



Silicon Valley Notebook

Volume 13, 2015

**Studies of Contemporary Social Issues:
Well Being through the Life Course and
Organizational Challenges**

**Dr. Marilyn Fernandez, Editor
Department of Sociology
Santa Clara University**

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Studies of Contemporary Social Issues: Well Being through the Life Course and Organizational Challenges

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LETTER FROM THE EDITOR OF *Silicon Valley Notebook*, Volume 13

Dr. Marilyn Fernandez, Professor of Sociology

The Sociology Department at Santa Clara University is proud to present, in this volume of *Silicon Valley Notebook*, seven research papers written by students from the class of 2015. These papers reflect the substantive, theoretical, and methodological depth of the Sociology curriculum. Originally prepared as part of the Research Capstone course (Sociology 121), the student authors further refined their papers during the following quarter for inclusion in this volume.

Taken together, the authors studied important social issues through the life course of individuals and social organizations. Each conducted rigorous quantitative analyses of national secondary survey data to test predictions grounded in sociological theoretical traditions. Qualitative interviews with sources knowledgeable about their respective topics were used to complement the quantitative findings.

The three student authors in the first section reflected on the social mobility aspirations and health of adolescents. **Laila Anne Waheed**, in "*High School Seniors' College Plans: Gendered Variations in the Effects of Academic Agency, Cultural and Social Capital*," found theoretically meaningful gender differences in social and cultural capital pathways (that included parents, friends, and students' academic agency) to higher education. She used data on high school seniors from the national Monitoring the Future (2012) survey and interviews with eight education professionals. **Kathryn L. Luna** explored adolescent body image issues in her "*Gendered Differences in Adolescent Body Image: Youth Agency, Protective and Risk Factors*" and identified the complexities of female negative body image (in contrast to a simpler male pattern). Her analyses, using national survey data from students in the Health Behavior in School Aged Children survey (2009-2010), commentaries from 6 education/health professionals, and the Iowa and Chicago theoretical Schools of Self Concept, endorsed a wrap-around need for health modeling and protection for adolescents. In the third paper in this section, "*Children's Health: Family, Social Environment, and Child Activity*," **Anna Garvey** revealed that children's physical activities promoted health; but parental control and distressed neighborhoods worsened it. These findings, drawn from the 2011-2012 National Survey of Children's Health and qualitative interviews with child development professionals, were theoretically framed within the Ecological and Social Interactionist models and contributed to the sociology of children's health in the digital world.

The next set of papers on the well-being of adults was situated in the later stages of the individual life course; the specific themes were self-concept as well as health consequences of violent crime and cumulative racial disadvantages. In "*Family, Intimate Partners, and Adult Self-Concept*," **Danae Vanessa Dickson**, accessed data from the 2012 New Family Structures survey (n=2,765) and interviews with eight helping professionals, to evaluate the "boundary limiting" parameters of family influence on adult

self-concept. Even though romantic relationships, irrespective of early family structure, were the most relevant for positive adult self-concept (reinforcing the Chicago school of symbolic interactionism and self-concept), early family relationships continued to play a role in adult self-concept, but only for those who grew up in traditional family structures. “*Health Implications of Violent Crime Victimization and Resources*,” was the question explored by **Emily Szabelski** in the experiences of a subset of 1059 violence victims who responded to the 2010 National Crime Victimization Survey. Particular “strains” (Agnew’s Strain Theory) associated with the violent events, namely weapons used, medical attention needed, and close relationship with the attacker, led to mental and physical health problems; the ten professionals interviewed for the study reflected on the enduring mental (than physical) injuries resulting from the violence. **Leslie E. Sapon** found health disparities between minorities and non-minorities due to cumulative minority disadvantages in the 2012 National Survey on Drug Use and Health and interviews with eight knowledgeable professionals. The findings were broadly grounded in Durkheim and Merton’s theories of integration, with specific emphasis on Berger’s expectation states and Cockerham’s Health Lifestyle theoretical constructs.

In the final paper in this volume, “Gendered Collegiate Sports: Athlete-Student or Student-Athlete?” **Derek Bradley Eng** shifted the unit of analysis from individuals (be they adolescents or adults) to the sociology of college sports organizations and illustrated the structural conflicts in, and the Mertonian manifest-latent dysfunctional nature of, collegiate athletics. Analyses of the 2003-2012 National Collegiate Athletic Association (NCAA) survey and interviews with six athletic professionals showed the following: students of larger male sports programs were athletes first and students second while female sports and private (than public) universities were more likely to adhere to the “student-athlete” model.

As a collection, student research presented in this volume continued to exemplify the evidence-based social science curriculum that the Department of Sociology at Santa Clara University offers its students. The social issues explored have important policy implications that resonate with the University’s mission to not only prepare students of competence, conscience, and compassion but who will also help fashion a more just, humane, and sustainable world.

THE UNDERGRADUATE SOCIOLOGY CURRICULUM AT SANTA CLARA UNIVERSITY

Drs. Jack Gilbert (Interim Chair) and Charles Powers (Professor of Sociology)

In the 1990s, Santa Clara University embarked upon an ambitious effort to re-make its Sociology curriculum, informed by “best practices” discussions then taking place within the American Sociological Association. These efforts garnered special recognition when, in 1998, the program won the American Sociological Association’s Distinguished Contributions to Teaching Award.

Since that time, the Sociology Department has continued to consciously improve the structure of its curriculum in order to insure that all students (1) acquire methodological tools and conceptual frameworks for analyzing the world around them, and (2) have meaningful opportunities to apply their sociological skills through two vehicles for professional preparation: by designing and executing a professional quality research study (research capstone) and/or participating in an applied project (applied capstone). The research capstone experience illustrates the level of academic sophistication students can achieve by the time they complete their undergraduate study.

Research papers included in Volume 13 of *Silicon Valley Notebook* demonstrate the very high quality of student work produced by undergraduate sociologists in the Santa Clara University’s graduating class of 2015. It is with great pride in our students, and eager anticipation for the bright future that awaits each of the authors showcased in *Silicon Valley Notebook*, that we share Volume 13 with you.

High School Seniors' College Plans: Gendered Variations in the Effects of Academic Agency and Cultural and Social Capital

Laila Anne Waheed¹

(Winner of the 2015 Sociology Krassowski Award for Student Research)

ABSTRACT. This research focused on gendered variations in the effects of academic agency, social and cultural capital on high school seniors' college plans. Monitoring the Future (2012) data from a sample of 12,000 seniors, supplemented with interviews with education professionals found theoretically meaningful gender differences. College plans of males and females were directly influenced by their academic agency. Their parents were an additional direct positive influence, even if only for males. But, parental cultural capital and abstaining from controlled substances increased likelihood of pursuing college through increased academic agency for both males and females. These findings contributed to the literature on gendered higher education pathways and supported theories of social and cultural capital development.

INTRODUCTION

Education is considered by scholars to be the panacea for many of the worlds' problems. Whether it is energy, or environmental crises or social justice issues, we would be closer to meaningful and effective solutions if people were able to make informed and educated choices. Against this background, it is pertinent to raise questions about the state of education in the U.S. Public schooling is available to all American children up until age 18. However, according to the Bureau of Labor Statistics (2014), only about 65% of the students graduating high school go directly to college. Granted, college is not the only option for continued learning by any means, but it is the most commonly accepted route to future success. In fact, in an increasingly technology driven economy, a high school diploma leaves graduates under qualified for most jobs that pay comfortable wages, restricting upward economic mobility.

Pursuing college, a major decision for many youth, is governed by many factors; some are within their control and some are far beyond most 18 year olds. For example, some

¹ **Acknowledgements:** Thanks to Professor Marilyn Fernandez for her tireless editing and explanations and the Sociology Department for the opportunity to develop this research paper.

who desire to continue their learning may be limited by financial constraints. Other limitations may be self-imposed, based on how students view themselves as successful learners and the effort they put into their education. Risky behaviors such as smoking and drinking can additionally constrain their college options. Their family and friends could either assist the students in continuing their education or deter them from that path. Gender is yet another consideration in the mobility plans of seniors as well. Female students may feel pressured to pursue a more typical feminine career, while males may be primed for positions of power and leadership. In this multilayered context of the lives of high school seniors, this research paper examined the effects of individual agency and socio-cultural capital on seniors' post high school plans; gender differences in the effects will be used to frame the analysis.

LITERATURE REVIEW

Education and factors influencing achievement have been recognized as important subjects of study by many scholars. The following review of the extant literature identified themes relevant to the educational goals of youth; namely gender in education, academic agency of students, delinquent behaviors, and socio-cultural capital available to them.

Gender and Education

Over the last 40 years, gender disparities in overall numbers of men and women at universities have not only evened out but have favored women (Buchmann and DiPrete 2006). To understand the growing female advantage in college graduation rates of American students, Buchmann and DiPrete (2006) utilized General Social Survey data and the National Educational Longitudinal Survey. An important precursor of gender differentials in college graduation was the overall superior performance in high school academics by females (compared to males).

Yet, gender inequality within specific fields of study in both the humanities and sciences is still very high. Barone (2011), in his study of surveys of university students who graduated between 1999 and 2002 across 8 EU countries, found that a distinction between care and technical subjects was responsible for the gender divide in both humanities and sciences. Fields more closely associated with the feminine caring role, like teaching, social work and nursing, had higher proportions of female graduates; computing and engineering had more male graduates. These divisions may be a factor in gendered income gaps as well.

Youth Agency

Research on youth is also rife with findings about the importance of the responsibility (agency) that youth take, or do not, for their academic success. Youth agency reflects

not only academic effort but other social activities that might limit their options and chances for future success.

Academic Agency

For example, the effort students put into their academic work can influence not only their choices of majors, but even their choice to pursue education beyond high school, if at all. Rooted in the power of perception, a study in the United Kingdom by Chevalier, Gibbons, Thorpe, Snell and Hoskins (2009) demonstrated that students were more likely to pursue higher education when they had positive views of their abilities, regardless of their actual skill levels. University students who were pursuing higher education had a more inflated view of their abilities in high school as well, estimating that they would do better on exams than they actually did. White males had the most inflated views of themselves in contrast to females and males of other races (Chevalier et al. 2009). In short, perception of ability was more powerful than actual ability in influencing student plans to pursue higher education.

Such disconnect between perception and reality should not be surprising given the developmental stage of adolescents and young adults. It is the rare high school senior that will be clear about his/her academic plan, leave alone be coherent in their predicted and actual academic effort. A study by Wust and Beck (2012) based on 472 surveys of college students in the EU, found that students expected to spend a longer time studying when the test was a long way in the future than when the actual time to study arrived. Two-thirds of students thought they would be in the middle rank of student grades.

In the U.S., the expectations-academic effort links have generally been more positive. Researchers, Domina, Conley and Farkas' (2011) found that U.S students, who expected to go to college, put more effort in high school. Not surprisingly, middle school students, from the longitudinal study of US youth, scaled down their original college plans as they grew older. However, regardless of that scaling down of educational goals, effort levels were still higher among American youth than they would have been without the "college-for-all ethos" (94). In other words, whether or not students actually go to college, thinking they will go is beneficial for how much effort goes into academics in high school.

Looking beyond educational attainment to career success of adults, positive attitude and perception are important, but without actual skills, long-term success could be limited. In a longitudinal (from 1979 to 2006) U.S. based study, Hall and Farkas (2011), compared attitudes and cognitive skills of adults of different race groups in a sample of 12,686 respondents. At various points in their careers, irrespective of race/ethnicity, positive attitudinal and behavioral skills were useful at first for both men and women; but, cognitive abilities took over in their impacts on wage growth over time. Taken together, research on adolescents and adults alike has indicated that positive perceptions and effort are crucial for academic and career success.

Delinquent Behavior

Delinquent behavior, another example of youth agency, even if negative agency, has been found to increase the risk of dropping out of high school and not going to college. Using the NLSY97 data from 1997 to 2006, Cowan (2011) found that students, who perceived college to be attainable cost-wise, were less likely to jeopardize that opportunity with risky behaviors. For example, students who lived in lower college cost areas participated in fewer risky behaviors, such as cigarette and marijuana use, and had fewer sexual partners.

Other studies have documented the academic risks posed by delinquent behavior. Barry, Chaney, and Chaney (2010), in their analyses of the 2006 *Monitoring the Future* data, found alcohol use and truancy to be associated with lower educational aspirations for seniors, and that truancy led to other delinquent behaviors. Fleming, White, Haggerty, Abbot, and Catalano (2012) also found higher educational attainment to be associated with less high school marijuana use. Fleming and his colleagues used data from ten public schools in Washington State who participated in the Raising Healthy Children project to track substance use from age 15 to 23. Cigarette smoking rates were highest for students not planning to go to college and for those who dropped out of college, but alcohol use was not unusual for any group of students. However, marijuana use increased after they entered college.

Unfortunately, the connection between drug use and school truancy could compound the risks for not completing high school and college for adolescents. For example, the effects of truancy on other risky behaviors persisted, even when school performance, isolation, friend groups and family were controlled, in a study of young adolescents in Denver (Henry, and Huizing 2006).

The negative agency that delinquency represents is not unique to the American youth. In a street outreach program in Taipei, researchers Chou, Ho, Chen and Chen (2006), evidenced that adolescents who used drugs had much higher rates of truancy than those who did not use drugs. More important from an academic standpoint, larger drug doses reported by students increased days of school missed.

Working through High School

Student employment during high school can be another detractor from academic effort. A study by John Robert Warren, Paul C. LePore and Robert D. Mare (2000), confirmed the connection between lower grades and employment during high school in the US. In evidence from a longitudinal study and follow-ups with a cross-sectional group in the early 90s, employed students had poorer grades, lower achievement on tests, lower socioeconomic standing, and reported lower likelihood of going to college. Employment, per se, was not the cause of lower grades; but grades were a result of factors associated with working in high school, such as reduced effort and even lower family

SES. In other words, employment while in high school can also offer a glimpse into students' socioeconomic standing.

Social and Cultural Capital

While effort and motivation are certainly important for life choices that youth make, the social and cultural contexts in which they live also play a large role in their educational success. Parents and peers are two dominant forces in adolescent lives.

Parents

Social and cultural capital, offered by educated parents to their children, can motivate their children to pursue and excel in their studies. However, the linkages between parent and children's educational trajectories have not been uniform. Holmlund, Lindahl and Plug (2011), in their review of 16 studies of the impacts of educated parents on children's education found varied patterns. Twin parent and adoptee studies showed fathers with a positive influence on children's education, while studies from countries with recent education reforms found mothers to be more instrumental. The researchers concluded that while parent education, or socio-cultural capital, is important for children's educational socialization, fathers and mothers were not uniformly relevant for the overall academic achievement of students. More generally, the role of women's education in lowering birth rates and increasing the general health of the population has been well documented. For example, when Lutz and Samir (2011) compared education trends in countries around the world in order to predict population growth, the positive impact of women's education was evident.

Such gendered effects have also been evident in the U.S. For example, Buchmann and DiPrete (2006) found that males with absent or less educated fathers had the lowest college completion rates while females in the same family situation did far better. They posited that the recent social and legal steps towards gender equality have changed the ways parents invest in sons and daughters, with maternal investment leaning especially towards daughters in homes with absent fathers.

