* had been available.

Though the overall popular support level for capital punishment subsequently declined to 71% in July 1996,²⁶ it has nonetheless remained consistently high over the past decade. The most recent death penalty poll, administered by the Human Sciences Research Council in 2004, calculated that 75% of the population supported the reinstatement of capital punishment. As always, the demographic breakdown of the survey showed that blacks were the comparatively least supportive at 72%, mixed-race Coloureds were somewhat more supportive at 76%, and Indians and whites were the most supportive at 86% and 92%, respectively.²⁷

Explanations

The newspaper articles examined in this study provide numerous insights into why death penalty support has remained so strong and prominent in public discourse during the past decade. Certainly crime

²³ "77% of South Africans want Death Penalty Reintroduced," 1995.

²⁴ Parekh & De la Rey, 110.

²⁵ "77% of South Africans want Death Penalty Reintroduced," 1995.

²⁶ Human Sciences Research Council, 1996.

²⁷ Human Sciences Research Council, 2004.

has been the most commonly cited catch-all explanation for rising death penalty support in South Africa. In the immediate aftermath of the abolition of the death penalty, numerous articles appeared in the *Cape Times* and *The Star* calling for the reinstatement of capital punishment in order to forestall a massive rise in crime.²⁸ Secondary sources confirm the existence of overwhelming popular anxieties about the impact of the death penalty's demise and its potential for generating an increase in the amount of violent crime.²⁹ The common perception that all types of violent crime rose dramatically following the transition to democracy (1994) and the abolition of the death penalty (1995) persists today, especially among whites,³⁰ and this perception is used to further justify and fuel the demand for reinstatement of capital punishment.

However, the purported post-apartheid rise in crime, particularly violent crime, does not bear-up under scrutiny. That South Africa's overall murder rate was high throughout much of the apartheid era is made evident by Andrew Kenny's observation that "during the years when South Africa was hanging more people than any other country in the West, her murder rate was higher than any other country in the West."³¹ Also, although South Africa's current homicide rate of 48 murders per 100,000 people³² makes it one of the world's leading nations in reported murders, there is no reliable evidence to suggest that the non-political homicide rate was markedly higher in the past decade than it was during the waning years of apartheid. The same is true for most other violent crimes, all of which, with the possible exception of rape, were either stable or in decline during the opening years of the post-apartheid era.³³ As for the rise in crime that apparently occurred in the early 1990s, much of that rise may be attributable to the inclusion for the first time of the troubled ethnic homelands in the overall South African crime statistics in 1993.³⁴

Blacks and the Death Penalty

Blacks are the group most acutely aware of how little the crime situation has changed between the apartheid and democratic eras, for it is

²⁸ "Many angry over abolition of death sentence," 1995. See also, "Illogical decision," 1995, "Hanging goes with crime-free society," 1995, and "Define murder as a compromise," 1995.

²⁹ McIntosh, 7-8. See also Maduna, 212-213.

³⁰ *Financial Mail* (November 1996), 22.

³¹ Kenny, 9.

³² Thomson, 9.

³³ Landman, 11.

³⁴ Schonteich, 10.

the blacks who live in the crime-ridden townships and former homelands. Yet despite their long history of experience with crime and violence, black South Africans have consistently expressed the lowest levels of death penalty support of any group, although even among blacks pro-death penalty sentiment is extraordinarily high. Black support for capital punishment has also risen markedly over the past decade, from 24% in 1993 to 49% on the eve of abolition to 72% in the most recent poll. The primary factors fueling this rise appear to be a heightened sense of trust in the nation's formal legal institutions and a growing disenchantment with the slow pace of social transformation in the New South Africa, which is not nearly so "new" as it first appears.

As previously noted, under apartheid, the death penalty was used disproportionately against blacks as a form of symbolic social control. Hence, it is not surprising that blacks overwhelmingly opposed the death penalty before 1994. The transition to a black-led democratic regime helped alleviate blacks' mistrust of the justice system to a degree, but even today there remains a strong sense that justice still favors the whites.³⁵

One of the opinion pieces appearing in *The Star* in 1995 addressed this very issue of ongoing bias. The article's author, Ishidi Molete, highlighted a recent media outcry over the murders of three white tourists and a white suburbanite, and noted the routine lack of interest in the dozens of murders that occurred daily in the townships.³⁶ In looking at institutional bias, it is also important to note that the judicial bench was, and still is, disproportionately white, male, and middle-class,³⁷ which could signal a continued lack of impartiality in the justice system. Given the historical disadvantage of blacks in the courts, it is not surprising that in 1995, less than a year after the transition to democracy, many blacks remained wary of capital punishment, despite the extraordinary level of violence surrounding most of them.

However, with the fall of apartheid, many blacks also expected that vast improvements in the crime situation would take place and a degree of income redistribution would occur.³⁸ These expectations were noted by the *Sowetan*, a newspaper with a predominantly black readership, which asserted that, "when the cry of freedom echoed in the township streets . . . seven years ago, it was about a promise of a better life. Yet it seems with each passing day we have drifted from that

³⁵ Parekh, 111.

³⁶ Molete, 1995.

³⁷ Carpenter, 113. See also, "More at stake than competence," 2001.

³⁸ Shaw, 59, 61.

promise into an abyss.”³⁹ With the failure of that promise, many blacks have begun to rethink their stance on capital punishment. As one black South African that I spoke to put it, a reduction in crime will only occur if one of two things happens: if South African society undergoes a genuine transformation, or if a severe crackdown on crime is implemented from above. Since the transformation appears increasingly far off, a growing number of blacks are favoring a crackdown in the form of capital punishment and other “get-tough” policies.

A final factor that may be driving the rise in black support of the death penalty is the rapidly expanding black middle-class. Although the so-called black elite remains fairly small in relation to the total black population of South Africa, its steady and substantial growth in the post-apartheid era means that this group’s influence and significance is rising. Since support for the death penalty is positively linked to income, the ongoing expansion of the black middle-class may be partially responsible for rising pro-death penalty sentiment among blacks. Already, one survey has found that 61% of skilled blacks are dissatisfied with their level of personal safety, and 54% expect their level of safety to diminish over the next five years.⁴⁰ These fears for safety are also already being played upon by opposition parties, which hope to woo the black middle-class away from the dominant African National Congress (ANC), which is staunchly anti-death penalty. Though the efforts of the opposition have been in vain thus far, they may begin to pay dividends in the future as class overtakes race as the defining marker of social identity for well-off blacks.⁴¹

Whites and the Death Penalty

While the amount of crime endured by most blacks has not, unfortunately, changed much in the past few decades, whites’ experience and fear of crime has changed significantly. One of the primary reasons support for capital punishment has risen steadily among whites is that crime has been increasingly “spilling” into the suburbs.⁴² Under apartheid, the luxurious suburban neighborhoods surrounding the city-centers were occupied exclusively by whites and kept virtually crime-free through heavy policing, pass laws, and curfews that forced blacks out of the cities and into the remote townships at dusk. These and other draconian security regulations helped preserve strict separation between

³⁹ Lindsell-Stewart, 10.

⁴⁰ Mattes & Richmond, 17.

⁴¹ Shaw, 92-93.

⁴² *Ibid.* 51.

the races, which also ensured a significant degree of class segregation and minimal opportunity for the commission of crimes against upper- and middle-class whites.

Since the fall of apartheid, crime in the suburbs, which remain predominantly white, has risen,⁴³ thus fueling the perception that violent crime increased dramatically on a national scale following the transition to democracy. The crimes most feared by suburban whites are carjacking and housebreakings, both of which receive a tremendous amount of media attention. In response to these perceived threats, many white suburbanites bar their windows, privatize roads, employ private security, and generally retreat from wider society.⁴⁴

Whites' tendency to adopt a siege mentality only exacerbates their fears and leads them to overestimate the threat of crime. For instance, the vast majority of the whites I encountered during my time in South Africa were unwilling to ride the public minibuses, known as *combies*, and were reluctant to board local trains, despite, as I found from experience, the minimal risk of crime or danger on these public modes of transportation. Whites also tend to avoid the city centers, particularly in Johannesburg, and generally will not, under almost any circumstances, venture into the black townships, which are viewed as alien and extremely dangerous areas.