Economic and interactional investments from parents were associated with students applying to more selective schools. In looking at families and high school seniors, An's study (2010) of a national sample in 2004 supported the general importance of social background and parental investments in their children's educational goals.

Peers

Parents are not the only people from whom students gather human capital. As children grow up, their friendship networks and network memberships, become increasingly important with both negative and positive ramifications. In a study of US high school

students, Flashman (2012) found that students typically created friend networks with those students who had similar achievement levels, regardless of socio-demographic traits. When students' achievement goals changed, they altered their network to keep friends at the same levels as themselves. Similarly, Ellenbogen and Chamberland (1997) found differences in the social networks of at-risk and not at-risk students. Of the nearly 200 students they surveyed, those at risk had more friends who had dropped out, more working friends, fewer in school and fewer friends of the same sex. If students and their friend groups are similar in their low achievement levels and goals, the encouragement to break out may be lacking.

Of course, not all peer social activities are detrimental to youth development. Recreational activities, such as sports, can create positive networks and useful social capital for teens. In a study of girls' sports, Troutman and Dufur (2007) found that females, in the NELS survey, who participated in high school sports, were more likely to complete college than females who did not participate. A national longitudinal study comparing sports benefits among males, females and minority groups, by Shifrer, Pearson, Muller and Wilkinson (2012), found that all groups of students benefitted in college although black female athletes were at a disadvantage until the 2000s. Lower levels of female participation in sports were also a concern to researchers. Overall, positive friend groups and recreational activities have had important impacts on students' success.

Demographics, Resource Deficits, and Education

Race or ethnicity and associated deficits in resources and cultural knowledge have been another crucial element in the education plans of American youth. Brian An (2010) found that minority students and those with more educated parents applied to the most selective schools. But it was family background that mattered and less so race or ethnicity. In a US immigrant community, researchers Gonzalez, Stein and Huq (2012) found that students' perceptions of resilience to barriers and adoption of Anglo values led to increased likelihood of college going in 171 Latino youth. These two findings implied that cultural knowledge of the mainstream did aid students in their education goals and success.

Urbanicity. Location within cities is often recognized as a marker of positive human and economic capital; but outside of cities, socioeconomic struggles mattered more for rural youth. Two examples: central city and suburban residential location of 16 year olds, impacted attainment positively based on data from the General Social Survey (Sander 2006). Overtime, the advantage decreased for youth but the location advantages grew for older people. Similarly, although rural students in the National Educational Longitudinal Study had more community and social resources to draw from, researchers Byun, Meece and Irvin (2012) noticed that lower socioeconomic standing made completing college more of a challenge for rural youth.

Gaps in the Research

Based on the literature on student agency and socio-cultural capital presented above, it is clear that researchers have begun to understand factors that influence student motivation for academic success. Some of the most prominent were: cost, friend circles, parental capital, social class and gender. When college was perceived to be financially and intellectually available to high school students, they were more academically engaged and refrained from risky behavior (Domina et al. 2011; Cowan 2011). On the other hand, if they were struggling academically, friends were a negative academic influence (Flashman 2011; Ellenbogen and Chamberland 1997). The role of cultural capital that parents offer their children was touched on by Buchman and Diprete (2006) but not systematically compared to other forms of capital. And, because gendered social expectations are still strong forces in the labor market and in women's occupational choices, researchers (Barone 2011) have advocated for continued research on gender in education. Gendered research is particularly appropriate because women have outnumbered men in college going rates (Buchmann and DiPrete 2006). Against this background, this paper explored the current female advantage in higher education; more specifically, academic agency, delinquent behaviors, and social and cultural capital, with an overlay of gendered variations, was connected to higher education plans of high school seniors.

RESEARCH QUESTION

Gendered variations in the influence of four spheres of influences on post-high school college plans were examined. The first set indicated positive dimensions of individual agency; namely students' effort in school, and their perception of themselves as learners. A potential risk dimension of individual agency, delinquent behavior, was the second explanatory source; unlike positive agency, delinquency was expected to inhibit post-graduation college plans. A set of social environmental factors, indicated by family and friends, rounded out the model. Cultural capital, offered by mothers and fathers, and social capital, accrued through their peer social interactions, were expected to further clarify college plans of high school seniors.

The formal research question posed was: What are the gendered variations in the effects of individual agency and socio-cultural capital on the clarity of high school seniors' academic plans post- graduation? Male and female students were looked at separately; it is well known that differences in gendered norms differentially influence male and female youth reactions to life circumstances and their self-concept. Student work history, race, and residence location was controlled. Students' work history was accounted for because students, whose parents cannot financially support them in high school or in college, tend to combine academics with work (Warren et al. 2000). Controlling for race and urbanicity will help account for possible cultural and other community barriers to education, often by-products of history of discrimination or community expectations.

THEORIES AND HYPOTHESES

To understand, theoretically, the gendered relationships of college plans to student academic agency, and cultural and social capital, three sets of inter-related concepts were used. They were: Coleman's social and cultural capital (1988); Lareau's concerted cultivation (2002); and gendered socialization norms (Jossleson and Harway 2012).

The social capital and social mobility theoretical frameworks were used to broadly frame the search for gender differences in college plans. Scholars have demonstrated the usefulness of social capital, both social and cultural, in social mobility outcomes (higher education and employment) of individuals. Coleman (1988), in his cultural and social capital theoretical reasoning, emphasized that the social and cultural capital and associated learning that parents transfer to their children have important consequences for their success. According to Coleman (1988), parents teach their children the role obligations, expectations, social norms, and the information channels that will be useful to them as they grow into adulthood. Children are expected to use the inherited social and cultural capital to develop their own human capital, commonly typified by educational and occupational success. Lareau (2002) further specified the particulars of the socialization (Cooley 1902) processes of teaching and learning that occurs between parents and children that are most productive for success in societal institutions. She contrasted the focused efforts or "concerted cultivation" by middle-class parents to help their children succeed against the more *laissez-faire*, natural parenting styles of working class and poor parents. In Lareau's concerted cultivation, goal directed parenting styles resulted in middle class children being better equipped to fit in and succeed in social institutions, such as higher education. In other words, parents, by role modelling (a variation of Cooley's looking glass self; Powers 2010:139) expectations and behavior that are normative in traditional institutions, teach their children appropriate pathways to succeed, giving them a head start in the social mobility ladder. In addition to parental capital, the social environments and networks around teens can impart (or not) capital as well. Crowder and South (2003), drawing on Wilson's theories of neighborhood disadvantages, demonstrated how low neighborhood capital could be a detrimental force in socialization for teens.

Against this theoretical background, it is reasonable to evaluate the relative roles that individual agency and social/cultural capital, respectively, play in predicting children's success. Applied to senior high school students, two sets of predictions were made. One, parents with more cultural capital would transfer that capital to children, who in turn would assume more academic agency, decrease delinquency, and have clear post high school plans. The formal hypotheses read as follows: The more parental social and cultural capital high school seniors have, irrespective of their gender, the more likely they would be to have net positive academic agency, and in turn firmer college plans; race/ethnicity, urbanicity, and student work experience will be controlled.

However, given the gendered nature of society, starting from the family and lingering on into other larger societal institutions, it is imperative to ask whether the outcomes of social and cultural capital are different for male and female students. Researches have posited that disparities in childrearing patterns associated with raising girls and boys continue to persist (Buchmann and DiPrete 2006). Gender inequalities and parity in the American society are a work in progress. For example, while more female than male students are entering and graduating from college (Buchmann and DiPrete 2006) and more women are succeeding in the work place, they continue to face glass ceilings in pay and promotions (Barone 2011).

The Male Role Norms Inventory, created by Levant (cited in Jossleson and Harway 2012) as binary opposites of female norms, offered useful tools to disaggregate the gendered effects. The male norms were avoidance of femininity, restriction of emotionality, toughness/aggression, self-reliance, homophobia, non-relational sexuality, and achievement. In fact, Chevalier et al. (2009) and Wust et al. (2012) documented the behavioral and attitudinal manifestations of the binary gender norms. In their studies, men tended to think more highly of themselves than women but also engage in more risky behavior. Assuming that the binary gender norms continue to operate in the lives of high school seniors in 2012, we predicted that social and cultural capital will have stronger positive net impacts on the agency (both positive and negative) of male, than female students, and in turn lead to clear college plans. If gendered role modeling assumptions hold true, paternal cultural capital will also have a stronger impact on academic agency and college plans of males than females; maternal cultural capital will be more relevant for female agency and college plans.

METHODS

This research relied on mixed methods for the data analyses. First, the hypothesis and associated theories were tested using the Monitoring the Future data gathered in 2012 by researchers at the University of Michigan (Johnston et al. 2012). Second, interviews with 8 professionals in the field of high school counseling, sociology, college admissions and education were used to elaborate on the survey findings.

Secondary Survey Data Set

Monitoring the Future: A Continuing Study of American Youth, is an annual survey that is administered to high school seniors from 130 private and public schools in the US. *Monitoring the Future (MTF)* addressed topics ranging from drug use, school work, future plans and family structure of seniors in high school. Researchers Johnston, Bachman, O'Malley, and Schulenberg, at the University of Michigan, with funding from the National Institute for Drug Abuse, have been conducting this survey yearly since 1975.² The 2012 MTF survey, the focus of this study, included a group of about 13,000

youth who responded to the questions relevant to plans after high school. Roughly equal numbers of male and female high school students were represented in the MTF survey (50.1% Male, 49.9% Female). The race/ethnic distribution of youth in the 2012 MTF survey mirrored the overall US population: 12% black, 70% white and 16% Hispanic (Appendix A. Table). As for rural and urban childhood environments: over 40% of respondents grew up in rural areas, such as farms or small towns. Students' work experience was determined by income and hours worked, which affected about 60% of students who held jobs during the school year. These three factors will be controlled for in the multivariate analysis.

Primary Qualitative Interviews

To lend experiential perspectives on the survey findings, eight professionals who work with high school seniors, in college admissions and in education were interviewed for their insights on factors influencing students' plans after graduation. A high school counselor and a college counselor for public high school students, recommended by peers, worked in the same school district. Yet, the two schools had very different demographics; one had nearly all Asian-American students with 95% college attendance (Interviewee #1) and the other advised a more diverse set of students with a typical college attendance of 65% (Interviewee #2). A third interviewee, a private school guidance counselor (#3) in the Bay Area, was contacted online. A teacher (Interviewee #4) and a PhD candidate who works with high school students in San Francisco, was referred by an acquaintance. Two admissions officers (Interviewees #5 and #6) from a private school in the Bay Area were also interviewed. A local specialist in educating teachers (Interviewee #7) and a student services vice president from a public university (Interviewee #8) were the final set of professionals to be interviewed. Each interview lasted about 30 minutes: three were phone conversations and the others were in-person interviews. Interview protocol can be found in Appendix B.

DATA ANALYSES

Three levels of analysis, univariate, bivariate, and linear regression, were used to examine the MTF data. To assess gendered variations, the analyses were disaggregated by male and female students, with about 6,400 respondents in each group.

² In the 2012 *MTF* survey, the focus of this study, schools were chosen using units of geography developed by the Sampling Section of the Survey Research Center. The likelihood of a particular school being selected was proportionate to the size of its graduating class. About 350 students were drawn from each school, with smaller schools having all seniors surveyed. Response rates for 2012 were 83% with a sample size of 14,343 students (Johnston et al., 2012) and was representative of the US high school population. But, *MTF* did not survey young people who have dropped out of high school, which could range from 11 to 20 percent, and who will therefore be omitted in the following analysis. Six survey forms, with a core set of questions on demographics, were used in the survey process so not all students responded to every question. A group of about 13,000 responded to the questions relevant to plans after high school, ability and effort.

Operationalization and Descriptive Analysis

Descriptive analyses of College plans, protective and risk in individual agency, and protective socio-cultural capital are presented below.

Gender Differences in College Plans

The focus of this study, students' college plans after graduation, was measured using a series of survey questions from the *MTF* survey (Table 1.A) about students' plans after high school. The questions referred to the likelihood of them pursuing 2-year college, 4-year college or graduate school. Because no one student should respond affirmatively to all three options (because attending a 2 year and 4 year college simultaneously is unlikely), the responses were ranked from more definite plans to not pursuing more education.

Table 1.A. College Plans of High School Seniors: *MTF* 2012

Concepts	Variables	Values	Statistics	
			Female (n=6330-6485)	Male (n=6233-6407)
College Plans after High School Graduation (Dependent)	How likely are you to do each of the following things after high school?	Definitely will (4)	22.9%	20.3% ^{***}
		Probably will (3)	18.9	21.6
		Probably won't (2)	16.7	19.1
		Definitely won't (1)	41.5	39.0
	V2182. Graduate from a two-year college program?	Definitely will (4)	69.5%	57.5% ^{***}
		Probably will (3)	19.0	24.3
		Probably won't (2)	5.9	9.6
		Definitely won't (1)	5.6	8.6
	V2183. Graduate from a four-year college program?	Definitely will (4)	20.1%	29.2% ^{***}
		Probably will (3)	33.3	33.6
		Probably won't (2)	29.0	24.2
		Definitely won't (1)	17.7	13.0
V2184. Attend a graduate or professional school after college?	Mean (SD)	8.52(1.75)	8.05(1.93) ^{***}	
	Min-Max	3-12	3-12	
Index of College Plans ¹				

¹. Index of College Plans = V182(2 year college)+V183(4 year college)+V184(grad school); r of V183 and V184=.525^{***}; r of V182 and V184=.134^{***}; r of V182 and V183= -.201^{***}; *p≤ .05, **p≤.01, ***p≤.001.

The largest gap between males and females was that significantly smaller proportions of males (59%) planned to pursue college in contrast to females (69%). When averaged together, this finding is consistent with the Bureau of Labor Statistics (2014) data that about 60% of students, both male and female, going to college. As for 2 year and 4 year colleges, women had more definite plans to attend than males did, although more males had definite plans for graduate school. The mean () value of 8.3 on the index of college plans (range of 3-12) indicated a strong likelihood for most students to pursue some sort

of higher education; however, the index of women's college plans were slightly more definite (=8.52) than for males (=8.05).

Individual Agency: Protective and Risk Factors

As noted earlier, both positive and negative aspects of youth agency were considered for this analysis. Students' perceptions of their intelligence and school ability as compared to their peers can influence what they believe themselves to be capable of doing. The grades that students receive are feedback on that performance that ranks students among their peers. On the other hand, delinquent behavior or risky activities can serve to inhibit school performance and limit further education especially if students are apprehended by teachers or law enforcement.

Gendered Variations in College Agency: Protective Factor. Gender differences in students' perception of their school abilities, their intelligence and grades (first independent concept) presented in Table 1.B revealed the following: males had higher perceptions of their abilities while females had higher grades.

Table 1.B. Academic Agency: MTF 2012

Concepts	Variables	Values	Statistics	
			Female (n=6587-6591)	Male (n=6561-6567)
Perceived Ability	V2173. Compared with others your age throughout the country, how would you rate yourself on school ability?	1="Far Below Average"	0.7%	1.5% ^{***}
		2="Below Average"	1.3	1.8
		3="Slightly Below Average"	4.4	4.5
		4="Average"	33.5	28.1
		5="Slightly Above Average"	25.7	24.0
		6="Above Average"	28.8	30.1
		7="Far Above Average"	5.7	9.6
	V2174. How intelligent do you think you are compared with others your age?	1="Far Below Average"	0.8%	1.3% ^{***}
		2="Below Average"	1.6	1.2
		3="Slightly Below Average"	5.1	3.5
		4="Average"	32.4	24.1
		5="Slightly Above Average"	26.7	23.5
		6="Above Average"	26.7	33.3
		7="Far Above Average"	6.7	13.1
	V2179. Which of the following best describes your average grade so far in high school?	9="A (93-100)"	20.5%	14.9% ^{***}
		8="A- (90-92)"	22.1	17.7
		7="B+ (87-89)"	20.7	18.6
		6="B (83-86)"	15.7	19.0
		5="B- (80-82)"	9.3	12.4
		4="C+ (77-79)"	6.5	8.7
		3="C (73-76)"	3.5	5.4
2="C- (70-72)"		1.2	2.1	
1="D (69 or below)"		.5	1.1	
Index of Perceived Ability ¹	Mean(SD)	16.7(3.4)	16.6(3.6) ^{***}	
	Min-Max	3-23	3-23	

¹. Index of Academic Agency = V2173(ability)+V2174(intelligence)+V2179(grades); r of V2174 and V2173= .726^{***}, r of V2174 and V2179=.370^{***}, r of V2173 and V2179=.515^{***}; *p<.05, **p<.01, ***p<.001

Looking specifically at the differences between male and female responses, women tended to clump more tightly in the middle, with over 30% considering themselves “average,” whereas only about 25% males ranked themselves as average. Fully twice as many men felt they were very high above or very high below average than women. In terms of grades, female respondents had a higher percentage of top grades (by 5%). A larger proportion of males reported their average grade to be C+ or below than females (by over 5%). On the index of academic agency (range of 3-23), it was revealed that what females (=16.7) lacked in positive perceptions, they slightly made up for with better grades (Male =16.6).

Gendered Variations in Delinquent Behavior: Risk Factor. Delinquent Behavior of students was measured using three indicators of substance use in the 30 days before the survey: alcohol, marijuana and cigarettes as well as truancy in the same period. The data are presented in Table 1.C.

The majority of students had not used any of these substances in 30 days prior to the survey; about 5% more females abstaining from all three. As for alcohol, 59% of females and 54% of males did not have any alcoholic beverages. About 20% females had alcohol on 1 to 2 occasions but twice as many males reported 10 to 40 occasions of drinking. Responses for marijuana ranging from 1 to 9 times was uniform between the sexes; but three times as many males reported 10 to 40 instances of using marijuana. Cigarettes, the least popular drug of choice, had 85% of females and 81% of males not smoking. Looking at truancy (classes that students cut), males skipped class more frequently than females by a very small percentage; 70% of males not missing any classes and about 15% missing 1 or 2 classes.

On the Index of Delinquent Behavior, which included alcohol, marijuana, cigarettes and truant behavior and ranged from 0-29, most student scores were in the bottom of the range; with a score of 2 to 4. For females, the mean value of 2.6 was about a point lower than the mean value of 3.4 for males; that is, most students were not delinquent; however, males did so more frequently than females.

Table 1.C. Delinquent Behaviors: MTF 2012

Concepts	Variables	Values	Statistics	
			Female (n=6359-6605)	Male (n=6365-6658)
Delinquent Behavior	V2106.C. On how many occasions (if any) have you had alcohol beverages to drink---more than just a few sips---during the last 30 days? ¹	0= "0 Occasions"	59.7%	54.4% ^{***}
		1="1-2 Occasions"	21.4	19.2
		2="3-5 Occasions"	9.9	12.1
		3="6-9 Occasions"	5.3	6.5
		4="10-19 Occasions"	2.6	4.3
		5="20-39 Occasions"	0.6	1.5
		6="40 or More"	0.5	1.8
	V2117.C. On how many occasions (if any) have you used marijuana during the last 30 days?	0= "0 Occasions"	80.7%	73.1% ^{***}
		1="1-2 Occasions"	7.3	8.0
		2="3-5 Occasions"	3.9	3.8
		3="6-9 Occasions"	2.2	2.5
		4="10-19 Occasions"	2.2	3.5
		5="20-39 Occasions"	1.7	3.1
		6="40 or More"	2.0	6.0
	V2102. How frequently have you smoked cigarettes during the past 30 days?	0="Not at all"	85.3%	81.0% ^{***}
		1=">one /day"	7.5	8.7
		2="1-5 /day"	4.6	5.8
		3="about ½ pack /day"	1.7	2.7
		4="About 1 pack /day"	0.7	1.3
		5="About 1½ pack/day"	0.1	0.2
		6="2 pack or more/day"	0.1	0.3
	V2176. During the last four weeks, how many whole days of school have missed... B. Because you skipped or cut? ¹	0="None"	69.2%	69.3%
		1="1 Day"	13.8	13.0
		2="2 Days"	6.9	7.4
3="3 Days"		4.4	4.1	
4="4-5 Days"		3.3	3.6	
5="6-10 Days"		1.3	1.2	
6="11 or More"		1.1	1.4	
V2178. During the last four weeks, how often have you gone to school, but skipped a class when you weren't supposed to? ²	0="Not at all"	72.8%	70.8% ^{**}	
	1="1 or 2 times"	16.9	17.0	
	2="3 to 5 times"	6.6	7.6	
	3="6 to 10 times"	2.3	2.6	
	4="10 to 20 times"	0.6	0.8	
	5="more than 20"	0.7	1.2	
Index of Delinquent Behavior ²	Mean(SD) Min-Max	2.6(3.6) 0-29	3.4(4.3) ^{***} 0-29	

^{1.} All variables recoded so that "0 occasions" or "Not at all" = 0;

^{2.} Index of Delinquent Behavior= V2106 (ALC) + V2117(MJ)+ V2102(CIG); r of V2106 and V2117=.424^{***}, r of V2106 and V2102= .346^{***}, r of V2117 and V2102=.396^{***}

^{*}p≤.05, ^{**}p≤.01, ^{***}p≤.001

Paternal and Maternal Cultural Capital

Parental availability and education levels do influence what students pick up from their parents and in turn, the cultural capital they can rely on as they grow up. Maternal and paternal education levels and whether the high school senior lived with them are shown in Table 1.D.

Table 1.D. Paternal and Maternal Cultural Capital: MTF 2012

Concept	Variables	Values	Statistics	
			Female (n=6227-6419)	Male (n=6191-6428)
Paternal Cultural Capital	V2163. What is the highest level of education your father completed?	1="completed some grade school or less"	4.2%	3.8% ^{**}
		2="some high school"	10.7	10.2
		3="completed high school"	28.4	26.5
		4= "some college"	16.8	18.0
		5=" completed college"	24.1	26.4
		6="graduate or professional school"	15.8	15.1
	V2155. Father or male guardian in household? ¹	0=Not Marked 1=Marked	27.6% 72.4	24.9% ^{***} 75.4
	Index of Paternal Cultural Capital ²	Mean(SD) Min-Max	2.9(2.2) 1-7	3.1(2.1) ^{***} 1-7
Maternal Cultural Capital	V2164. What is the highest level of education your mother completed?	1="completed some grade school or less"	3.2% 8.0	3.0% ^{***} 6.7
		2="some high school"	23.2	22.5
		3="completed high school"	22.5	20.7
		4= "some college"	28.4	32.0
		5=" completed college"	14.7	15.0
		6="graduate or professional school"		
	V2155. Mother or female guardian in Household? ³	0=Not Marked 1=Marked	9.3% 90.7	10.6% [*] 89.4
	Index of Maternal Cultural Capital ⁴	Mean(SD) Min-Max	3.8(1.7) 1-7	3.7(1.8) ^{***} 1-7

^{1.} V2155. Which of the following people live in the same household with you? Father or male guardian?

^{2.} Index of Paternal Cultural Capital=V2163(fathers education)+V2155(father at home). $r=.174^{***}$

^{3.} V2155. Which of the following people live in the same household with you? Mother or female guardian

^{4.} Index of Maternal Cultural Capital=V2164(mothers education)+V2156(mother at home). $r=.12^{***}$

^{*} $p \leq .05$, ^{**} $p \leq .01$, ^{***} $p \leq .001$

Female youth reported slightly lower rates of education for both parents than males did. But, mothers had completed more education than fathers by a few percentage points. And far more youth lived with their mothers (86.6%) than with their fathers (70%); only slightly more females reported no father or male guardian in their home. Because of these differences in living arrangements, the mean Index of Maternal Cultural Capital (female =3.8; male =3.7 on a range of 1-7) was higher than Index of Paternal Cultural Capital (female =2.9; male =3.1).

Peer Social Capital

Early in the life of a child, it is the parents that are very influential. But, as they grow up, friendship circles and activities outside the home become more influential. These new peer associations can change the views and behaviors of adolescents and generate social capital that can be drawn on to either support or hinder educational aspirations.

In terms of peer social capital, two indicators of seniors' involvement in social activities were used. Respondents were asked how frequently they go out in a week and how frequently they go on dates (Table 1.E). More female respondents went out a few times a week for recreational activities while more males reported doing an activity with their peers almost every day of the week. When it came to dating, males reported dating more frequently than females. The Index of Peer Social Capital, treated by adding frequency of social activities, indicated that males had more frequent social events (4.2) than females (3.7) but both participated in social activities each week.

Table 1.E. Peer Social Capital: Monitoring the Future 2012

Concepts	Variables	Values	Statistics	
			Female (n=6394-6519)	Male (n=6323-6437)
Peer Social Capital	V2194. During a typical week, on how many evenings to you go out for fun and recreation? ¹	0=less than 1	14.4%	11.2% ^{***}
		1=one	18.3	13.6
		2= two	27.8	25.2
		3=three	22.6	24.0
		4=four to five	12.0	16.8
		5=six to seven	4.7	9.2
	V2195. On the average, how often to you go out with a date? ²	0=never	37.2%	34.3% ^{***}
		1=1/mo	17.7	17.9
		2=2-3/mo	15.0	15.8
		3=1/wk	13.1	14.7
	4=2-3/wk	11.4	11.4	
	5=3+/wk	5.5	5.8	
	Index of Peer Social Capital ¹	Mean(SD) Min-Max	3.7(2.4) 0-10	4.2(2.4) ^{***} 0-10

¹. Recoded for 'less than 1' to equal zero;

². Recoded for 'never' to equal zero;

³. Index of Peer Social Capital = V2194(Go Out) + V2195 (Date); r=.278^{***}

^{*}p≤.05, ^{**}p≤.01, ^{***}p≤.001

Summary of Descriptive Statistics

The *MTF* sample of high school students used in this study was comparable to national statistics on gendered college plans and associated factors in many ways. There were small, but noticeable differences between males and females in the clarity of their college plans. Males were bifurcated in their perceptions of their abilities; they were either very high or very low in their self-rating. However, females had higher grade averages than males. Similarly, albeit the levels of delinquency were low for the sample, male youth were more delinquent than females. Generally, students had more access to maternal cultural capital than paternal cultural capital. But, female students reported higher levels of maternal cultural capital while males had more paternal cultural capital. Peer social capital from socializing was also reported more by males than females.

Bivariate Analysis

The next step in the analytical strategy was to explore the relationships among the indices of Students' College Plans, Academic Agency, Delinquent Behavior, Parental Cultural Capital, Peer Social Capital, Urbanicity, Work Experience, and Race. The focus was on comparisons between male and female high school students on the following relationships: the relationships of college plans to academic agency, followed by the other indices. The correlation matrices are presented in Appendix C.

Gender variations in the associations between college plans and predictors were in the expected directions. As for the association between the indices of Academic Agency and College Plans, male students who exercised more agency ($r=.23^{***}$), had firmer education plans than their female counterparts ($r=.12^{***}$). Similarly, delinquent behavior was negatively correlated with college plans more strongly for males ($r=-.10^{***}$) than for females ($r=-.03^*$). Paternal cultural capital was a positive influence for males ($r=.10^{***}$) but not for females. So was maternal cultural capital; mothers were a stronger influence on their sons ($r=.12^{***}$) than their daughters ($r=.05^{***}$), even though both benefitted from maternal cultural capital. On the other hand, peer social capital was not significantly correlated with college plans for either males or females.

Linear Regression Analysis

The robustness of gender differences in the correlations of students' academic agency and college plans, were tested using multivariate analyses; urbanicity, need for work and race were controlled. Additionally, to chart the specific pathways through which parents and friends helped shape the higher education plans of high school children/friends, a two-step regression analyses was conducted. In the first step, youth academic agency in their senior year of high school (a clear indicator of future academic plans) was regressed on delinquent behavior, peer influence, parental cultural and Peer Social Capital, urbanicity, work experience, and race/ethnicity. College plans were then,

in Step 2, regressed on academic agency, social and cultural capital, and other relevant factors. In order to evaluate gender variations in the said effects, the analyses were disaggregated by sex of the high school students.

The results are presented in Table 2 and modelled in Figure 1³. Qualitative insights from interviews with professionals in the field of education were used to elaborate on the relevant quantitative findings.

Youth Academic Agency (Model 1)

Overall, non-delinquency (agency), followed by social and cultural capital, were the most relevant factors in the academic agency of high school students. However, noteworthy gender similarities and differences were evident in their effects on high school students' academic agency. On the one hand, paternal and maternal cultural capital offered similar advantages in academic agency for both male (paternal $\beta=.14^{***}$ and maternal $\beta=.15^{***}$) and female youth (paternal $\beta=.12^{***}$ and maternal $\beta=.16$). On the other hand, the negative consequences of delinquency on limiting academic agency was stronger for females ($\beta=-.22^{***}$) than for males ($\beta=-.18^{***}$).

Interesting race/ethnic and gender interactions were also evident in academic agency: White male high school seniors' had more (net) academic agency than their non-white counterparts ($\beta=.11^{***}$); but, white females took less ownership of their academics than non-white females ($\beta=-.10^{***}$). A high school teacher (Interview #5) corroborated the self-talk and "growth mind states" of young students influencing their success; but in her experience the gendered cultural upbringing (more than just gender) that was critical. Cultural underpinnings of gender differences in the academic effort of students were echoed by another teacher (Interviewee #4) as well. The boys he counselled were struggling to fulfill more of the cultural expectations of what it means to be "college guys."

College Academic Plans (Model 2): Direct and Indirect Pathways

Turning to the college trajectories of the youth surveyed (Model 2), the following similarities and differences between male and female high school students were identified.

³ Because of the large sample size, only significant Beta values of $\pm.07$ or above (about a third the size of the largest beta value in the models) were discussed.