The siege mentality adopted by many whites is underpinned by strong racial stereotypes, which are evident throughout the newspaper samples gathered in this study. The racism expressed by whites is often none too subtle, for in one letter to the editor of *The Star*, a white businessman complained about being mugged by "three snarling louts" and surmised that this was "just a case of another white dude getting his butt kicked in Darkest Africa."⁴⁵ In another instance, a man writing to *The Star* argued that, in order to effectively fight the high crime rate in South Africa, the "army must flood the townships and check everyone."⁴⁶ Since the inhabitants of the townships are almost entirely black and overwhelmingly poor, there can be little doubt as to whom the writer was blaming for what he perceived to be a growing crime problem. The breakdown of whites' sheltered existence goes a long way towards explaining why their support for capital punishment has remained strong, and even risen somewhat, since 1995.

⁴³ Ibid. 51.

⁴⁴ Shaw, 94.

⁴⁵ "Could I get a police escort as well?," 1998.

⁴⁶ "Confidence lost," 1995.

The Media and the Death Penalty

Racial stereotypes and prejudices also play a significant role in the print media's coverage of the death penalty debate, which tends to be highly sensationalistic and episodic. The articles for both 1998 and 2001 provide ample evidence of the subtle racial biases and class divisions that have helped generate support for the death penalty over the past decade. During 1998, there were only two articles related to the death penalty, both covering a murder case involving two young, white, male victims and four black male perpetrators, ranging in age from sixteen to twenty-seven.⁴⁷ The murders themselves were not extraordinary: both victims were shot once in the head after coming home to find the four perpetrators in the process of robbing their house. Heinous though this crime was, it constitutes a daily occurrence in South Africa, so it is interesting that the press would choose to focus on this case in particular and give it multiple days of coverage.

The three editorials that appeared on this case were highly sympathetic to the family of one of the victims, and noted the father's comments that "both boys had a bright future" and "the murders were totally senseless and a waste."⁴⁸ Although the articles did not report the reactions of the family of the other victim, Stefan Broody, who was a New Zealander, the articles did record a statement by Broody's best friend, who stated that "the Broodys did not understand the situation in South Africa and that they blamed their son's murder on the apartheid system,"⁴⁹ thus implying that this was an incorrect assumption on the Broodys part. Also, two of the three articles addressed the issue of the death penalty, and one of the articles ran the caption: "they should have got the death sentence,"⁵⁰ which was the appropriate sentence for the four perpetrators according to both the judge in the case and father of one of the victims.

While the subtle racial undertones of the 1998 articles were designed to inspire pro-death penalty sentiment, the early June articles for 2001 occurred within a very different context. The 2001 articles were run roughly two months after the onset of a heavy debate surrounding the execution of South African citizen, Mariette Bosch, who was hung by the neighboring government of Botswana on March 31, 2001.⁵¹ News of the execution broke without warning in early April and created a furor in South African society and the press. The case aroused a significant

⁴⁷ "Family of murder victim relieved after ordeal ends," 1998.

⁴⁸ "Father breaks down after son's killers are convicted," 1998.

⁴⁹ "Family of murder victim relieved after ordeal ends," 1998.

⁵⁰ "Family of murder victim relieved after ordeal ends," 1998.

⁵¹ Makhado, 2001.

amount of controversy and brought the death penalty debate to the forefront once more. However, unlike in the past, the abolitionists seemed to gain the advantage in this round of the debate, and proponents of the death penalty were unusually silent during the months surrounding Bosch's execution. Even *The Star*, which usually features a disproportionate number of retentionist articles, chose this period to run its first and only abolitionist article to ever appear during the sample periods of this study.⁵²

Given the sudden ascendancy of the abolitionist cause and the equally sudden shift in death penalty coverage following Bosch's execution, it is not surprising that the *Sowetan*, a popular black newspaper, drew a link between Bosch's status as a middle-class, white woman and the amount, and type of, attention her case received.⁵³ In particular, the *Sowetan* noted that:

What has been starkly apparent throughout this sad episode is the position of prominence the case has occupied in South Africa.

When this is contrasted with the silence that greeted the scores of other executions, mainly of black Botswana nationals, it does prompt an unfortunate but necessary question. Did the fact that Bosch was white have anything to do with the fervency with which the campaign for clemency was undertaken? We certainly believe it did. How else does one explain the inaction over and obvious lack of interest in the fate of others on death row in Botswana?

It also raises another question. Would South Africans have invested the same energy in a campaign for clemency had the condemned person been black? Put another way, would the story have occupied the same number of column centimeters in our newspapers had the individual been black? We think not. The transparent lack of interest in the fate of Bongani Mkhwanazi, a black South African on death row in Swaziland, amply illustrates the point.⁵⁴

⁵² "DA should not be allowed to sit on fence over death penalty issue," 2001.

⁵³ "More than just a moral question," 2001.

⁵⁴ *Ibid.* 2001.

From the many insightful points raised in the above article and the subtle prejudices evident in the 1998 articles, it is evident that racial bias plays a significant role in the debate surrounding the reinstatement of capital punishment in South Africa.

Conclusion

Through visiting South Africa and analyzing a wide variety of data on their death penalty debate, it has become clear that the extraordinarily high level of support for reinstatement of the death penalty is not solely the result of the high crime rate. Subtle (and at times, not so subtle) racial biases and class distinctions also play a fundamental role in generating support for the death penalty and in exposing the social scars left behind by the apartheid years.

A decade ago, when the African National Congress came to power after the nation's first all-race elections in 1994, Nelson Mandela declared his intentions of building a "new" South Africa, free of racial hatred and class prejudice. Though great strides have been made in achieving that dream, the debate over the death penalty symbolizes the distance South Africa still needs to traverse in order to attain a truly equitable society. The death penalty is not a solution to South Africa's woes. One look at the high rates of violent crime in the United States, one of the world's leading executioners, should establish that fact to all nations. Also, South Africa's own unabatedly high crime rate under apartheid, when the use of capital punishment was in full force, should demonstrate that the death penalty is no answer to crime in the post-apartheid era. The first step towards resolving South Africa's crime problem is to look beyond the excuse of the "rise in crime" and acknowledge the race and class conflicts that are the true cause of much death penalty support, as well as the ultimate source of most crime. Only then will South Africa and other nations suffering a similar plight be able to begin developing real cures for their social disorders.

References

- Adam, Ahmed. (2001, December 5). Castrate all the child rapists [Letters to the editor]. *The Star*, p. 11.
- Angus, Laurel. (1992). Capital punishment. *South African Human Rights Yearbook*, 3, 23-33.
- Baines, Mike. (2001, June 5). Constitutional Court is the protector of our rights [Letter to the editor]. *Cape Times*, p. 10.
- Bekker, Peet M. (2000). The maximum length of imprisonment imposed by South African courts after the constitutional abolition of the death penalty: A comparative note on the position in the United States of America. *Comparative and International Law Journal of Southern Africa*, 33, no. 2, 136-164.
- Berg, Dorette van den, & Caroline Nomoyi. (1999). Influence of the mass media and politicians on public perceptions of crime. *Acta Criminologica*, 12, no. 2, 1-8.
- Bissiker, Clair. (2004). The black middle class: Breaking class. *Financial Mail*, 178, no. 4, 18-22.
- Camerer, Lala, Antoinette Louw, Mark Shaw, Lillian Artz, & Wilfried Scharf. (1998). *Crime in Cape Town: Results of a city victim survey*. Johannesburg, ZA: Institute of Security Studies.
- Carpenter, Gretchen. (1996). Constitutional Court sounds the death knell of capital punishment. *Tydskrif vir Hedendaagse Romeins-Hollandse Reg*, 59, no. 1, 145-165.
- . (1996) Public opinion, the judiciary and legitimacy. *SA Public Law*, 11, no. 1, 110-122.
- Chetty, Robert (Ed.). (2000). *Firearm use and distribution in South Africa*. Pretoria, ZA: National Crime Prevention Center.
- Crime and capital punishment. (1995, June 7). *Cape Times*, p. 4.

- Colgan, Desia. (1991). *Review of the death penalty in 1991*. Johannesburg, ZA: Society for the Abolition of the Death Penalty.
- Confidence lost [Letter to the editor]. (1995, December 1). *The Star*, p. 16.
- Courts issue life sentences in bid to curb rape of children. (2001, December 14). *The Star*, p. 2.
- Currin, Brian. (1990). Capital punishment. *South African Human Rights Yearbook*, 1, 1-23.
- The death penalty is never a solution [Leaders page]. (2001, June 12). *Cape Times*, p. 8.
- De Freitas, S. A. (2002). A historical overview of the imposition of the death penalty in South Africa from a juridical perspective. *Tydskrif vir Christelike Wentenskap*, 38, no. 3/4, 29-48.
- De Haas, Mary. (1995). Violence. *South African Human Rights Yearbook*, 6, 284-304.
- . (1996). Violence. *South African Human Rights Yearbook*, 7, 272-293.
- . (1998). Violence. *South African Human Rights Yearbook*, 8, 300-321.
- Devenish, G. E. (1990). *Application of the death penalty in South Africa*. Pietermaritzburg, ZA: University of Natal Press.
- Dixon, Bill, & Elrena van der Spuy (Eds.). (2004). *Justice gained? Crime and crime control in South Africa's transition*. Cape Town, ZA: University of Cape Town Press.
- Dreyer, Nazma. (2004, June 10). Delegates review 10 years of criminal justice in SA. *Cape Times*, p. 4.
- Du Plessis, Danielle. (2003). The new elite. *Marketing Mix*, 21, no. 2, 21-23.

- Family of murder victim relieved after ordeal ends. (1998, December 4). *The Star*, p. 3.
- Garland, Ross. (1996). Capital punishment. *South African Human Rights Yearbook*, 7, 1-15.
- Gcabashe, Leah. (1993). Capital punishment. *South African Human Rights Yearbook*, 4, 1-13.
- Get out of South Africa while the going is good [Letter to the editor]. (1995, December 12). *The Star*, p. 15.
- Glanz, Lorraine. (1994). *Crime in South Africa: Perceptions, fear and victimization*. Pretoria, ZA: Human Sciences Research Council Publishers.
- Grant, Evadne, & Laurel Grant. (1991). Capital punishment. *South African Human Rights Yearbook*, 2, 1-18.
- Hanging goes with crime-free society [Letter to the editor]. (1995, December 5). *The Star*, p. 16.
- Hammond, Arthur. (1995, December 11). People must urge referendum [Letter to the editor]. *The Star*, p. 8.
- Hassen, Abraham-Khalil. (2004). The BEE-hive swarm, if you've got the money, honey . . . *South African Labour Bulletin*, 28, no. 3, 22-26.
- Hijackers hit Gauteng hard. (1995, December 12). *The Star*, p. 1.
- Hoffman, David. (1995, June 14). Paroled killers could kill again [Opinion page]. *Cape Times*, p. 6.
- Holomisa, Nkosi Phathekile. (1998). A princess, African values and the black elite. *Financial Mail*, 149, no. 10, 22.
- Horak, Jeanne, & Hennie van As. (1999). Reintroduction of the death penalty in South Africa - fighting crime or winning votes? *SA Public Law*, 14, no. 2, 413-438.

- Hough, M., & A. du Plessis. (2003). *Combating crime in South Africa: contemporary perspectives*. Pretoria, ZA: Institute for Strategic Studies.
- Human Sciences Research Council. (1996, October 4). The death penalty debate. Retrieved April 12, 2005, from www.hsrc.ac.za/media/1996/9/19960904.html.
- . (2004, October 4). Rights or wrongs? Public attitudes towards moral values. Retrieved April 12, 2005, from www.hsrc.ac.za/media/2004/10/20041008_1.html.
- If we have backbone, we must do something about rapes [Letter to the editor]. (2001, December 5). *The Star*, p. 11.
- Institute for Security Studies. (2004). *National victims of crime survey: South Africa 2003*. Pretoria, ZA: Institute for Security Studies.
- Jacobs, Elize & Anthony Mukwita. (2001, December 11). Zuma urges stiff terms for rapists and murderers. *The Star*, p. 3.
- Jacobs, Sean. (2003). The ‘transformation’ and reform of South African media: Transforming Media Apartheid. *New Agenda*, 11, 30-34.
- Jefferson, Peter. (Ed.) (2001). *Unequal protection: The state response to violent crime on the South African farms*. New York: Human Rights Watch.
- Kenny, Andrew. (1998). The last thing South Africa needs. *Frontiers of Freedom*, 15, 9-11.
- Kirchmann, Fred. (1995, December 6). Making life safe for S. Africa’s murderers [Letter to the editor]. *The Star*, p. 13.
- Klug, Heinz. (1996). Striking down death. *South African Journal on Human Rights*, 12, no. 1, 61-70.
- Kollapen, Jody. (1996). Popular will and the death penalty. *SA Now*, 1, no. 9, 22-25.

- Landman, Karina. (2003). *Crime, political transition, and urban transformation in South Africa and Brazil*. Johannesburg, ZA: South African Institute of International Affairs.
- Leggett, Ted. (2003). *Criminal justice in review*. Pretoria, ZA: Institute for Security Studies.
- Lindelof, Agneta, & Johann van der Westhuizen. (1997). *The abolition of the death penalty in South Africa*. Lund, Sweden: Raoul Wallenberg Institute.
- Lindsell-Stewart, Gavin. (2002). Death, the ultimate deterrent. *Confidence: the Official Magazine of the South African Chamber Movement*, 9-10.
- Louw, Antoinette, Mark Shaw, Lala Camerer, & Rory Robertshaw. (1998). *Crime in Johannesburg: Results of a city victim survey*. Johannesburg, ZA: Institute for Security Services.
- Ludick, R. (1995, December 8). Punishment should fit the crime [Letter to the editor]. *The Star*, p. 9.
- Maduna, P. M. (1996). The death penalty and human rights. *South African Journal of Human Rights*, 12, no. 2, 193-213.
- Makhado, Khangale. (2001, April 3). Shockwaves over hanging of Bosh. *The Sowetan*, pp. 1-2.
- Many angry over abolition of death sentence. (1995, June 12). *Cape Times*, p. 4.
- Mattes, Robert, & Wayne Richmond. (2000). The brain drain: What do skilled South Africans think? *Africa Insight*, 30, no. 2, 10-20.
- McIntosh, Graham. (1998). A crisis for liberals. *Frontiers of Freedom*, 15, 7-8.
- Melzer, Martin. (2001, June 14). Death penalty would save money for needier causes [Letter to the editor]. *Cape Times*, p. 10.
- Meyer, Koert. (2001, June 6). DA should not be allowed to sit on fence over death penalty issue [Letter to the editor]. *The Star*, p. 9.

- Molete, Ishidi. White lives worth more than blacks [Letter to the editor]. (December 11, 1995). *The Star*, p. 8.
- More at stake than competence. (2001, April 3). *The Sowetan*, p. 8.
- More than just a moral question. (2001, April 4). *The Sowetan*, p. 10.
- Mowbray, M. Jacobs. (1995, June 12). Illogical decision [Opinion and Analysis]. *Cape Times*, p. 6.
- Naude, C.M.B. (1990). Execution patterns in the USA and South Africa in terms of race of offenders, types of crimes committed, race and gender of victims, and sentences commuted. *Acta Criminologica*, 3, no. 2, 5-10.
- Newspapers. (1993, October). *Marketing Mix*, 11, no. 10, 44-46.
- Noose gets the gallows. (1995, June 9-14). *Mail & Guardian*, p. 4.
- Oosthuizen, Lucas M. (1994). Crime news, the police and the press: Moving away from the official orthodoxy. *Communitas 1*, 79-89.
- Parekh, A. & De la Rey. (1996). Public attitudes towards the death penalty in South Africa: A life or death decision. *Acta Criminologica*, 9, no. 1, 108-113.
- Pitfield, D. J., & C. M. B. Naude. (1999). Public opinion on crime seriousness and sentencing. *South African Journal of Criminal Justice*, 12, no. 1, 22-40.
- Posen, Kevin. (2001, June 6). Like the beast that threatens people, a man who kills and rapes deserves to die [Letter to the editor]. *The Star*, p. 9.
- Rivero, Carlos Garcia, Pierre du Toit, & Hennie Kotze. (2003). Tracking the development of the middle class in democratic South Africa. *Politeia*, 22, no. 3, 6-29.
- Sapa. (2001, December 10). IFP calls for death penalty after killing. *The Star*, p. 2.