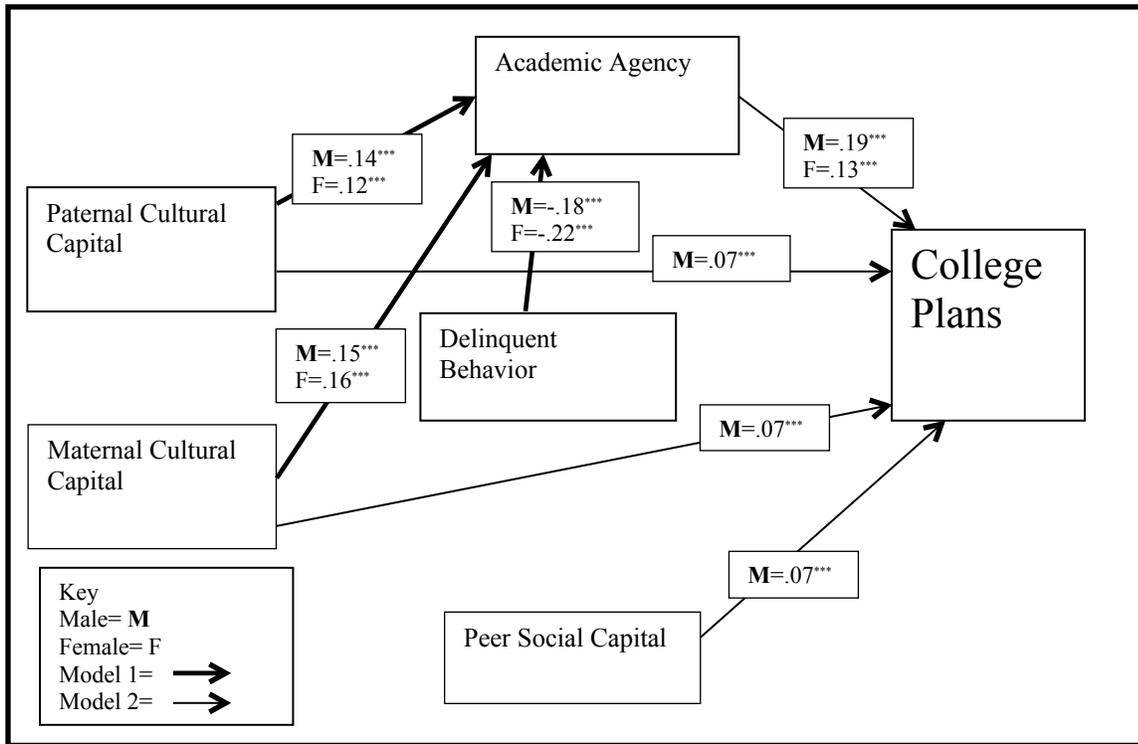
Table 2. Regression (β) Analysis of Gendered Variations in Academic Agency, Delinquent Behavior, and Socio-Cultural Capital on Academic Plans after High School¹:
Monitoring the Future 2012.

	Individual Academic Agency Model 1		Academic Plans ¹ Model 2	
	Males	Females	Males	Females
Individual Academic Agency ²	-----	-----	.19***	.13***
Delinquent Behavior ³	-.18***	-.22***	-.04*	NS ¹⁰
Paternal Cultural Capital ⁸	.14***	.12***	.07***	NS
Maternal Cultural Capital ⁵	.15***	.16***	.07***	.04*
Peer Social Capital ⁶	NS	NS	.05**	NS
Residential Location (Urbanicity?) ⁷	NS	NS	.08***	NS
Need for Work ⁸	NS	NS	NS	NS
White vs. Non-White ⁹	.11***	-.10***	-.16***	NS
Constant	14.28***	14.84***	5.82***	7.58***
Adjusted R ²	.13	.13	.09	.04
DF 1 and 2	7 & 4203	7 & 4253	8 & 3986	8 & 4089

1. Index of Academic Plans = 2 year college+4 year college+ graduate school; range= 3 (less plans)-12 (more plans);
 2. Index of Academic Agency= intelligence + school ability + grades: range =3 (more agency) - 23;
 3. Index of Delinquent Behavior= alcohol+ marijuana+ cigarettes+ days skipped +classes skipped: range =0 (less delinquency) - 29;
 4. Paternal Cultural Capital=education+ home: range = 1(less capital) – 7;
 5. Maternal Cultural Capital= education + home; range= 1(less capital) - 7;
 6. Index of Peer Social Capital= go out + dates: range = 0(never) – 10;
 7. Residential Location=non-urban= 1, urban = 2;
 8. Need for Work= money/hours worked: range = 1(less income) – 10;
 9. Race= White =1, Non-white=0;
 10. NS= Not Significant
- ***p <= .001; **p <= .01; * p <= .05

Academic Agency. High school students, whether male ($\beta=.19^{***}$) or female ($\beta=.13^{***}$), who ranked themselves as more capable academically than their classmates were more certain of their post high school academic plans than their peers who had less agency for their academic success. The education professionals uniformly underscored the power of confidence and self-perception in college success. To paraphrase the college admissions officer (Interviewee #3), students who believe that the sky is the limit aim higher and are able to take risks to achieve what they want.

Figure 1. Empirical Model of Gendered Direct and Indirect Pathways to College Plans¹



¹ Description of indices and variables can be found in Table 2 footnotes.

The gender similarities ended here. As was seen with academic agency (in Model 1), male and female high school seniors differed in their pathways to higher education. Male students translated their academic agency into firmer college plans ($\beta=.19^{***}$) than females ($\beta=.13^{***}$). The education professionals concurred with this male-female difference in college plans. For example, in the professional experience of one counselor (Interviewee #2), while students with low GPAs did not feel confident enough to apply to college in the first place, she had also noted observed a difference in the confidence levels of males and females. She referred to a “manly role” that kept confidence high in males. The male confidence, notwithstanding, she opined that the majority of those on the D and F grade list were male, while girls maintained Bs and Cs to stay above the radar even when they tune out of school. She added: even with a new generation of females, second guessing their abilities was still something women have to overcome (Interviewee #2). Another counselor elaborated on another dimension of the gender difference: in her experience, male and female students were different in perceptions of their general abilities; but, she also saw females being more confident about the subject matter in the humanities but not the sciences (Interviewee #1). The maturity level differences between 18 year-old males and females, made females more cognizant of the kind of work it takes to be successful; this gendered maturity difference

was also pointed out in the experience of a number of other professionals interviewed (Interviewees #3, #6, and #7).

Parents and their Capital. As for the role that fathers and mothers played in the college trajectories of their high school children, gender differences, while statistically evident, were not substantial. Paternal cultural capital ($\beta=.07^{***}$) was a marginal asset in the college plans of male high school seniors, but it was not for females. Maternal capital gave male students ($\beta=.07^{***}$) only a slight advantage in their college plans while girls were supported even less ($\beta=.04^{***}$) by their mothers.

Interesting gender differences were also evident in the indirect pathways to college through parents; parents molded the college plans of their children indirectly by helping them take more responsibility (agency) for their academics. One important example: while parents, with their social and cultural capital, were equally influential in firming up academic agency of both sons (paternal $\beta=.14^{***}$ and maternal $\beta=.15^{***}$) and daughters (paternal $\beta=.12^{***}$ and maternal $\beta=.16^{***}$), boys ($\beta=.19^{***}$) were ultimately able to enact their inherited capital into human capital more effectively than girls ($\beta=.13^{***}$).

How do these statistical findings match with the professional experiences of those interviewed for the study? Educated parents were uniformly viewed, by all interviewees, to be very important in shaping students' college plans. The professionals who worked with children from well-off families pointed to the observed differences in mothers' and fathers' involvement in education. The positive beta values for maternal and paternal influence for their children's agency and college plans supported these observations. Stay at home mothers were seen as the ones involved with the child's education (Interviewee #5, #6, and #8).

In the experience of some of the professionals, it was not just parent education but also their careers that were relevant for the children. At the high achieving school (where Interviewee #1 worked) with 95% of students attending college, not only parents' education but also their careers shaped students' college choices. To other professional interviewees, both the pressure parents can put on their children and the influence of parental expectations were key forces encouraging college attendance (Interviewees #3, #4, and #5). On the other end of the spectrum, parents struggling to get by financially were harder to get hold of for parent-teacher conferences, as per one counselor (Interviewee #2) and consequently were less involved in their students' education. The unfortunate consequence was that kids slipped through the system without the grades or skills to go to college.

When pressed to explore gender differences in college plans of high school seniors, the interviewee responses were muted; they were unsure of gendered variations in parental influence (which might explain parents being a marginal asset for male youth and no female effect in the multivariate analyses). They had not experienced differences in capital conferred from mothers to daughters versus sons, even though almost all found mothers to be more involved in children's education and gathering college information.

In the end, it was the illustrations the professionals offered that hinted at possible gendered pathways to college. For example, one admissions officer noted that boys look up to their fathers more than girls do, so an absent or bad father role model can be much more damaging for them (Interview #3). Another counselor (Interviewee #4) noted that when athletic scholarships were on the table, fathers became much more involved in the college application process. With more boys than girls involved in highly competitive sports, additional encouragement from fathers may be more common for boys than girls.

Other instances of gendered parental capital were evident in their comments about mentors. One noted that first generation students may identify with a mentor of the same gender with more education and go to college (Interviewee #7). Others also highlighted the importance of mentors to guide students, especially in the absence of strong parental capital (Interviewee #6 and #7).

Peer Social Capital. Another sphere of influence on high school seniors, were peers. While peers and delinquency did not directly restrict college plans of either boys or girls, delinquency indirectly restricted college plans by rendering youth less responsible for their academics. Male model: Delinquency \rightarrow Agency ($\beta = -0.18^{***}$) \rightarrow College Plans ($\beta = 0.19^{***}$); Female Delinquency \rightarrow Agency ($\beta = -0.22^{***}$) \rightarrow College plans ($\beta = 0.13^{***}$).

The professional interviewees were nearly uniform in their assessment of the relevance of peer social groups in the college plans of high school seniors. A few noted that students surrounded themselves with students of similar aspirations (Interviewee # 3, #4, and #8). The complex interactions between peers and community for teenagers were on the minds of education professionals. One (Interviewee #5) reflected on the conflicting demands that students from lower socioeconomic groups have to reconcile as they try to bridge multiple communities of people with different expectations. She discussed the different perceptions of the limits and heights of academic achievement that are passed on from one generation to another in different ethnic groups and how difficult it can be to go against their community for a young person. Another interviewee (#7) echoed the pull of a high school social group in his personal experience, and how difficult it was to go home and try to fit in with old friends who had not gone to school.

Delinquency. Adolescents, particularly males, who were delinquent ($\beta = -.04^*$) had, on balance, less clear post high school academic plans. Interviewees were divided in their assessment of the drug prevalence among high school youth. Some found delinquency to be the exception to the rule for most students but others thought casual usage drugs and alcohol to be as high as 60% (Interviewees #3 and #4). The counselor (Interviewee #4) found that students thought they could do it all but couldn't keep up the standard of work if they became too involved in drinking and smoking. The school to prison pipeline, especially for males, was another case in point. One admissions officer (Interviewee #6), made the following observation: males were more truant at a younger age and were labeled as delinquent by mostly female teachers who did not have the resources to discipline them in the classroom.

Race/Ethnic, Geography, and the Resources They Bring. Finally, Black or Hispanic male youth ($\beta = -.16^{***}$) and those who lived in bigger cities ($\beta = .08^{***}$) were less sure of college. Race and ethnicity and their economic and cultural implications were recurring themes in the interviews. In their professional experiences, the history of college going in the family and the community were tied to minority status as well as socioeconomic background (Interviewee #3, #4, and #5). One (Interviewee #8) made the distinction in levels of drug use between high and low socioeconomic groups. She said that both groups engage in equally high levels of risky behavior, but the well-resourced teens take precautions and know how to not let drug use jeopardize their future.

Gendered Pathways to College: Diverse for Boys, but Limited for Girls

On balance, the regression analyses and the education professionals concurred that factors influencing male and female youth were not uniform when it came to their choices in higher education. At one level, the hypothesis about more parental and Peer Social Capital leading to increased positive academic agency held true for males and females in this study. However, as predicted in the gendered hypothesis, parental cultural capital was both directly and indirectly influential in the college plans, primarily of males. In contrast, females were influenced mainly by indirect pathways; parental capital increased female agency, which in turn was converted into firmer college plans. In other words, while male youth had the privilege of diverse pathways to college, the pathways were narrower for female youth.

CONCLUSIONS

Empirical Implications

The MTF survey data analyzed for this research brought to light significant gender differences in college pathways of high school students. That academic agency was the most important factor in college plans of high school seniors showed the importance of positive learning environments where students are encouraged to think highly of themselves. The positive role that parents played in fostering academic agency was another important empirical take-away. Positive family and community environment were key elements for engendering college aspirations according to all the education professionals interviewed for this research.

For male high school seniors, the multiple, direct and indirect, pathways, through their own agency, their parents, lower delinquency, and positive peer social groups, highlighted the many diverse opportunities open to boys to firm up their college plans. But, as one of the interviewee cautioned (Interviewee #6), there are many ways boys can get tripped up on their way from high school to college.

In contrast, college pathways were more limited for girls. They either relied on only their own academic agency and indirectly on their parents' cultural capital. In one way, the limited pathway of college-going influence may be an asset for girls. Unlike their male counterpart, girls might have a clearer set of, even if limited, pathways to college, which might also explain why girls are going to college at much higher rates than males. The disparities in maturity levels of boys and girls aged 18 were a key concern of professionals working in education and may contribute to the disparities in college readiness, and ability to succeed. In the final analyses, gendered pathways to college were evident in the quantitative and narrative comments by education professionals.

Theoretical Implications

Theoretically speaking, cultural capital from parents proved to have a strong indirect influence allowing their student children to exercise positive agency in their educational plans. In keeping with Coleman's theory of cultural capital and the hypothesis stated earlier, parental cultural capital increased agency for males and females, leading to more concrete college plans. However, at first glance the concerted cultivation of capital (Lareau 2003) notion that parents enact for their children was basically uniform for boys and girls, negated the gendered capital hypothesis. But, the diverse set of options available to boys versus the narrower college pathways open to girls confirmed the gendered capital expectations.

With increasing numbers of women, and stagnant numbers of men, attending college, new theoretical paradigms are needed for the inverted gender performance in higher education. Some professional interviewees noted that females have finally caught up, and are on an almost equal playing field. Perhaps the challenge for women to achieve and maintain equality with men has required women to take more responsibility or agency for their lives, be more organized and plan ahead in ways that have not been required of men.

Limitations and Suggestions for Future Research

Like any research project, this paper too had limitations. The most obvious was the predictors used for college education explained only 9% (Adjusted $R^2=.09$) of the variability in college plans of males and 4% (Adjusted $R^2=.04$) for females. In addition to strengthening the measurement of concepts, exploring additional pathways to college plans of high school seniors will be useful. One interesting avenue would be to compare age and maturity levels of adolescents exiting high school and their future success. Others could include contextual inequalities, be they social, geographical, or even the quality of high schools students attend.

Research on gendered challenges, be they familial, cultural, social, or developmental, in shaping college pathways is also needed. Clarifying the forces that uniquely influence females will move the field of gender research forward and begin to fill out the

theoretical contours for a newer generation of educated women. Such research may also have the added benefit of finding ways to encourage males to pursue college education and to make their skills more relevant in the new information technology economy.

Promise of Gender Roles in Social Science Research

The effects of gender roles on young men's and women's plans to pursue higher education were explored in this research. The building and strengthening of these roles are both a longstanding norm and a slowly morphing one in the sociology of gender and families. Discussions of gender equality and feminism are not simply black and white with one gender beating out the other, as in education. The increased freedoms offered to, and availed of by, women seem to be moving society towards one in which there is a middle class of women with the men bifurcated at the opposite ends of the class spectrum; they have either excelled or dropped out of the system. Families and other social institutions need to continue to explore ways in which men and women are both supported to achieve a more productive and inclusive social system.

APPENDICES

Appendix A. Table

Race, Urbanicity, Work Experience by Sex: Monitoring the Future: 2012

Concepts	Variables	Values	Statistics			
			Total	Female (n=6227-6419)	Male (n=6191-6428)	
Race	V2151. How do you describe yourself?	0=Black	12.1%	13.1%	10.4%	
		1=White	71.6	70.3	73.7	
		0=Hispanic	16.4	16.6	15.8	
Rural vs Urban	V2152. Where did you grow up mostly? ¹	1=Farm, country or small town	42.7%	43.1%	42.4%	
		2=medium to very large city	57.3%	56.9	57.6	
Work Experiences	V2192. During the average week, how much money do you get from a job or other work?	1=none	46.0%	45.6%	46.7%	
		2=\$1-5	.6	.5	.7	
		3=\$6-10	2.4	2.7	1.9	
		4=\$11-20	3.0	2.9	3.1	
		5=\$21-35	3.6	3.7	3.4	
		6=\$36-50	4.7	5.3	4.2	
		7=\$51-75	7.2	8.2	6.3	
		8=\$76-125	14.1	14.5	13.8	
		9=\$126-175	8.6	8.7	8.5	
		10=\$176+	9.8	8.0	11.4	
		V2191. On the average over the school year, how many hours per week do you work in a paid or unpaid job?	1=none	41.6%	40.2%	43.2%
			2=5 or less	11.1	10.9	11.5
			3=6 to 10	10.2	11.2	9.2
			4=11 to 15	9.4	9.5	9.2
5=16 to 20	11.1		11.6	10.5		
6=21-25	7.0		7.6	6.3		
7=26 to 30	4.7		4.7	4.7		
8=more than 30	4.8		4.1	5.4		
Index of Need for Work ²	Mean(SD)	1.5(1.1)	1.4(89)	1.55(1.2)***		
	Min-Max	1-10	1-10	1-10		

¹ Recoded into groups of rural versus urban.

² Index of Need for Work= V2192(\$)/V2191(hours); r=.769***
*p≤.05, **p≤.01, ***p≤.001

Appendix B

Consent Form and Interview Protocol

Letter of Consent

Research Question: Gender differences in college plans of high school seniors and the roles played by the high school senior, their friends, and parents. Financial challenge, race and urbanicity will also be considered.

Interview Date and Time: _____
Respondent ID#: __ (1-8)

Dear _____:

I am a Sociology Senior working on my Research Capstone Paper under the direction of Professor Marilyn Fernandez in the Department of Sociology at Santa Clara University. I am conducting my research on high school seniors and their plans for college.

You were selected for this interview, because of your knowledge of and experience working in the area of high school counseling, education studies or college admissions.

I am requesting your participation, which will involve responding to questions about factors influencing high school seniors' decisions concerning college and will last about 30 minutes. Your participation in this study is voluntary. You have the right to choose to not participate or to withdraw from the interview at any time. The results of the research study may be presented at SCU's Annual Anthropology/Sociology Undergraduate Research Conference and published (in a Sociology department publication). Pseudonyms will be used in lieu of your name and the name of your organization in the written paper. You will also not be asked (nor recorded) questions about your specific characteristics, such as age, race, sex, religion.

If you have any questions concerning the research study, please call/email me at _____ or Dr. Fernandez at _____

Sincerely,

Laila Waheed

By signing below you are giving consent to participate in the above study. (If the interviewee was contacted by email or phone, request an electronic message denoting consent).

Signature

Printed Name

Date

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, through Office of Research Compliance and Integrity at (408) 554-5591.

Interview Protocol

Hello,

My name is Laila Waheed, and I am a Sociology Senior at Santa Clara University. As part of our major's curriculum, seniors have the opportunity to write a research paper to be published in the Silicon Valley Notebook, a SCU Sociology Department Publication. I'm writing about High School seniors' college aspirations.

You were selected for this interview, because of your knowledge of and experience working in the area education. I would like to talk to you about what you know/think about High School seniors' plans after they graduate and factors influencing those plans.

The interview will take about 30 minutes. In order to protect the confidentiality of your opinions, I will only use only pseudo-names (to represent you and your organization), when I write about your thoughts.

1. What is the Type of the Agency/Organization/Association/Institution where you learned about (and/or worked) with this issue:
 - a. What is your position in this organization?
 - b. How long have you been in this position and in this organization?
2. Based on what you know of high school seniors and their plans after graduation, how common is it for students to go directly to college? Have you observed differences between teen boys and teen girls; could you expand a bit more?
3. In your opinion, what are some factors that help High School seniors choose to go to college? (PROBE with: Could you expand a bit more, particularly about gender differences?).
4. What do you think hinders these students' from thinking about college? (Also probe for differences between boys and girls)
[If the respondent does not bring up your independent concepts (ICs) as potential causes of seniors' decision to go or not to go to college), PROBE for the ICs and for gender differences :
5. Student Responsibility
 - a. How about how students perceive themselves in terms of ability? Do you see differences between boys and girls perceptions of themselves?
 - b. How about students' effort in school affecting choices? Do you see different effort levels between boys and girls?
6. Adolescent Risky Behaviors
 - c. What roles do you think marijuana, cigarettes and alcohol have on students' plans to pursue more education?
7. Parents
 - d. How about parents? Are adolescents with educated parents more likely to think about college after high school?
 - e. Do you think one parent is more influential than the other in terms of influencing college going? Could you expand?
 - f. How important is parents' availability to the teen in their college choices?

8. Peers

- a. How do you think students' social lives (such as recreational activities with their friends) influence students' likelihood to pursue more education?
- b. What do you think about friend groups influencing college going?

9. Controls

- a. How do you think students' college choices are influenced by holding a job during high school?
- b. Do you think family economic background influences the choices students make? How so?
- c. How about race/ethnic differences in college decisions?
- d. How about differences among urban and rural youth have different tendencies in terms of college?

8. Is there anything else about high school students and their college plans I should know more about?

Thank you very much for your time. If you wish to see a copy of my final paper, I would be glad to share it with you at the end of the winter quarter. If you have any further questions or comments for me, I can be contacted at _____. Or if you wish to speak to my faculty advisor, Dr. Marilyn Fernandez, she can be reached at _____.

Appendix C

Correlation Matrix: Indices of College Plans Academic Agency, Paternal and Maternal Cultural Capital, Peer Social Capital, Delinquent Behavior, Urbanicity, Need for Work and Race
(Male n=5580-6294 below diagonal; Female n=5717-6309 above diagonal)

		FEMALE								
		College Plans ¹	Academic Agency ²	Delinquent Behavior ³	Paternal Cultural Capital ⁴	Maternal Cultural Capital ⁵	Peer Social Capital ⁶	Urban vs Rural ⁷	Need for Work ⁸	Race ⁹
M A L E	Index of College Plans	1.0	.12***	-.03*	-.01	.05**	.00	.07***	-.03*	-.01*
	Index of Academic Agency	.23***	1.0	-.23***	.23***	.22***	-.02	.02	.00	.17***
	Index of Delinquent Behavior	-.10***	-.19***	1.0	-.09***	.09***	-.26***	.00	.02***	.01**
	Index of Paternal Cultural Capital	.10***	.25***	-.13***	1.0	.36***	-.01	.06***	.02	.32**
	Index of Maternal Cultural Capital	.12***	.24***	-.10***	.35***	1.0	-.03*	.10***	.02	.18***
	Index of Peer Social Capital	.017	-.03*	.28***	-.01	.00	1.0	-.05***	.08***	.09***
	Urban versus Rural	.12***	.03***	.019	.04**	.09***	-.01**	1.0	-.01	-.25***
	Need for Work	-.01	-.01	.08***	-.01	.00	.10***	-.03**	1.0	.04**
	Race	-.10***	.20***	.02	.29***	.19***	.04**	-.17***	-.01	1.0

1. Index of College Plans = 2 year college+4 year college+ graduate school; range= 3(less plans)-12(more plans);
2. Index of Academic Agency=school ability+ intelligence+grades; range= 3(lower agency) -23(higher agency);
3. Index of Delinquent Behavior=cigarettes+alcohol+marijuana+truancy; range = 0(less delinquency)-29;
4. Index of Paternal Cultural Capital=father at home+father education; range = 1(less capital)-7;
5. Index of Maternal Cultural Capital=mother at home+mother education; range = 1(less capital)-7;
6. Index of Peer Social Capital=going out+ dating;range=0(less capital)-10;
7. Rural vs Urban grouped as 1=rural, 2= urban;
8. Need for work=money /hours; range = 1(low income and low hours)-10(low income and high hours);
9. Race=white(1) vs non-white(0);

*** p <=.001; ** p <=.01; * p <=.05.

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- Interviewee 4. 2/24/2015. Guidance Counselor and Teacher.
- Interviewee 5. 3/0/2015. Teacher and PhD Candidate.
- Interviewee 6. 3/02/2015. College Admissions Officer.
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Gendered Differences in Adolescent Body Image: Youth Agency, Protective and Risk Factors

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(Honorable Mention in the 2015 Sociology Krassowski Award for Student Research)

ABSTRACT. This research examined youth agency and the micro-meso system environments (protective and risks) as they shaped adolescents' body image. National data from 11,531 students (Grades 5-10) in the Health Behavior in School Aged Children survey (2009-2010) and commentaries from six education/health professionals were used. As predicted by the Iowa and Chicago Schools of Self Concept, parental figure protected youth against negative body image by shielding them against school bullying. But, the protection and risks associated with youth agency and the micro-meso systems were gendered and operated differently for male and female youth. Female negative body image models were more complex in the salience of protective and risk factors than male models. These findings added to the literature on adolescent health and endorsed the need for wrap-around role modeling and protection for adolescents.

INTRODUCTION

Body image, feelings about the way one looks and feels about oneself, can be positive and/or negative. These days, a beautiful body is defined as thin, in-shape, and muscular, an image that only a few can live up to. In order to live up to these unrealistic ideals, dieting and even life-changing surgeries are choices many teens make to alter and deal with their perceived body image. Consequently, negative body image and related health issues have become problematic for adolescents and teenagers, particularly females.

Though health and body image are ultimately an individual choice, external factors also impact adolescents' images of their bodies. Television shows, movies, music, advertisements, magazines, and other social institutions play a large role in shaping views about ideal body image. According to a middle school counselor interviewed for this research (Interviewee #1), a significant portion of the student body, boys and girls have negative body image especially because "students at middle school are in such an incredibly wide range of pre-adolescent/adolescent physical and mental development, coupled with the need/drive to be accepted or be part of a group." Adolescents are at a

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stage where their bodies are largely changing and developing, and outside influences play a large role in shaping how they grow over time. A school psychologist/behavior specialist (Interviewee #2) who was asked to comment on adolescent body image added, "I see body image as a characteristic on a large spectrum, where one end is an inflated sense of self and the other being such disordered thinking [that] it may result in body dysmorphic disorder. I imagine there is a healthy balance in the middle somewhere, but most adolescents lean toward a negative body image at some point.

An important dimension of adolescent body image is its gendered nature. Researchers and practitioners have spoken about female body image, centering more on dissatisfaction and other negative body image aspects. More recently, body image of males have also been given attention, especially in the age of social media and other influencing factors.

Although there are many social service agencies, help hotlines, and campaigns that promote positive body image, many adolescents and teenagers continue to struggle with negative body image problems. These issues not only affect adolescent health, but also extend to relationship problems with family, friends, and society. There is an urgent need to find evidence based solutions to promote positive health amongst youth, for both males and females. The search for pathways to better health will have to include understanding the critical social pathways to the development of health related behaviors and attitudes in early adolescence (Iannotti 2009).

LITERATURE REVIEW

A review of some of the research on body image issues, particularly among youth, has identified the gendered nature of the problem. Youth agency, parents, classmates, and friends have been noted to both protect and aggravate body perceptions.

Adolescent Agency and Gendered Body Image

At one level, body dissatisfaction is largely due to negative body image thinking by adolescents themselves. Meland, Haughland, and Breidablik (2006) studied 5,026 11-, 13-, and 15-year old Norwegian students and noted gender differences in body dissatisfaction; girls more often reported negative health, dieting, and weight/appearance dissatisfaction, with these problems increasing as the girls got older. Similarly, Verplanken and Velsvik (2007) found girls (from among 426 Norwegian students aged 12-15) to show more image dissatisfaction than males, even if habitual negative body image thinking was found for both genders.

Certainly, healthful, or less than healthful lifestyles, are consequential for body weight and body images. Moreno-Murcia, Hellin, Gonzalez-Cutre, and Martinez-Galindo (2011), in their study of healthy lifestyle habits of 472 male and female youth in Spain, reported

sport competence to be positively correlated with physical activity for both genders. But, alcohol/tobacco use was negatively correlated with physical activity only for males.

To further understand the health practices of female youth, Forneris, Bean, Snowden, and Fortier (2013) explored physical activity and body image of 11 Canadian females, aged 12-16. Body image permeated the girls' idea of health and engagement in health behaviors; being thin was to be healthy. And positive peer support enabled more physical activity. However, self-perceptions were a double-edged sword: positive perceptions facilitated participation in physical activity but low self-esteem was a barrier to becoming physically active.

Obesity, or being over-weight, is another dimension of body image. Vera-Villarroel, Piqueras, Kuhne, Cuijpers, and van Straten (2014) studied 3,311 Chilean university students (aged 17-24) and observed more male (than female) students to be overweight or obese. Overweight/obese male students were less physically active, had unhealthy diet, and had much higher drug use. Overuse of pharmaceutical substances was common among overweight males while overweight females reported tobacco, alcohol, and marijuana.

Healthy adolescence is also critical for good health later in life. For example, adolescent exposure to drugs and alcohol has been linked to negative consequences in adulthood (Vera-Villarroel et al. 2014). Multiple exposures to cannabis and alcohol in ages 13-15 were more likely to lead to substance dependency, herpes, early pregnancy, and criminal offenses in adulthood (Odgers, Caspi, Nagin, Piquero, Slutske, Milne, Dickson, Poulton, and Moffitt 2008).

To summarize, research on adolescent agency in their body image is important to study among both males and females. Although research about body image, health practices and dissatisfaction is more female-centered, there are some aspects of body image, like greater levels of obesity and drug use, which are more male-centered.