- Schneider, J. H. (1992). Crime in the mass media. *Acta Criminologica*, 5, no. 1, 30-36.
- Schonteich, Martin. (1999). *Unshackling the crime fighters: Increasing private sector involvement in South Africa's criminal justice system*. Johannesburg, ZA: South African Institute of Race Relations.
- Seleoane, Mandla. (1996). *The death penalty: Let the people decide*. Lee Glen, ZA: Vivlia Publishers.
- 77% in SA want executions back. (1995, December 1). *Cape Times*, p. 4.
- 77% of South Africans want death penalty reintroduced. (1995, December 1). *The Star*, p. 2.
- Shaw, Mark. (2002). *Crime and policing in post-apartheid South Africa: Transforming under fire*. London: Hurst & Co.
- Shift to the right benefits black elite. (1996, November). *Financial Mail*, 143, 22-25.
- South African Labour Bulletin. (2002, October). Black economic empowerment: What's in it for labour and the poor? *South African Labour Bulletin*, 26, no. 5, 20-23.
- Southall, Roger. (2004). South Africa's emerging black middle class. *South African Labour Bulletin*, 28, no. 4, 26-27.
- Sparks, Allister. (1990). *The mind of South Africa*. New York: Alfred A. Knopf.
- Statistics South Africa. (1998). *Victims of crime survey*. Pretoria, ZA: Statistics South Africa.
- Steenkamp, Willem. (1995, June 9). Uncertainty about an alternative to hanging. *Cape Times*, p. 5.
- Steinberg, Jonny (Ed.). (2001). *Crime wave: The South African underworld and its foes*. Johannesburg, ZA: Witwatersrand University Press.

- Stop Politicising Crime. (2001, April 9). *The Sowetan*, p. 9.
- Theron, Roelien, Julia Sloth-Nielsen, & Hugh Corder. (1991). *Death by decree: South Africa and the death penalty*. Plumstead, ZA: Society for the Abolition of the Death Penalty.
- This is what it feels like to hang someone. (2001, April). *Financial Mail*, 162, no. 2, 14.
- Thomson, J. D. S. (2004, March). A murderous legacy: Coloured homicide trends in South Africa. *SA Crime Quarterly*, 7, 9-14.
- Tomlinson, Richard (Ed.). (2003). *Emerging Johannesburg: Perspectives on the post-apartheid city*. New York: Routledge.
- Turner, T. A. S. (1995, June 12). Absurd ruling [Opinion and analysis]. *Cape Times*, 6.
- Van Rooyen, Jan H., & L. C. Coetzee. (1996). How easily could the death sentence be reintroduced in South Africa? *Codicillus*, 37, no. 1, 9-16.
- Van Rooyen, Johann. (2000). *The new great trek: The story of South Africa's white exodus*. Pretoria, ZA: Unisa Press.
- Van Vuren, Johannes. (1994). *Homicide and the death penalty in South Africa: The historical development*. Berkeley, CA: UC Berkeley Press.
- Venter, Zelda. (1998, December 4). Four killers sentenced to two life terms. *The Star*, p. 3.
- White, C. B. (1995, December 6). Define capital murder as a compromise [Letter to the editor]. *The Star*, p. 13.
- Zimring, Franklin E., Johannes van Vuren, & Jan H. van Rooyen. (1995). Selectivity and racial bias in a mandatory death sentence dispensation: A South African case study. *Comparative and International Law Journal of Southern Africa*, 28, no. 1, 107-112.

Zlotnick, Myron. (1996). The death penalty and public opinion. *South African Journal on Human Rights*, 12, no. 1, 61-70.

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The Need for Mental Health Parity Now: The Journey of Mental Health Parity through the Washington State Legislature

Turquoise Young

Abstract

It is estimated that 1 in 5 Americans is affected by mental illness each year. Beginning in the 1970's employers began to compensate for the rising overall costs of health care by unequally raising deductibles and lessening treatment of mental health in comparison to physical health services. The increase in the cost of mental health insurance decreased access for mental health patients.

Mental health insurance parity is a step on the road toward full equality for persons with mental illness. For the past eight sessions of the legislature Washington has had some form of mental health parity legislation introduced. This paper examines the history of mental health in America, the federal Mental Health Parity Act, and the barriers to mental health parity legislation in order to determine the effects of mental health parity legislation for the citizens of Washington and why its implementation is necessary now.

Introduction

Mental health insurance parity is a step on the road toward full equality for persons with mental illness. It is estimated that 1 in 5 Americans is affected by mental illness each year. Yet, mental illness coverage for persons who are privately insured is often not equal to the coverage for medical and surgical services.¹ The stigma of mental illness must be eliminated in order for mentally ill people to receive equitable treatment in society. Inequitable coverage of mental illness in comparison to medical or surgical services exemplifies the greater issue of the minimization of people with mental illnesses in society. For the past eight sessions of the legislature Washington has had some form of mental health parity legislation introduced. This paper examines the history of mental health in America, the federal Mental Health Parity

¹ John V. Jacobi, *Parity and difference: The value of parity legislation for the seriously mentally ill*. American Journal of Law and Medicine, 2003 [Proquest], Accessed on 3/7/2005; and Mari C. Kjorstad, *The current and future state of mental health parity insurance*, Psychiatric Rehabilitation Journal, 2003 [Proquest], 1, Accessed on 3/7/2005.

Act, and the barriers to mental health parity legislation in order to determine the effects of mental health parity legislation for the citizens of Washington and why its implementation is necessary now.

History of Mental Health

Mental illness has long been stigmatized in society, and the progression of the struggle for the rights of the mentally ill has been long fought. During the 19th century persons with mental illness were viewed as demon possessed and were routinely ostracized, beaten, harassed, and placed into asylums without proper treatment. In the early 1900's mental illness and health care received attention and reform due to the publication of Clifford Beers's autobiography detailing his battle with mental illness, *A Mind That Found Itself*. Even with the awareness brought by Beers's autobiography, stigma and shame of mental health illness remained along with the inequitable treatment of persons who were mentally ill.²

The 1960's and the following decades resulted in many policy changes regarding mental health. The 1961 Joint Commission on Mental Illness released *Action for Mental Health*, calling for the integration of the mentally ill into the general public with the aid of Community Mental Health Centers. However, due to the Vietnam War the release of patients came without proper funding. By 1977, involuntary commitment had been restricted to only persons who were a danger to themselves or others.³

From the late 70's through the 1980's the cost of health care began to skyrocket. According to an article by John V. Jacobi:

Employers found that costs for treating mental illness and substance abuse among their workers and the workers' families were rising far faster than costs for other health problems -- almost double the rate, according to some estimates. Employers cut back in a variety of ways. They raised the deductibles the workers

² National Mental Health Association, [State mental illness parity laws](http://www.nmha.org), <<http://www.nmha.org>> (1 March 2005).

³ Alexander Thomas, *Ronald Reagan and the Commitment of the Mentally Ill: Capital, Interest Groups, and the Eclipse of Social Policy*, *Electronic Journal of Sociology*, 1998 [journal on-line, 5-6, Available from http://www.sociology.org/content/vol003.004/thomas_d.html. Accessed on 3/7/2005.

themselves had to pay before health plan benefits kicked in; reduced the number of hospital days or outpatient visits covered by the plan each year; raised the percentages workers had to pay for each visit or hospitalization; and lowered the annual and lifetime ceilings on the total amount the plan would pay for any member. All at rates less generous than those for physical illness.⁴

At the same time the Reagan Administration took a regressive stance on mental health care – cutting funding severely through the 1980's. Many people were unable to afford medical coverage, let alone mental health coverage. The disparate cost of mental health care decreased access to mental health services and many people found themselves without proper treatment. Improper or no treatment for mental illness results in greater financial and societal problems. The degree to which mental illness impairs social activities differs, but untreated illness can be “disabling — disrupting family life, employment status and the ability to maintain housing.” Thus, the decrease in care led to an influx of persons who were receiving improper or little to no treatment being released into the community without the proper resources.

The passing of the Americans with Disabilities Act (ADA) in 1991 was a significant step for persons with both physical and mental disabilities. The ADA stipulated that actions be taken to integrate persons with disabilities into society, required residential services for persons with disabilities, and mandated nondiscriminatory provision routine medical services (Jacobi, 2). However, the ADA did not prevent discrimination in the area of health insurance provisions leaving room for the unfair coverage of mental health benefits.

Mental Health Parity Act of 1996

In 1996 President Clinton signed the Mental Health Parity Act (MPHA). The Federal Mental Health Parity Act was enacted to provide equitable insurance charges for mental health at parity to medical or surgical benefits. MPHA does not mandate mental health coverage for group health plans, but regulates parity for plans that offer mental health coverage.

⁴ John V. Jacobi, *Parity and difference: The value of parity legislation for the seriously mentally ill*. American Journal of Law and Medicine, 2003 [Proquest], Accessed on 3/7/2005.

MPHA regulates that limits on mental health benefits as they are defined under the terms of the plan or coverage be at parity for comparable medical or surgical benefits. It establishes in both the case of lifetime and annual limits that:

- If the plan or coverage does not include an aggregate lifetime limit or annual limit on substantially all medical and surgical benefits, the plan or coverage may not impose any aggregate lifetime limit or annual limit on mental health benefits.
- In the case that a plan or coverage does include an aggregate lifetime limit the plan or coverage must either apply the lifetime or annual limit it sets on mental health benefits to medical or surgical benefits or not include any aggregate lifetime or annual limit on mental health benefits that are less than the applicable lifetime or annual limit.

MPHA does not regulate “the terms and conditions (including cost sharing, limits on numbers of visits or days of coverage, and requirements relating to medical necessity) relating to the amount, duration, or scope of mental health benefits under the plan or coverage” with the exception of aggregate lifetime and annual limits. The definition of “mental health benefits” and “medical or surgical” with respect to services were left up to the terms of the plan or coverage.

MPHA does have exemptions for small business and increased costs. Businesses with 50 or fewer employees are exempted from the mandates of the MPHA. There is also an exemption for group health insurance plans or health insurance coverage to which the application of the MPHA would result in a cost increase of at least 1 percent. The Mental Health Parity Act that passed was a relaxed version of a more comprehensive bill by Senator Paul Wellstone. While it was a significant step in the movement toward parity, it still left room for discriminatory practices in terms and conditions, deductibles, and more.

Before the implementation of the Mental Health Parity Act of 1996, only five states: Maine, Maryland, Minnesota, New Hampshire, and Rhode Island had passed mental health parity legislation. Massachusetts, Texas, and North Carolina had implemented parity legislation for state employees only as well. Since the passing of the MPHA of 1996, thirty-three states have passed mental health parity mandates.⁵ While the mandates for parity range from limited to

⁵ See appendix A.

comprehensive, mental health parity has been accepted in traditionally “red” and “blue” or Republican and Democratic states alike.⁶

The comprehensiveness of mental health parity varies from state to state. There are some states that have no exemptions and require coverage for mental illness, alcohol and substance abuse at “full parity” which is defined as all terms and conditions for mental health being equal to the terms and conditions of physical services. While there are other states that limit coverage to biological disorders (schizophrenia, major depression, paranoia, and pervasive developmental disorder/autism, and such other disorders as schizo-affective, bipolar affective, panic, delusional, and obsessive-compulsive)⁷, maintain small business and cost increase exemptions, others that expand the definition of mental illness to behavioral and more.

History of Parity in Washington State

Mental health parity has not been a priority in Washington State. Over the past eight years, mental health parity bills have been introduced and reintroduced in the legislature without passing. Finally, on March 4, 2005, Substitute House Bill 1154 (SHB 1154) passed both the Senate and House of Representatives and has been delivered to the Governors’ office for signature. After years of contention, SHB 1154 passed the legislature with overwhelming bipartisan support and was signed into the law by Gov. Christine Gregoire on March 9, 2005. The implementation of this legislation is a necessary measure and will not only benefit the mentally disabled persons of this state but the general public as well.

Mental Health Parity Legislation was first introduced during the 1998 session. SB 6566, prime sponsored by Sen. Pat Thibaudeau, defined "mental health services" as “services provided to treat any of the diagnostic categories listed by the diagnostic and statistical manual of mental disorders IV or any subsequent revision.” SB 6566 required parity for co-pays, cost sharing, dollar limits, outpatient visit limits, outpatient day limits, and inpatient limits. SB 6566 exempted the Basic

⁶ National Alliance for the Mentally Ill. 10 June 2002, <<http://www.nami.org>> (7 March 2005); and Mari C. Kjorstad, *The current and future state of mental health parity insurance*, *Psychiatric Rehabilitation Journal*, 2003 [Proquest], 4. Accessed on 3/7/2005.

⁷ Alan L. Otten, *Mental Health Parity: What Can It Accomplish in a Market Dominated by Managed Care?* New York: Milbank Memorial Fund, [1998], 11.

Health Plan (BHP) from the requirement.⁸ It was referred to the Senate Health and Long-Term Care committee, but no public hearing or executive session was held for this bill. Thus, it died⁹ in committee.

Rep. Kelli Linville introduced HB 2517 in the 2000 regular session. HB 2517 was referred to the House Health Care Committee. This bill had all the requirements of SB 6566 without the exemption of the BHP. Similar to SB 6566 in the previous biennium, HB 2517 was never scheduled for public hearing and eventually died in committee.¹⁰

During the 2001 regular session companion bills¹¹, SB 5211 and HB 1080, were introduced by Senator Thibaudeau and Representative Ruderman in both the Senate and House. These bills called for parity in co-pays, cost sharing, dollar limits, outpatient visit limits, outpatient day limits, out of pocket limits and inpatient limits for children, but the co-pay or coinsurance could be no greater than it was on January 1, 2001. These bills also required the BHP to be covered as well. SB 5211 became the vehicle for the mental health parity legislation. It was referred to the Senate Health-Long-Term Committee where a more relaxed substitute bill requiring parity only for dependents “other than a spouse or domestic partner” was passed.¹²

SSB 5211 passed the Senate with a 37-12 vote and the House returned it to the Senate Rules Committee for third reading by resolution. The bill “died” in Senate Rules with the end of the 120 day Session. During the special session in late April 2001, SSB 5211 was brought back to life in its current form by a resolution but again died with the

⁸ Washington State Legislature. Senate. *An Act Relating to Mental Health Parity*. 55th Leg., 2nd sess., SB 6566. (1 January 1998).

⁹ Died is the term for bills which will not continue in the legislative process. Death of a bill is a relative term as bills are never truly dead until the end of the biennium in which it is introduced.

¹⁰ Washington State Legislature. House. *An Act Relating to Comparable Mental Health Benefits*. 56th Leg., 2nd sess., HB 2517. (14 January 2000).

¹¹ Companion bills are Senate and House bills that are introduced in the same session with the same exact text.