Micro-System Protective and Risk Factors

While youth are ultimately responsible for their own health, families and friends in their immediate environment also support and/or worsen body image issues and related healthy/unhealthy behaviors. Parents/guardians help their children maintain healthy body weight by creating positive environments that establish normative behaviors to support their children's well-being. On the other hand, parents can also pose risks; parental habits and behaviors in the home, such as poor eating/diet, no encouragement for physical activity, or drugs/alcohol, can contribute to negative body image among adolescents.

Parents as Protectors

Families do play an important role in shaping children's weight behaviors and attitudes. Frisen and Holmqvist (2010) studied 30 Swedish boys and girls, aged 10-13, and noted that girls were not that concerned with their imperfections; rather they accepted them as part of who they were. Both genders thought it was important and a natural part of their lives to exercise routinely. Also, health conversations with family/friends often focused on the external and interchangeable aspects of a person, such as clothing or hair. When adolescents reported having negative comments from family or friends, they were not bothered because most had been told by parents, particularly mothers, that they should overall be satisfied with how they look.

The critical role of the mother has been documented in other research on body image. Daily, Thompson, and Romo's female teens (2013), when compared to males in a sample of 107 motivating mother-teen dyads, adopted healthier behaviors and felt more satisfied with weight management communication. Notably, mother-daughter relationships were more influential than father-daughter when it came to body dissatisfaction and eating disorders in another sample of young adult women aged 16-24 (Kluck 2010). Kluck surveyed 268 never-married college women, the majority of whom (85%) came from two parent households with at least one biological parent (married or one/both remarried). Appearance-focused families had similar negative effects as media messages on young women specifically, and weight related behaviors were associated with increased rates of body dissatisfaction.

The Risks that Families Pose

While families are typically supportive of healthy adolescent development, they can also aggravate physical and body image problems for their adolescents. Ata, Ludden, and Lally (2006), who studied 177 8th-12th grade students from the Northeast United States, found family pressure to be the strongest predictor of negative body image/eating behaviors. To quote, "When adolescents perceive these pressures from the people who are closest to them – their family and friends – they may become more distressed, feel more negatively about themselves, diet, and engage in other negative eating behaviors..." (1033). Interestingly, sociocultural pressures (family, friends, media) were more relevant for males than females.

Parents are also known to greatly miscalculate their female child's weight status, especially during adolescence. Hearst, Sherwood, Kelin, Pasch, and Lytle (2011) studied 375 parent-adolescent dyads (grades 6-11) who were American Health Partners health plan members; most parents overestimated their daughter's weight even when she was actually a healthy measured weight. Estimating healthy weight became more challenging for parents as their adolescents' bodies grew and matured.

Childhood obesity, another dimension of youth body image, has roots in the family. Parenting practices and their connections to early-childhood (children aged 2-5) obesity was the focus of Hernandez, Thompson, Cheng, and Serwint's study (2012). In their

survey of 150 parent-child dyads, unhealthy food purchase, using food as reward, and forcing children to finish food were risk factors for early-childhood obesity. However, few parents thought low-levels of physical activity were a reason for obesity, highlighting the need for age-appropriate educational efforts to get parents involved and knowledgeable about the importance of activity for children's health.

Friendship Circles

Adolescence is a developmental stage where youth prefer to spend more time with their peers than with their families. Holsen, Jones, and Birkeland's (2012) study of 1,132 Norwegians aged 13-30 found that peer relationships were significant predictors for body satisfaction for both males and females. Those who reported poor quality relationships expressed less body satisfaction. However, even though those with positive relationships showed overall less growth in image satisfaction over time, those with less positive relationships had steeper growth in image dissatisfaction. Researchers concluded, "perceptions of supportive relationships are connected to more consistent and positive self-appraisals of body image independent of gender" (206).

The comparative influence of parents and peers in adolescent body image management has been another theme in the extant research. Holsen et al. (2012) found that "although adolescents and young adults spend less time with their parents compared to peers as they get older, the early adolescent attachment and close relationship to parents seem to matter for development of body image satisfaction among males" (206). For women however, other factors, such as romantic partners or experiences like pregnancy, were more relevant to their body image. Helfert and Warschburger's (2011) study of 236 German girls and 193 boys (grades 7-9), found similar results about peer and parental pressure on body image; positive parental relationships were important for weight management for both genders. But, peers were also influential figures in weight/appearance beliefs and practices.

In short, parents and peers act as a protectant through healthy conversations and positive communication with adolescents. On the other hand, parents and peers can also exert negative pressures, as on childhood obesity. Of particular relevance to the current research was the gender differences in the effects of parents and peers; negative communication and pressures impacted negative body image of both genders, but positive communication between mothers and their daughters was more consequential.

Meso-System Protective and Risk Factors

As children grow older, their social environment expands beyond their families and friends. School peers and teachers become an important addition to adolescent lives.

Meso-System Risks

While schools are supposed to be a safe environment for learning, school bullying is becoming a common experience for many American adolescents. Unfortunately, bullying, which can be physical, verbal, or relational, has negative effects on a child's well-being.

Prior research has shown that adolescents who were victims of bullying typically experienced more psychological problems than those who were not bullied. For example, Brixval, Rayce, Rasmussen, Holstein, and Due (2011), who studied 4,781 Danish students aged 11, 13, and 15, observed that overweight/obese boys and girls were at greater odds of negative body image as a consequence of exposure to bullying. Ledwell and King (2015), who studied health-related behaviors and attitudes of 14,817 American adolescents in grades 6-10, concluded that the majority of youth internalized behaviors more when they were bullied. But, when adolescents had positive and supportive relationships with their parents they tended to fare better socially, emotionally, and psychologically. In other words, parental support protected adolescents from internalizing distress experienced because of bullying.

Body weight, whether over or underweight, is sometimes a gendered trigger for bullying. Wang, Iannotti, and Luk (2010), studied the relationship between body weight and victimization among 6,939 U.S. youth grades 6-10. They found overweight boys and girls were more likely to be targets of verbal bullying. But, underweight boys were more likely to be physical victims while underweight girls were more likely to be relational victims. Wang et al. (2010) also found gender differences in types of bullying; boys were more involved with physical bullying and girls in relational bullying.

With the exponential growth of the internet as a medium for social interactions, the cyberspace has become another avenue for gendered bullying. Kowalski and Limber (2012) studied 931 6th-12th grade students in Pennsylvania to compare the negative effects of traditional bullying versus cyberbullying. For male victims, it was the negative, physical, psychological, and academic, effects of cyberbullying that were the most-pronounced. Female victims reported high rates of anxiety and depression when they experienced cyberbullying.

Another gendered context for bullying is sports. Slater and Tiggemann (2011) studied 714 South Australian boys/girls, aged 12-16, and found that girls who participated in sports were more likely to be teased by girls. Since appearance-related teasing affected girls more, the researchers concluded that higher levels of teasing may contribute to lower rates of female participation and enjoyment of organized sports.

Meso-System Protection

Despite the negative school environments that children sometimes face, academic institutions do live up to the healthy developmental functions they were intended to provide children. Research has shown that school engagement and interactions can be

positive for many students and even decrease high school dropout rate. Fall and Roberts (2012) analyzed a base-year study which was carried out in a national probability sample of 752 public, Catholic, and private schools; 15,362 students, 13,488 parents, 14,081 teachers, 743 principals, and 718 librarians completed the questionnaires. Teacher and parent support encouraged positive self-perception in their sample of students. Besides, students who were engaged academically were less likely to drop out of school. To add, Forrest, Bevans, Riley, Crespo, and Louis' (2012) 1,479 U.S. students who were entering the age of adolescence, were protected from school related stress, bullying, other related pubertal transitions, and were academically successful if they had positive and supportive school relationships.

In summary, the meso-system can be positive and negative environments for adolescents. On the negative front, victims of bullying experience suffer psychological issues, and are typically overweight or underweight in size. With the rise of technology and the social space, cyberspace is becoming a growing platform for bullying. Both overweight and underweight males and females are bully victims. Also, the gendered nature of the extant findings indicated that males were more involved with physical bullying while girls in mental and relational bullying.

Youth Demographics

Urban living, race/ethnicity, and social class have been additional inter-related parameters in the discussion of gendered body image. About one-third of the 1,212 youth (grades 4-6) surveyed in an inner-city U.S. location were overweight or obese (Xanthopoulos, Borradi, Hayes, Sherman, Vander Veer, Grundy, Machmani, and Foster 2011). Dissatisfaction was more common among Black and Hispanic children and those from lower socioeconomic status households. Weight status was the strongest predictor for body dissatisfaction among heavier adolescents, Asians, and girls. Van den Berg, Mond, Eisenberg, Ackard, and Neumark-Sztainer's (2010), who studied 7th-12th graders in the Minneapolis-St. Paul area using in-class surveys as part of Time 1 trial (4,746 respondents) and Time 2 trial (2,516 respondents), found: "given the strong social pressures that girls face regarding physical appearance, one might expect that body image would have a stronger effect on global self-esteem in female adolescents. However, the large size and racial/ethnic socioeconomic diversity of our sample lend support to the generalizability of this result" (294).

Summary and Looking Forward

On balance, much is known about the importance of strong parent-child relationships and communication for positive adolescent body image, and how bullying negatively affects their weight management and internalizing behaviors. Yet, researchers reviewed above also offered new methodological and substantive directions that adolescent body image researchers should take. Some of the suggestions considered in this study were: using multiple measures of body image to better capture body image (Xanthopoulos et al. 2011); incorporating the influential people in children's lives, mothers, fathers, and

peers (Hernandez et al. 2012; Daily et al. 2013; Ata et al. 2006); as well as the negative (bullying, Kowalski and Limber 2012) and positive aspects of school life (student academic involvement, Fall and Roberts 2012; Forrest et al. 2012). As per Ledwell and King's (2015), the indirect pathways (protection against bullying and offering academic support) through which parents helped their adolescents with body image problems will also be addressed.

This research will address a set of related questions. The first issue is how parent/guardians and academic engagement protected adolescents against the negative effects of school bullying, and in turn their body image. The comparative influences of protective factors (parent/guardians, academic engagement) versus risk behaviors (friendship circles, school bullying) will then be evaluated. Because of the established gendered difference in body image, the analyses will be conducted separately for male and female adolescents.

RESEARCH QUESTION

The research question stated formally was: what comparative roles did youth agency as well as the micro and meso-system environments (protective and risks) play in shaping the negative body image of adolescents? Because of the known gendered variations in body image, separate analyses were conducted for male and female adolescents. Grade, race/ethnicity, and nationality were controlled.

Definition of youth agency included health promoting activities and drugs/alcohol usage. Following Bronfenbrenners' ecological framework (1979), adolescents' relationships with their family (micro-system protection) were measured by how supportive their maternal (mother/female guardian) and paternal (father/male guardian) family were. Social relationships in friendship circles represented potential risks in the micro-system environment. Academic engagement and school bullying experiences represented the protective and risk factors, respectively, in the adolescents' meso-system environment. The goal was to better target health promotion initiatives, and to understand the development of health behaviors and attitudes through early adolescence.

THEORETICAL FRAMEWORK

At one level, negative body image can be thought of as an abstract social issue constructed by television and other media advertisements. However, as we have seen in the literature reviewed in the previous section, negative body image is also a product of micro- and meso-level environments in the life of a child. This study evaluated gender differences in the influences of parents/guardians (micro-system), teen academic life and school mates (meso-system) play in constructing negative body image of adolescents. The Iowa and Chicago schools of self-concept along with gendered

identity socialization offered ways to theoretically isolate the effects of micro and meso-systems on body image.

Socialization- Iowa and Chicago Schools of Self-Concept

Parents are typically the first socializing agents in children's lives. And children who were raised in a supportive and caring environment are likely to develop a healthy sense of social self or a strong self-concept which is expected to carry over into their later years. Theorists differ in the permanence or fluidity of self-concept developed early in life. For example, the Iowa School of self-concept (Manford Kuhn 1964) posited that the "self," developed in the early stages is a constant state of being and does not change from situation to situation or from place to place.

In contrast to the Iowa School, the Chicago School of self-concept (Herbert Blumer 1969) stated that the "self" is dynamic; it is molded by new situations and can change from situation to situation and place to place. As per this reasoning, even adolescents who have developed strong self-concepts growing up in supportive environments, can, in the face of bullying, struggle with their identities. For example, an overweight student bullied in 5th grade and told by peers they were too fat, could develop a negative image of their self. Then, say in the 9th grade, the student lost a significant amount of weight and is not told by peers that he/she was not too fat, is no longer bullied, internalized the new messages, and assumed control over their body image; in this scenario, the "self" changed as the child grew older.

Gendered Socialization and Identity

Another important dynamic in the socialization process and construction of the self-concept, whether stable or dynamic, is gendered self-concept. Gender socialization begins at birth; the way families differentially shape behavior and define boundaries for their daughters and sons are eventually internalized by children and become their identity standard (Carter 2014). In other words, gender and gender related differences are created, maintained, and perpetuated throughout life. These gendered structures of symbolic interactions in the socialization processes have vastly different meaning and consequences for boys and girls. For example, daughters might require more attention and support from parents in their development than sons.

Deriving from the Iowa School and gendered identity theories, the first hypothesis predicted: parent/guardian relationships will have more of a positive impact on body image of girls than boys, after controlling for academic engagement, bullying, grade, race/ethnicity, and nationality. In contrast, girls who grew up with weak or non-existent parent/guardian relationships will have a more negative image of their bodies, with these images continuing into adolescence and beyond.

In contrast, the second hypothesis, based on the Chicago School and gendered identity theories, posited that being a victim of school bullying will have a stronger negative impact on school-aged girls' body image (than that of boys), after controlling for parent relationships, academic engagement, grace, race/ethnicity, and nationality.

This study also assessed the gendered protection that parents/guardians offered their children against negative body image, by indirectly shielding them from the negative consequences of school bullying. Therefore, the third hypothesis stated that positive parent/guardian relationships will protect adolescent girls (more than boys) against the negative effects of school bullying, and consequently promote a positive body image.

METHODS AND DATA SOURCES

This research used secondary data from the 2009 national survey of children's health. Survey analyses were supplemented with qualitative interviews specifically conducted for this paper with education and health professionals.

Secondary Quantitative Survey Data

The main source of secondary data was the 2009-2010 survey data on Health Behavior in School-Aged Children (HBSC) (Iannotti 2009). The principal investigators were: Ronald J. Iannotti, United States Department of Health and Human Services, National Institutes of Health, and Eunice Kennedy Shriver National Institute of Child Health and Human Development (2009). The researchers used on-site questionnaires with students in Grades 5 through 10 from 314 participating schools in the 50 states and the District of Columbia; public, Catholic, and other private schools were included.

Data used for the current study on negative body image included healthy and risk behaviors and attitudes of 11,531 youth (who had complete information on the Negative Body Image index). An equal number of males (n=5,858) and female (n=5,673) were surveyed (Appendix A: Table). As seen in, the majority were U.S. born (males =91.2%; females =91.7%), and Non-Hispanic/Latino (males=71.6%; females=72.3%). These demographic differences will be controlled for in the multivariate analyses.