¹² Washington State Legislature, House, Committee on Health Care, “HB 1080 Requiring comparable mental health benefits,” <http://www.leg.wa.gov/> (2001) and Washington State, Legislature, Senate, Committee on Health and Long-Term Care, “SB 5211 Requiring comparable mental health benefit,” <http://www.leg.wa.gov/>. (2001).

expiration. However, because it was introduced in the first year of the biennium it had more chances. When the 2002 session began, SSB 5211 was again brought back to life by resolution and sent to the Rules Committee for third reading. SSB 5211 died for good with the close of the 2002 session, failing to be passed out of Rules and be put to the Senate floor for a final vote.¹³

The 2003-4 biennium was another hard fought battle for parity legislation. Rep. Shay Schual-Berke introduced HB 1828 during the 2003 regular session. HB 1828 was referred to the House Financial Institutions & Insurance where a substitute bill was passed with a majority recommendation. The bill was then referred to the House Appropriations Committee due to its fiscal impact on the state budget. The bill died in committee when the regular session ended. The legislature held two special sessions to finish the budget. In each of the sessions HB1828 was reintroduced but failed to make it out of committee both times.¹⁴

SHB 1828 saw life again during the 2004 session when it was reintroduced by resolution and retained in its present status. The House Appropriations Committee passed with a majority vote passed a 2nd substitute bill which was then referred to the House Rules Committee where it was placed on the floor for third reading. SSHB 1828 passed the house with a 64-33 majority and was sent to the Senate Health and Long-Term Care Committee for consideration. The Health and Long-Term Care Committee referred the bill to the Ways and Means Committee where it finally died with the close of session and the biennium. In addition to the rebirth of SHB 1828, Sen. Lisa Brown introduced SB 6484 which was referred to the Senate Health and Long-Term Care Committee where it died without public hearing.¹⁵

¹³ Washington State, Legislature, Senate, Committee on Health and Long-Term Care, “SB 5211 Requiring comparable mental health benefit,” <http://www.leg.wa.gov/>. (2001).

¹⁴ Washington State Legislature, House, Committee on Financial Institutions and Insurance, “HB 1828 Requiring that insurance coverage for mental health services be at parity with medical and surgical services,” <http://www.leg.wa.gov/>. (2003).

¹⁵ Washington State Legislature, House, Committee on Financial Institutions and Insurance, “HB 1828 Requiring that insurance coverage for mental health services be at parity with medical and surgical services,” <http://www.leg.wa.gov/>. (2003); and Washington State Legislature, Senate,

Current mental health parity legislation

Mental health parity legislation would come to the forefront during the 2005 session. With democrats in control of both houses and the governorship, and Governor Gregoire promising to sign-off on the bill if it made it through the process, mental health parity was slated to finally have its day. Sen. Thibaudeau and Rep. Schual-Berke introduced companion bills, SB 5450 and HB 1154 in the Senate and House respectively. HB 1154 and SB 5450 were referred to the Financial Institutions & Insurance and Health and Long-Term Care Committees in their houses, respectively. Both bills were scheduled for public hearing. After the public hearings HB 1154 became the vehicle for mental health parity legislation.

SHB 1154 passed out of the House Financial Institutions & Insurance Committee with a majority recommendation. SHB 1154 is the same as the original bill with the exception of the starting date, for the first of three phases has changed from July 1, 2005, to January 1, 2006, the word "identified" in the original bill relating to prescription drug coverage is replaced by the word "covered" throughout the substitute bill, and the emergency clause has been removed.¹⁶

SHB 1154

SHB 1154 requires group health insurance plans with more than 50 employees to provide mental health coverage equal to that which is provided for medical or surgical services. This mental health parity requirement applies to five categories of group health insurance coverages: plans administered by the HCA on behalf of state employees; plans provided by disability insurers; plans provided by health care services contractors; plans provided by health maintenance organizations; and benefits provided by the Washington Basic Health Plan. SHB 1154 requires that mental health insurance be an optional supplement for businesses with 50 or fewer employees. "Mental health services" is defined as the required medically necessary inpatient and outpatient services provided to treat mental disorders listed in the most current version of the Diagnostic and Statistical Manual of Mental

Requiring that insurance coverage for mental health services be at parity with medical and surgical services., 58th Leg., 1st session, SB 6484, (2004).

¹⁶ Washington State Legislature, House, Committee on Financial Institutions & Insurance, "SHB 1154 An act relating to mental health parity," <http://www.leg.wa.gov/>.(2005).

Disorders. The bill does not apply to disorders related to substance abuse, life transition problems (family/marital issues, occupational/academic problems, etc.), residential treatment and custodial care, and court ordered treatment (unless medically necessary).¹⁷

The requirements of the bill are implemented in three phases between 2006 and 2010. Substitute House Bill 1154 will implement the following between January 1, 2006 and July 1, 2010:

- **Phase One** - For health benefit plans established or renewed on or after January 1, 2006:

(1) The co-payment or coinsurance for mental health services may not exceed the co-payment or coinsurance for medical/surgical services provided under the plan. *Begun in Phase One.*

(2) Prescription drug coverage for mental health services must be covered to the same extent and under the same conditions as other prescription drug coverage in the health benefit plan. *Begun in Phase One.*

- **Phase Two** - For health benefit plans established or renewed on or after January 1, 2008:

(1) The co-payment or coinsurance for mental health services may not exceed the co-payment or coinsurance for medical/surgical services provided under the plan. *Begun in Phase One. Maintained in Phase Two.*

(2) Prescription drug coverage for mental health services must be covered to the same extent and under the same conditions as other prescription drug coverage in the health benefit plan. *Begun in Phase One. Maintained in Phase Two.*

(3) If the health insurance plan imposes a maximum out of pocket limit or stop loss, the same limit or stop loss must apply to medical, surgical, and mental health services. *Begun in Phase Two.*

- **Phase Three** - For health benefit plans established or renewed on or after July 1, 2010:

(1) The co-payment or coinsurance for mental health services may not exceed the co-payment or coinsurance for medical/surgical services provided under the plan. *Begun in Phase One. Maintained in Phases Two and Three.*

(2) Prescription drug coverage for mental health services must be covered to the same extent and under the same conditions as other

¹⁷ Washington State Legislature, House, Committee on Financial Institutions & Insurance, "SHB 1154 An act relating to mental health parity," <http://www.leg.wa.gov/>. (2005).

prescription drug coverage in the health benefit plan. *Begun in Phase One. Maintained in Phases Two and Three.*

(3) If the health insurance plan imposes a maximum out of pocket limit or stop loss, the same limit or stop loss must apply to medical, surgical, and mental health services. *Begun in Phase Two. Maintained in Phase Three.*

(4) If the health insurance plan imposes a deductible, it must be a single deductible covering medical, surgical, and mental health services. *Begun in Phase Three.*

(5) Any treatment limitations or financial requirements must be the same for mental health, medical, or surgical services. *Begun in Phase Three.*¹⁸

After passing out of the House Financial Institutions & Insurance committee the Rules were suspended and SHB 1154 was placed on third reading. SHB passed the third reading of the House with a 67-25 vote and no amendments on January 28, 2005. The bill then moved to the Senate for consideration. It was passed out of the Senate Health & Long-Term Care committee and sent to Rules for second reading. On March 3, 2005 the rules were suspended and the bill was placed on third reading in the Senate. During third reading, Sen. Linda Evans Parlette introduced an amendment that would insert an emergency clause and implement all the phases at once effective July 1, 2005. The amendment failed 24-25. However, SHB 1154 passed the Senate with a 40-9 majority. The bill was signed by the Speaker of the House and the President of the Senate then delivered to the governor for signature on March 4, 2005. Gov. Christine Gregoire signed the mental health parity bill into law on March 9, 2005 ending the eight year battle in Washington State.

Mental health parity legislation has faced opposition every step of the way. Supporters had to defeat cost concerns, societal views, and political inefficiencies in seeing this legislation through. Even with the success of mental health parity legislation in numerous states, mental health was still a hard sell in Washington.

The Benefits and Opposition to Mental Health Parity in Washington *Costs of Mental Health Parity*

The biggest argument of parity opponents has continued to be cost. Opponents argue that mental health parity will simply drive up the

¹⁸ Washington State Legislature, House, Committee on Financial Institutions & Insurance, "SHB 1154 An act relating to mental health parity," <http://www.leg.wa.gov/>. (2005).

cost of health care and is bad for business. The HB 1828 bill report includes the following as testimony against mental health parity:

This bill will only add to what is already a huge regulatory burden that threatens the ability of some businesses to provide employee health insurance. Furthermore, mandated benefits are inherently unfair, because they force people to pay for them whether they want them or not. What the public wants is better access to basic health care, and this bill will decrease such access because the mandate will make basic insurance more expensive. If mental health parity is truly a cost effective option, then let people freely choose whether they want it and let the marketplace decide if this is the direction we should go. The cost of mental health parity may harm businesses and cause lower wages.¹⁹

The cost factor for businesses was again repeated in testimony against HB 1154 and SB 5450 in the 2005 session as well. Opponents of parity stated the following as reasons to oppose parity during public hearings for HB 1154 and SB 5450²⁰:

- Washington already has 47 mandates that add considerably to the costs of premiums.
- The increased costs will limit the number of employers who can afford coverage.
- Increased mandates reduce the attractiveness of Washington as a place to do business for out of state health carriers.
- Others estimate the cost of this legislation to be much higher than the proponents, and comparisons to costs in other states are not accurate.

¹⁹ Washington State Legislature, House, Committee on Financial Institutions and Insurance, “HB 1828 Requiring that insurance coverage for mental health services be at parity with medical and surgical services,” <http://www.leg.wa.gov/>. (2003).

²⁰ Washington State Legislature, Senate, Committee on Health and Long-Term Care, “SB 5450 An act relating to mental health parity,” <http://www.leg.wa.gov/>, (2005), and Washington State Legislature, House, Committee on Financial Institutions & Insurance, “SHB 1154 An act relating to mental health parity,” <http://www.leg.wa.gov/>. (2005)

- Even a small percentage increase in cost means a lot in actual dollars.
- Mental illnesses are not like other illnesses.
- More mental health treatment does not lead to better mental health.

The cost implications of mental health parity are not limited to businesses, but also have financial burdens for the state. The inclusion of the BHP in parity legislation along with the state as an employer of thousands adds a cost factor for the state government as well. The importance of cost has been a significant barrier in the face of the continued budget deficits and strains on Washington State. It is estimated the state will incur a total cost impact of \$1,501,580 and \$3,003,160 in 2011 and 2012 from the implementation of phase 3 requirements of SHB 1154.²¹

Supporters acknowledge that mental health parity does have a price tag. During public hearing for HB 1154 and SB 5450 the following counterarguments were made concerning cost concerns:²²

- The mental health recovery rate for kids exceeds the recovery rate for physical illnesses.
- Effective mental health treatment can lessen medical costs of care and costs to society.
- A lack of treatment can lead to lifelong problems.
- We need to stop the cycle where the police or justice system has to deal with mental health issues that should be addressed in our health system.
- The cost of imprisonment greatly exceeds the cost of care for mental illness.
- A national expert has studied the issue; he found a 1 percent gross impact and a 0.44 percent net impact.
- The federal government has found the impact to be about 1 percent in their employee programs.

²¹ Washington State Legislature, Office of Financial Management, Fiscal Note Package for SHB 1154, (26 January 2005).

²² Washington State Legislature, House, Committee on Financial Institutions & Insurance, “SHB 1154 An act relating to mental health parity,” <http://www.leg.wa.gov/>. (2005); and Washington State Legislature, Senate, Committee on Health and Long-Term Care, “SB 5450 An act relating to mental health parity,” <http://www.leg.wa.gov/>. (2005).

- The costs of implementing mental health parity would be offset by the societal cost savings.
- It is important that mental health be covered at similar levels by all carriers to avoid the risk of adverse selection.
- None of the 33 states with mental health parity laws have repealed parity or endured severe costs.
-

Additionally, the National Mental Health Association reports that:

In the absence of fully funded services and treatments, many people with mental illness find themselves warehoused in our nation's prisons, jails and juvenile justice systems. Fifty to 75 percent of young people in juvenile justice facilities have at least one mental disorder.²³

Proponents use the above arguments surrounding the costs of mental illness as a defense of the necessity of parity.

Other Barriers

In an interview with Representative Schual-Berke, she cited disbelief about the low costs of parity and myths about mental illness as significant barriers to legislation in Washington State. In testimony against HB 1154 it was stated, "Mental illnesses are not like other illnesses. More mental health treatment does not lead to better mental health."²⁴ Representative Schual-Berke, the only physician in the legislature, argues the beliefs that "mental illness is voluntary, and treatment is not successful" are myths. She further declared mental illness is treatable and adverse affects of mental illness are preventable.²⁵

A final obstacle to mental health parity in Washington State has been in part been politics. Washington has faced several balance changes in its predominantly two-party legislature.²⁶ The combination of

²³ <http://www.nmha.org/>.

²⁴ Washington State Legislature, House, Committee on Financial Institutions & Insurance, "SHB 1154 An act relating to mental health parity," <http://www.leg.wa.gov/>. (2005).

²⁵ Schual-Berke, Rep. Shay of Washington, Interview by author, 9 March 2005, Olympia, Washington State Legislature, Olympia.

²⁶ See Appendix B.

leadership changes in both houses along with budget constraints have been a barrier to parity legislation. Aside from Democratic control of the Legislative and Executive branch, Representative Schual-Berke attributes the 3 phase process and delayed fiscal impact for the State to be key in making HB 1154 successful in a budget year where the state is facing an estimated \$2.2 billion deficit.²⁷

Mental health parity will provide greater access to mental health care. It is estimated that HB 1154 potentially benefit about 900,000 people whose plans do not cover mental health at parity.²⁸ Randy Revelle, a lobbyist for the Washington Coalition for Insurance Parity, is one of the many people who will benefit from mental health parity. He was diagnosed with manic depression in 1977. At the time, his insurance wouldn't cover hospitalization for the psychotic episodes he was suffering – so his doctor got him admitted for his bad back, which the health plan covered.²⁹ The bill will benefit people like 45 year old Colleen McManus whose nearly 20 year battle with depression and severe anxiety attacks is shared in the following exert from the *Seattle Times*:

McManus said that as a young woman, she earned a bachelor's degree, married and was teaching at an infant-care center when her life began falling apart. The condition she once attributed to a personality quirk became so acute she had trouble coping with daily life and was hospitalized. Her marriage ended.

Because her health insurance did not cover the mounting bills, social workers advised her to give up work and apply for Social Security disability benefits, said McManus, of Lake City.

²⁷ Schual-Berke, Rep. Shay of Washington, Interview by author, 9 March 2005, Olympia, Washington State Legislature, Olympia.

²⁸ Perry, Nick and Siderius, Christina. *Mental-health parity approved; State Senate OKs measure, 40-9 - Gregoire expected to sign bill that will potentially benefit 900,000; opponents say premiums will climb*, 2005 [Lexis-Nexis]. Accessed on 3/7/2005.

²⁹ Cook, Rebecca. Gregoire signs bill that says insurers must pay same as for physical illness. *The Associated Press*, 2005 [Proquest]. Accessed on 3/10/2005.

That sparked a cycle in which she took part-time jobs while forgoing disability benefits. Because she could not afford proper treatment while working, her condition would worsen and she would again find herself out of a job and applying for disability.³⁰

Stories like Randy Revelle's and Colleen McManus's are not uncommon for the thousands of people suffering from mental illness.

Mental illness is not limited to adults. One in five kids have mental disorders and they are even less likely to receive care than the one in five adults who are afflicted. Suicide is the second leading cause of death among adolescents. Mental health parity legislation will provide greater access for adults and children alike. The mental health recovery rate for kids exceeds the recovery rate for physical illnesses, but without parity legislation there is an unequal coverage for mental health benefits.³¹

Conclusion

The battle for mental health parity in Washington State has been long fought. The March 9, 2005 signing of SHB 1154 marks a great victory for the mentally ill of Washington State. Mentally ill persons have unfairly been denied equitable health insurance coverage for too long. According to the World Health Organization less than one-third of adults and one-half of all children with a diagnosable mental illness receive the treatment they need in any given year.³² Excessive health care costs should not be the reason people do not receive treatment. Requiring group health insurance plans to provide mental health coverage equal to that which is provided for medical or surgical services is beneficial to all in Washington State.