Primary Qualitative Data

In order to elaborate on the multivariate statistical results about negative body image, I also conducted interviews with professionals who work with adolescents in school settings. The following professionals were interviewed via e-mail or phone: a middle school counselor (Interviewee #1); school psychologist/behavior specialist (Interviewee #2); middle school physical education teacher and coach (Interviewee #3); high school social studies teacher (Interviewee #4); psychologist (Interviewee #5); and a high school

health education teacher (Interviewee #6). Each interviewee had direct knowledge and experience with students regarding negative body image, bullying, and health behaviors. See Appendix B for the interview protocol and consent form.

DATA ANALYSES

Three levels of statistical analysis were used for this research. After describing the sample by using indicators chosen to represent the concepts in the research question, multivariate regression analyses were used to identify the multiple pathways through which parents/guardians, along with other protective factors, might protect adolescents from bullying and, in turn, minimize their negative body image. To assess gendered variations in body image, the analyses were disaggregated for male and female youth.

Operationalization and Descriptive Analyses

The univariate descriptive analyses focused on youth agency (negative body image, health activity, drugs/alcohol) and the two ecological systems considered for this research: micro-system (friendship circles, family), and the meso-system (academic engagement, school bullying culture).

Negative Body Image

As noted in the literature reviewed for this research, adolescent body image, particularly of the negative kind, is largely a social construction of the individual aided by surrounding influencers. Before assessing the reasons for adolescent negative body image, it is important to understand how school-aged children viewed their bodies in terms of weight and comfort level. Preliminary evidence on the body image of adolescents covered in this study is presented in Table A. below.

On balance, adolescent males had a more positive weight image and felt more comfortable with their bodies than their female counterparts. For example, the mean () negative body image score (range 2-14) for males was 5.3 (SD=2.7) while it was 6.2 (SD=3.0) for females⁵.

More specifically, half the male youth (53.8%) were satisfied with their weight without dieting compared to fewer females (47.0%; Q37). Similar gender differences were noted in their body comfort. Over two-thirds of males were not frustrated with their physical appearance (Q38A: 40.3% strongly disagree; 26.8% disagree) and even felt comfortable with their bodies (Q38D: 34.7% strongly agree; 37.8% agree). But, female responses were more varied; only half were not frustrated with physical appearance

⁵ Gender differences when noted were statistically significant at least at the .05 level (p value).

(27.3% strongly disagree; 25.1% disagree) and only a little over half felt comfortable with their bodies (26.4% strongly agree; 32.4% agree). It was interesting that males and females did not differ in thinking about their body size (Q8). Two-thirds thought they were about right size; but another third thought they were a bit too thin or fat.

**TABLE 1.A. Negative Body Image
Health Behavior in School-Aged Children 2009-2010
(Male n=5858; Female n=5673)**

Concept	Dimen- sions	Variables	Response	Statistics	
				Male	Female
Negative Body Image	Weight	Q8. Do you think your body is...?	0= About the right size ¹	61.4%	59.3%
			1= A bit too thin/fat	33.9	34.9
		2= Much too thin/fat	4.7	4.8	
		Q37. Doing something to lose weight? ²	0= no my weight is fine ¹	53.8% ^{***}	47.0% ^{***}
			1= no, but should lose some/put on some weight	29.1	32.4
	Comfort Level	Q38A. Frustrated with my physical appearance ³	1= strongly disagree ¹	40.3% ^{***}	27.3% ^{***}
			2= disagree	26.8	25.1
			3= neither agree or disagree	16.9	22.0
			4= agree	11.0	17.0
			5= strongly agree	5.0	8.7
Q38D. Feel comfortable with my body ⁴	1= strongly agree ¹	34.7% ^{***}	26.4% ^{***}		
	2= agree	37.8	32.4		
	3= neither agree or disagree	13.2	19.0		
	4= disagree	8.3	14.5		
	5= strongly disagree	6.0	7.7		
		Index of Negative Body Image ⁵	Mean (SD)	5.3 (2.7)	6.2 (3.0) ^{***}
			Min-Max	2-14	2-14

*** p ≤ .001; ** p ≤ .01; * p ≤ .05.

1. Recoded from original numerical codes;

2. Q37. At present are you on a diet or doing something else to lose weight?

3. Q38A. Please evaluate how the statements relate to you by checking the degree to which you agree or disagree with each one... I am frustrated with my physical appearance;

4. Q38D. Please evaluate how the statements relate to you by checking the degree to which you agree or disagree with each one... I feel comfortable with my body;

5. Index of Negative Body Image = Q8+ Q37+ Q38A+ Q38D (correlations among index variables were positive and statistically significant).

Youth Agency

The first set of explanatory factors, Youth Agency, included two dimensions: health activities and drug/alcohol usage. Adolescent reports of their health activities are presented first, followed by drug/alcohol usage.

Health Activity. Overall, males were more physically active (Table 1.B.), based on the mean score ((=17.1) on the empirical index of health activity (scale 2-26), compared to

females ((=16.1) who were more sedentary. Some specifics: well over 75% of males were consistently exercising in their free time (Q23), with one-third (29.8%) exercising to get out of breath every day. In contrast, only 18.4% of females exercised every day, with half exercising 2-6 times a week.

TABLE 1.B. Youth Agency: Health Activity
Health Behavior in School-Aged Children 2009-2010
(Male n=5673-5810; Female n=5558-5634)

Concepts	Dimensions	Variables	Response Values	Statistics		
				Male	Female	
Health Activity	Physical Activity	Q20. Exercise in free time...you get out of breath or sweat? ²	0= Never ¹	4.6% ^{***}	7.3% ^{***}	
			1= Less than once a month	2.5	5.2	
			2= Once a month	2.1	4.2	
			3= Once a week	9.5	14.9	
			4= 2-3 times a week	25.2	29.3	
			5= 4-6 times a week	26.3	20.6	
			6= every day	29.8	18.4	
		Q23. Main part of your trip TO school made by? ³	0= other means ¹	1.7% ^{***}	1.6% ^{***}	
			1= bus, train, tram, metro, subway, boat	39.9	39.0	
			2= car, motorcycle, moped, moto scooter	43.4	46.3	
			3= walking	12.9	12.7	
			4= bicycle	2.1	0.4	
		Sedentary Activity	Q10_2. Use a computer in your free time on weekend ⁴	1= about 7 or more hours a day ¹	4.8% ^{***}	6.6% ^{***}
				2= about 6 hours a day	2.1	2.7
			3= about 5 hours a day	3.1	4.4	
			4= about 4 hours a day	5.3	6.3	
			5= about 3 hours a day	7.9	10.0	
			6= about 2 hours a day	11.9	13.7	
			7= about 1 hour a day	17.0	18.3	
		8= about half an hour a day	21.4	21.1		
		9= none at all	26.4	16.8		
		Q31. Eat in a fast food restaurant ⁵	1= 5 or more days a week ¹	3.1%	3.0%	
			2= 2-4 days a week	12.3	11.3	
			3= Once a week	19.0	19.1	
			4= 2-3 times a month	31.2	30.5	
			5= Once a month	10.7	10.4	
			6= Rarely (less than once a month)	21.1	22.7	
			7= Never	2.6	3.0	
		Index of Health Activity ⁶	Mean (SD)	17.1	16.1 (3.6) ^{***}	
			Min-Max	(3.3)	2-26	
				2-26		

*** p ≤ .001; ** p ≤ .01; * p ≤ .05.

1. Recoded from original numerical codes;

2. Q20. Outside of school hours: How often do you usually exercise in your free time so much that you get out of breath or sweat?

3. Q23. On a typical day is the main part of your trip TO school made by...?

4. Q10_2. About how many hours a day do you usually use a computer for chatting on-line, internet, emailing, homework etc. in your free time?...WEEKEND;

5. Q31. How often do you eat in a fast food restaurant (for example McDonalds, KFC, Pizza Hut, Taco Bell)?

6. Index of Health Activity = Q20+ Q23+ Q10_2+ Q31 (correlations among index variables were positive and statistically significant).

As for sedentary activity, far more males (26.4%) did not spend their free time using a computer (Q10.2), compared to only 16.8% females not spending free time on a computer. Males and females did not differ in their fast food eating habits (Q31); both male and females reported either rarely or one-three times eating fast food per month.

Drugs/Alcohol. The second dimension of youth agency was the adolescent's drugs/alcohol choices and use. Majority of males (91.6%) and females (94.3%) had never smoked marijuana (Q81C) nor smoked tobacco (males 90.3%; females 92.5%). Based on the mean score (scale 0-9) for males (=0.4) and females (=0.3), both genders did not have much experience with drugs (Table 1.C).

**Table 1.C- Youth Agency: Drugs/Alcohol
Health Behavior in School-Aged Children 2009-2010**
(Male n=5563-5762; Female n=5433-5594)

Concepts	Dimen- sions	Variables	Response Values	Statistics	
				Male	Female
Drugs/ Alcohol	Drugs	Q81C.	0= Never ¹	91.6% ^{***}	94.3% ^{***}
		Taken	1= 1-2 times	2.8	2.5
		marijuana	2= 3-5	1.3	1.0
		in the last	3= 6-9	0.9	0.6
		30 days ²	4= 10-19	1.0	0.7
			5= 20-39	0.6	0.3
			6= 40+	1.7	0.6
		Q77.	0= I do not smoke ¹	90.3% ^{***}	92.5% ^{***}
	Smoke	1= Less than once a week	4.5	3.9	
	tobacco at	2= At least once a week, but not every day	2.5	1.9	
	present? ³	3= Every day	2.8	1.6	
		Index of	Mean (SD)	0.4 (1.4)	0.3 (1.0)
		Drugs ⁴	Min-Max	0-9	0-9
		Alcohol	Q79. Had	0= No, never ¹	86.0% ^{***}
	alcohol so	1= Yes, once	7.0	8.3	
	that you	2= Yes 2-3 times	3.5	3.5	
	were	3= Yes, 4-10 times	1.5	1.3	
	really	4= Yes, more than 10 times	2.1	0.9	
	drunk? ⁵	Q76B.	0= Never ¹	78.4% [*]	77.0% [*]
	Last 30	1= Once or twice	11.9	12.8	
	days	2= 3-5 times	3.4	3.9	
	drunk	3= 6-9 times	1.6	2.0	
	alcohol? ⁶	4= 10-19 times	1.4	1.6	
		5= 20-39 times	0.8	0.8	
		6= 40+	2.5	1.8	
		Index of	Mean (SD)	0.7 (1.8)	0.7 (1.6)
		Alcohol ⁷	Min-Max	0-10	0-10

^{***} p ≤ .001; ^{**} p ≤ .01; ^{*} p ≤ .05.

^{1.} Recoded from original numerical codes;

^{2.} Q81C. Have you ever taken marijuana (pot, weed, hash, joint)... In the last 30 days;

^{3.} Q74. How often do you smoke tobacco at present?

^{4.} Index of Drugs= Q81C+ Q74;

^{5.} Q79. Have you ever had so much alcohol that you were really drunk?

^{6.} Q76B. On how many occasions (if any) have you done the following things in the last 30 days...drunk alcohol;

^{7.} Index of Alcohol= Q79+ Q76B (correlations between the two variables were positive and significant).

Adolescents, irrespective of gender, did not have much experience with alcohol either; mean alcohol score on the 0-10 index was =0.7 for males and 0.7 for females. A vast majority (86.0%) of both groups had never had so much alcohol that they were really drunk (Q79). Neither had they had alcohol in the past 30 days (Q76B); males 78.4% and females 77.0% reported never (Table 1.C).

Micro-System Risk Factors: Friendship Circles

A third potential influence on negative body image was the adolescents' friendship circles (Table 1.D.).

**Table 1.D- Micro-System Risk Factors: Friendship Circles
Health Behavior in School-Aged Children 2009-2010**
(Male n=5563-5762; Female n=5433-5594)

Concepts	Dimen- sions	Variables	Response Values	Statistics	
				Male	Female
Friendship Circles	Time Spent	Q57. Days a week spend time with friends right after school? ¹	0= 0 days	17.7% ^{***}	22.6% ^{***}
			1= 1	12.4	15.7
			2= 2	14.8	16.1
			3= 3	17.0	14.8
			4= 4	10.0	9.0
			5= 5	13.8	12.2
			6= 6	14.3	9.5
		Q58. Evenings per week spend out with friends? ²	0= 0	26.1% ^{***}	30.4% ^{***}
			evenings	16.0	19.0
			1= 1	17.6	18.7
			2= 2	13.7	12.2
			3= 3	9.2	7.4
			4= 4	6.9	5.2
			5= 5	2.9	2.4
Drug/ Alcohol Culture	Q78D. How many friends smoke/ use marijuana? ³	6= 6	7.6	4.8	
		7= 7			
		1= None	68.4% ^{***}	68.1% ^{***}	
		2= A few	15.5	14.7	
		3= Some	7.8	8.0	
		4= Most	5.3	7.0	
		5= All	3.0	2.3	
		Q78B. How many friends drink alcohol? ⁴	1= None	60.6%..	57.8% ^{**}
			2= A few	20.8	21.2
			3= Some	10.0	10.9
4= Most	6.2		7.6		
5= All	2.4		2.5		
	Index of Friendship Circles ⁵	Mean (SD) Min-Max	8.5 (4.5) 2-23	7.8 (4.2) ^{***} 2-23	

^{***} p ≤ .001; ^{**} p ≤ .01; ^{*} p ≤ .05.

1. Q57. How many days a week do you usually spend time with friends right after school?

2. Q58. How many evenings per week do you usually spend out with your friends?

3. Q78D. How many of your friends would you estimate...? Smoke/use marijuana (pot, weed, hash, joint);

4. Q78B. How many of your friends would you estimate...Drink alcohol?

5. Index of Friendship Circles= Q57+ Q58+ Q78D+ Q78B (correlations among index variables were positive and statistically significant).

First, adolescents were asked how many days they spent with friends right after school (Q57); more males (14.3%) spent time with friends right after school six days a week, compared to only 9.5% of females. In contrast, more females (22.6%) spent zero days with friends versus 17.7% males. Even in the evenings (Q58), more females (30.4%) spent zero days with friends than males (26.1%). Also, more males (7.6%) spent seven evenings a week with friends whereas only 4.8% females did so.

Looking next at their friends' drug/alcohol use, 68% of friends did not use marijuana (Q78D). However, slightly more females (17.3%) had 'some, most or all' friends who used marijuana. Most males (60.6%) and females (57.3%) did not have any friends who drank alcohol (Q78B). But, slightly more females (21.0%) than males reported having 'some, most, or all' of their friends who drank alcohol. In short, based on the mean score (scale 2-23), males (=8.5) spent more time with friends (than females =7.8). But, males were less likely to be around those who used drugs/alcohol than females.

Micro-System Protective Factors: Family

The fourth independent concept, mapped family influences on the adolescents' body image (Table 1.E.). The first set of questions referred to the mother/female guardian. More female youth (82.4%) than males (77.5%) responded their mother she knew a lot about where the child was after school (Q51C). When asked if their mother/female guardian knew their friends (Q51A), females (63.8%) responded more positively than males (56.1%). The gender responses were reversed when the same questions were asked about the father/male guardian. Two-thirds of males (57.0%) reported their father knew where they were after school (Q52C), only half females (50.5%) did so. And more males (42.2%) than females (31.1%) noted their father/male guardian knowing a lot about who their friends were (Q52A).