³⁰Perry, Nick and Siderius, Christina. *Mental-health parity approved; State Senate OKs measure, 40-9 - Gregoire expected to sign bill that will potentially benefit 900,000; opponents say premiums will climb*, 2005 [Lexis-Nexis]. Accessed on 3/7/2005.

³¹ Washington State Legislature, House, Committee on Financial Institutions & Insurance, "SHB 1154 An act relating to mental health parity," <http://www.leg.wa.gov/>. (2005).

³² Revelle, Randy, Schual-Berke, Rep. Shay, Thibaudeau, Sen. Pat. *End Discrimination Now*. Written in support of SB 5450/HB 1154.

Now is the time for mental health parity in Washington State; it is past time. If the stigma associated with mental illness is to diminish there must be measured steps toward equality for those with mental illness. The statistics show that mental health parity can be accomplished with little cost – less than 1 percent in most states. The state will incur no financial burden until 2011, and is in no way affecting already difficult budget decisions. The financial cost to Washington State pales in comparison to societal benefits. Treatment of mental illness will increase productivity, employability, and social functionality of persons with mental illness. The ability of young children to receive care in early life will decrease the possibility of incarceration and vagrancy.

There are more than 900,000 citizens who will benefit from this legislation. Mental illness is just as treatable as any physical illness. “The distinction we make between physical and mental illness is arbitrary, artificial, and antiquated,” said Rep. Shay Schual-Berke.³³ There is a prevailing need for the end of discriminatory practices toward mental health in our state and this bill accomplishes the task within the insurance industry. When Governor Gregoire signed the parity bill she stated, “When we fail to treat mental illnesses in the same way we treat illnesses of the body, it costs everybody. The bill is a great leap forward in the health of Washingtonians.”³⁴

³³ Schual-Berke, Rep. Shay of Washington, Interview by author, 9 March 2005, Olympia, Washington State Legislature, Olympia.

³⁴ Perry, Nick and Siderius, Christina, *Mental-health parity approved; State Senate OKs measure, 40-9 - Gregoire expected to sign bill that will potentially benefit 900,000; opponents say premiums will climb*, 2005 [Lexis-Nexis], Accessed on 3/7/2005.

References

Cook, Rebecca. Gregoire signs bill that says insurers must pay same as for physical illness. *The Associated Press*, 2005 [Proquest]. Accessed on 3/10/2005.

Gitterman, Daniel P., Sturm, Roland, Scheffler, Richard M. *Toward full mental health parity and beyond*. Health Affairs, 2001 [Proquest]. Accessed on 3/8/2005.

Jacobi, John V. *Parity and difference: The value of parity legislation for the seriously mentally ill*. American Journal of Law and Medicine, 2003 [Proquest]. Accessed on 3/7/2005.

Kjorstad, Mari C. *The current and future state of mental health parity insurance*. Psychiatric Rehabilitation Journal, 2003 [Proquest]. Accessed on 3/7/2005.

Legislature should pass mental-health parity; There's no reason to distinguish between mental illness and physical ailments for insurance purposes, 2005 [Proquest]. Accessed on 3/7/2005.

Mental Health Parity Act. U.S. Code. Titl.42, sec. 703(a) (1999).

National Alliance for the Mentally Ill. 10 June 2002, <<http://www.nami.org>> (7 March 2005).

National Mental Health Association. State mental illness parity laws. <<http://www.nmha.org>> (1 March 2005).

Otten, Alan L. Mental Health Parity: What Can It Accomplish in a Market Dominated by Managed Care? New York: Milbank Memorial Fund, [1998].

Perry, Nick and Siderius, Christina. *Mental-health parity approved; State Senate OKs measure, 40-9 - Gregoire expected to sign bill that will potentially benefit 900,000; opponents say premiums will climb*, 2005 [Lexis-Nexis]. Accessed on 3/7/2005.

Revelle, Randy, Schual-Berke, Rep. Shay, Thibaudeau, Sen. Pat. *End Discrimination Now*. Written in support of SB 5450/HB 1154.

Schual-Berke, Rep. Shay of Washington. Interview by author, 9 March 2005, Olympia. Washington State Legislature, Olympia.

Sturm, Roland, Pacula, Rosalie Liccardo. *State mental health parity laws: Cause or consequence of differences in use?* Health Affairs, 1999. Accessed on 3/8/2005.

Thomas, Alexander. *Ronald Reagan and the Commitment of the Mentally Ill: Capital, Interest Groups, and the Eclipse of Social Policy*. Electronic Journal of Sociology, 1998 [journal on-line]. Available from http://www.sociology.org/content/vol003.004/thomas_d.html. Accessed on 3/7/2005.

Washington State Legislature. Office of Financial Management. Fiscal Note Package for SHB 1154, (26 January 2005).

Washington State Legislature. House. *An Act Relating to Comparable Mental Health Benefits*. 56th Leg., 2nd sess., HB 2517. (14 January 2000).

Washington State Legislature. House. *An Act Relating to Mental Health Parity*. 58th Leg., 1st sess., HB 1828. (11 February 2003).

Washington State Legislature. House. *An Act Relating to Mental Health Parity*. 59th Leg., 1st sess., HB 1154. (21 January 2005).

Washington State Legislature. House. Committee on Financial Institutions and Insurance. "HB 1828 Requiring that insurance coverage for mental health services be at parity with medical and surgical services." <http://www.leg.wa.gov/>. (2003).

Washington State Legislature. House. Committee on Financial Institutions & Insurance. "SHB 1154 An act relating to mental health parity." <http://www.leg.wa.gov/>. (2005).

Washington State Legislature. House. Committee on Health Care. "HB 2517 An act relating to mental health parity." <http://www.leg.wa.gov/>. (2000).

Washington State Legislature. House. Committee on Health Care. “HB 1080 Requiring comparable mental health benefits.” <http://www.leg.wa.gov/>. (2001).

Washington State Legislature. Senate. *Requiring that insurance coverage for mental health services be at parity with medical and surgical services*. 58th Leg., 1st session, SB 6484. (2004).

Washington State Legislature. Senate. *An Act Relating to Comparable Mental Health Benefits*. 57th Leg., 1st sess., SB 5211. (28 February 2001).

Washington State Legislature. Senate. *An Act Relating to Mental Health Parity*. 55th Leg., 2nd sess., SB 6566. (1 January 1998).

Washington State Legislature. Senate. *An Act Relating to Mental Health Parity*. 59th Leg., 1st sess., SB 5450. (25 January 2005).

Washington State Legislature. Senate. Committee on Health and Long-Term Care. “SB 6566 An act relating to mental health parity.” <http://www.leg.wa.gov/>. (1998).

Washington State Legislature. Senate. Committee on Health and Long-Term Care. “SB 5211 Requiring comparable mental health benefit.” <http://www.leg.wa.gov/>. (2001).

Washington State Legislature. Senate. Committee on Health and Long-Term Care. “SB 5450 An act relating to mental health parity.” <http://www.leg.wa.gov/>. (2005).

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Hardworking Newcomers and Generations of Poverty: Poverty discourse in Central Washington State*

Jennifer Devine

Abstract

This research is part of a project that reinterprets geographies of poverty in the American Northwest focusing on the cultural and political-economic processes that produce poverty differences. This paper contributes to this goal by unpacking differences in poverty beliefs by race at the local county level. This qualitative analysis is grounded by a brief discussion of the political economy of Kittitas County in Washington State and the history of Hispanic immigration to the area, which provides space to analyze the theoretical linkages between structural and cultural constructions of poverty differences. Specifically, the first generation 'hardworking' Hispanic immigrants embody the 'working poor,' while individual explanations of poverty are articulated as the 'intergenerational' poor. In this vein, many whites use the marker of 'generation' differently between racial groups to distinguish between white, lower class individuals who choose to be poor from a group of newcomers whose poverty stems from structural forces such as non-living wage jobs and discrimination. This analysis poses new theoretical insights into the intersection between difference markers such as race, class, and generation and contributes to the literature on racial differences in poverty explanations. Furthermore, the geographical specificity of poverty discourse argues further grounding of the poverty literature in material conditions which will allow for more nuanced understanding of the creation and persistence of poverty in poor communities.

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