Adolescents were also asked about ease of talking to (communicate with) their mother and father about things that really bothered them. More males found it very easy (42.7%) or easy (29.5%) to talk to their mothers (Q50C); comparable numbers for females (39.6% very easy and 29.2% easy). One-third of males (31.4%) found it very easy to talk to their father about things that bothered them (Q50A), whereas only 17.0% of females found it very easy. Interestingly, although males found it easier to talk to their mother than father, the majority felt comfortable talking to both mother and father. However, many more females reported it much easier to talk to their mother (68.8%) than father (41.2%).

Overall, more male adolescents (36.2%) were satisfied/had very good relationships in the family (Q54) compared to females (28.8%). Based on the mean score for males (=16.3) and females (=15.8) on the empirical index for maternal figure (scale 0-20), school-aged children had a female parent/guardian who was quite involved in their lives and generally felt satisfied with their parent relationships. In comparison, on the empirical paternal index (scale 0-20), males (=15.0) had a slightly more involved relationship than females (=13.7).

TABLE 1.E. Micro-System Protective Factors: Family Health Behavior in School-Aged Children 2009-2010
(Male = 5639-5752 and Female=5500-5595)

			Statistics			
Concept	Variables	Response Values	Mother/Guardian		Father/Guardian	
			Male	Female	Male	Female
Family	Q51C & Q52C. Where you are after school? ²	0=Don't have/see person ¹	1.7%	1.3% ^{***}	1.7%	1.3% ^{***}
		1= doesn't know anything	5.3	4.3	5.3	4.3
		2= knows a little	15.4	12.0	15.4	12.0
		3= knows a lot	77.5	82.4	77.5	82.4
	Q51A & 52A. Who your friends are? ³	0= Don't have/see person ¹	1.7%	1.0% ^{***}	1.7%	1.0% ^{***}
		1= doesn't know anything	6.2	3.9	6.2	3.9
		2= knows a little	35.9	31.2	35.9	31.2
		3= knows a lot	56.1	63.8	56.1	63.8
	Q50C & 50A. Talk about things that really bother you ⁴	0= Don't have/see person ¹	3.9%	3.7% ^{***}	3.9%	3.7% ^{***}
		1= very difficult	8.8	10.7	8.8	10.7
		2= difficult	15.0	16.7	15.0	16.7
		3= easy	29.5	29.2	29.5	29.2
	Q54. Satisfied with family? ⁵	4= very easy	42.7	39.6	42.7	39.6
		0= We have <u>very bad</u> relationships	1.2%	1.4% ^{***}	1.2%	1.4% ^{***}
		1	0.7	1.5	0.7	1.5
		2	1.6	2.0	1.6	2.0
		3	1.8	3.7	1.8	3.7
		4	2.6	4.8	2.6	4.8
		5	5.3	8.5	5.3	8.5
		6	5.7	7.2	5.7	7.2
7		9.4	10.0	9.4	10.0	
8		14.8	13.8	14.8	13.8	
9	20.7	18.2	20.7	18.2		
	10= We have <u>very good</u> relationships	36.2	28.8	36.2	28.8	
	Index of Maternal & Paternal ⁶	Mean (SD)	16.3 (3.4)	15.8 ^{***} (3.8)	16.3 (3.4)	15.8 ^{***} (3.8)
		Min-Max	0-20	0-20	0-20	0-20

*** p ≤ .001; ** p ≤ .01; * p ≤ .05.

1. Recoded from original numerical codes;

2. Q51C & Q52C. How much does your mother/father (or female/male guardian) really know about...where you are after school?

3. Q51A & Q52A. How much does your mother/father (or female/male guardian) really know about...Who your friends are?

4. Q50C & Q50A. How easy is it for you to talk to the following persons about things that really bother you... MOTHER/FATHER;

5. Q54. In general, how satisfied are you with the relationships in your family?

6. Index of Maternal= Q51C+ Q51A+ Q50C+ Q54; Index of Paternal= Q52C+ Q52A+ Q50A+ Q54 (correlations among variables for both sets of indices were positive and statistically significant).

Meso-System Protective Factors: Academic Engagement

Academic engagement, the fifth independent concept, represented school influences on adolescents (Table 1.F). The first indicator (Q61) found more females thought highly of their school performance (34.2% very good or 38.6% good), compared to males (27.8% very good or 41.1% good). Slightly more females (78.4%) liked school a lot or liked school a bit compared to 74.6% males. Lastly, most males (74.8%) and females (71.6%) felt accepted by other students in their classes (Q63). Overall, most students were satisfied with school and relationships, based on the mean score for males (=9.8) and females (=10.0) on the academic engagement empirical index (scale 3-13).

**Table 1.F. Meso-System Protective Factors: Academic Engagement
Health Behavior in School-Aged Children 2009-2010**
(Male n=5651-5736; Female n=5527-5571)

Concepts	Variables	Response Values	Statistics	
			Male	Female
Academic Engagement	Q61. Teacher(s) think about school performance compared to classmates ²	1= Below average ¹	5.2% ^{***}	3.7% ^{***}
		2= average	25.9	23.5
		3= good	41.1	38.6
		4= very good	27.8	34.2
	Q62. Feel about school at present? ³	1= I don't like it at all ¹	8.4% ^{***}	6.4% ^{***}
		2= Don't like very much	16.9	15.2
		3= I like it a bit	46.0	45.2
		4= I like it a lot	28.6	33.2
	Q63C. Other students accept me as I am ⁴	1= strongly disagree ¹	4.6% [*]	4.9% [*]
		2= disagree	4.9	5.9
		3= neither agree nor disagree	15.7	17.7
		4= agree	41.4	39.0
		5= strongly agree	33.4	32.6
	Index of Academic Engagement ⁵	Mean (SD)	9.8 (1.9)	10.0 (2.0)
		Min-Max	3-13	3-13

*** p ≤ .001; ** p ≤ .01; * p ≤ .05.

1. Recoded from original numerical codes;

2. Q61. In your opinion, what does your class teacher(s) think about your school performance compared to your classmates;

3. Q62. How do you feel about school at present?;

4. Q63C. Here are some statements about the students in your class(es). Please show how much you agree or disagree with each one...Other students accept me as I am;

5. Index of Academic Engagement= Q61+ Q62+ Q63C (correlations among index variables was positive and statistically significant).

Meso-System Risk Factors: School Bullying Culture

School bullying culture (Table 1.G.) was the sixth independent concept, included indicators of being a victim of bullying and the bully. Bullying has become more and more prevalent in school especially amongst youth, not only in terms of physical bullying but also mentally and emotionally.

**Table 1.G. Meso-System Risk Factors: School Bullying Culture
Health Behavior in School-Aged Children 2009-2010**
(Male n=5497-5671; Female n=5387-5543)

Concepts	Dimen-Sions	Variables	Values/Responses	Statistics	
				Male	Female
School Bullying Culture	Victim of Bullying	Q65. Bullied at school ²	0= Not bullied in past couple months ¹	72.7%*	72.5%*
			1= Only happened once or twice	15.8	17.4
			2= 2 or 3 times a month	4.3	3.8
			3= About once a week	2.8	2.5
		Q66C. Physical bully victim ³	4= Several times a week	4.4	3.8
			0= Not bullied in past couple months ¹	89.3%***	89.3%***
			1= Only once or twice	9.6	6.3
			2= 2-3 times a month	2.9	1.3
		Q66J. Cyberbully victim ⁴	3= About once a week	2.2	1.4
			4= Several times a week	2.9	1.7
0= Not bullied in past couple months ¹	93.2%***		91.8%***		
1= Only once or twice	3.1		4.8		
		2= 2-3 times a month	1.5	1.4	
		3= About once a week	0.9	0.6	
		4= Several times a week	1.3	1.4	
		Index of Victim of Bullying ⁵	Mean (SD)	1.0 (2.0)	0.8***
			Min-Max	0-12	(1.7)
					0-12
The Bully		Q67. Bullying another student(s) at school ⁶	0= Not bullied another student ¹	69.2%***	75.2%***
			1= Only happened once or twice	21.6	19.2
			2= 2 or 3 times a month	4.4	2.8
			3= About once a week	2.1	1.4
		Q68C. Physically bullied another student(s) ⁷	4= Several times a week	2.8	1.3
			0= Not bullied another student ¹	85.9%***	91.3%***
			1= Only once or twice	8.4	5.3
			2= 2-3 times a month	2.0	1.1
		Q68J. Cyberbullied another student ⁸	3= About once a week	1.7	1.1
			4= Several times a week	2.0	1.2
0= Not bullied another student ¹	93.3%***		95.3%***		
1= Only once or twice	3.0		2.6		
		2= 2-3 times a month	1.3	0.6	
		3= About once a week	0.9	0.6	
		4= Several times a week	1.5	0.9	
		Index of The Bully ⁹	Mean (SD)	0.9 (1.8)	0.6 (1.4)
			Min-Max	0-12	0-12

*** p ≤ .001; ** p ≤ .01; * p ≤ .05.

1. Recoded from original numerical codes;

2. Q65. How often have you been bullied at school in the past couple of months;

3. Q66C. How often have you been bullied at school in the past couple of months...I was hit, kicked, pushed, shoved around, or locked indoors;

4. Q66J. How often have you been bullied at school in the past couple of months...I was bullied outside of school using a computer or e-mail messages or pictures;

5. Index of Victim of Bullying= Q65+ Q66C+ Q66J (positive correlations among variables were significant);

6. Q67. How often have you taken part in bullying another student(s) at school in the past couple of months?

7. Q68C. How often have you bullied another student(s) at school in the past couple of months...? I hit, kicked, pushed, shoved around, or locked another student(s) indoors;

8. Q68J. How often have you bullied another student(s) at school in the past couple of months...? I bullied others outside of school using a computer or e-mail messages or pictures;

9. Index of The Bully= Q67+ Q68C+ Q68J (positive correlations among variables were statistically significant).

The majority (72%) of school-aged males and females had not been bullied in the past couple of months of the survey (Q65). Also, 89.3% males and females had not been physically bullied (Q66C). Most male (93.2%) and females (91.8%) had not experienced cyber-bullying (Q66J) either. Overall, based on the mean empirical index for victim of bullying (male =1.0 and females =0.8) on the (scale 0-12), the children surveyed had little recent experience with being a victim of bullying.

The same questions were then asked about being a bully. More females (75.2%) had not bullied another student, compared to 69.2% males (Q67). A fifth (21.6%) of males had bullied another student once or twice. A majority of females (91.3%) had not physically bullied another student, 85.9% of males had not (Q68C). But 8.4% males had physically bullied someone once or twice compared to only 5.3% females. The vast majority of males (93.3%) and females (95.3%) had not cyber bullied (Q68J). Overall, based on the mean bully index (scale 0-12), the youth had little experience with being a bully (males =0.9 and females (=0.6).

Summary

Overall, female youth had a more negative body image and felt less comfortable with their bodies than their male counterparts. Males were more physically active, whereas females engaged more in sedentary activities. Both male and female students had little experience with individual drug/alcohol use. However, while males (than females) spent more time with friends but were not around drugs/alcohol, females spent less time with friends but were around drugs/alcohol more. As for their families, both males and females mostly felt their family relationships were supportive, even though females found it much easier to talk to their mother. Similarly, the adolescents were surrounded by relatively secure meso-system environments. Most adolescents were academically engaged and were neither bullied or bullied other students at school.

Bivariate Analyses¹

In the next analytical step, bivariate correlations revealed preliminary glimpses into the gendered connections between negative body image and predictors (Appendix C)⁶. For male adolescents, the following relationships were revealing. Adolescent males who had stronger maternal ($r=-.24^{***}$), paternal ($r=-.22^{***}$), and academic engagement ($r=-.25^{***}$) tended to have more positive body image. Also, being a victim of school bullying ($r=.21^{***}$) or being a bully ($r=.11^{***}$) negatively impacted male body image. In sum, for male adolescents, the potential predictors of body image were micro-system (maternal and paternal) and meso-system (academic engagement) protective factors as well as bullying (risk factors).

⁶ Because of the large sample size (over 5000 for males and females), only substantive correlations (greater than $r=.07^{***}$), were discussed. Also, the focus was on the main aspects of the research, namely, correlations between negative body image, parent/guardian relationships, school bullying, and academic engagement.

Female adolescent body image correlations were similar to their male counterparts in many ways, except for a few differences. Maternal ($r=-.34^{***}$), paternal ($r=-.30^{***}$), and academic engagement ($r=-.32^{***}$) resulted in more positive body image. However, health activity ($r=-.10^{***}$) also contributed to positive female body image. Unlike males, drugs ($r=.10^{***}$), alcohol ($r=.14^{***}$), being a victim of school bullying ($r=.17^{***}$), and being older ($r=.14^{***}$) resulted in more negative body image for females. That is, individual agency, micro-system (maternal and paternal) and meso-system protective factors were stronger protectors for females (than males) against negative body image. On the other hand, drugs, alcohol use, and bullying added to the risks of negative female body image. The robustness of these relationships will be tested in the next section.

Multivariate Analyses and Interviewee Insights¹

Finally, based on the premise that parents (Ledwell and King 2015) and schools are often the first line of defense in children's lives from negative experiences, such as school bullying and negative body image, a two-step linear regression analysis was conducted. In the first step the effects (net of demographic controls), of youth agency, parental (micro) and school (meso-system) protection, on bullying were estimated. In the second step, negative body image was regressed on bullying and other protective and risk factors. Separate analyses were conducted for male and female adolescents to identify possible gender differences. This analytical model had the benefit of identifying the multiple and gendered pathways through which parents/guardians along with other micro- and meso-level influences directly and indirectly protected adolescents from being bullied, and in turn minimized the risks of negative body image.

As seen in Model 1 of Table 2, the only two factors that protected male adolescents against bullying were academic engagement ($\beta=-.23^{***}$) and getting older ($\beta=-.17^{***}$). In contrast the portrait of the female victim of bullying was slightly more complex. Like the boys, girls who were more academically engaged ($\beta=-.22^{***}$) and had stronger relationships with maternal figures ($\beta=-.09^{***}$) were protected against bullying. However, unlike males, drug use somewhat elevated the female adolescents' risk of bullying ($\beta=.07^{***}$).

The direct net effects of micro- and meso-system factors on negative body image were presented in Model 2. While boys and girls were protected from, or placed at risk of, negative body image by a similar set of factors, the effects were more pronounced for female, than for male, adolescents. More specifically, being more academically engaged ($\beta=-.14^{***}$), positive maternal ($\beta=-.13^{***}$) support, and less frequent drug use ($\beta=-.08^{***}$) were helpful to boys in protecting a more positive body image; but bullying experiences made their negative body image worse ($\beta=.15^{***}$). Similarly, females who had positive maternal relationships ($\beta=-.21^{***}$) and were more academically engaged ($\beta=-.18^{***}$) experienced more positive body image; but, the net bullying effect on negative body image was more muted for girls ($\beta=.10^{***}$) than for boys. Stated differently, girls needed much more protection from negative body image than comparable boys.

Table 2: Gendered Regression (β) Effects of Youth Agency, Micro- and Meso-System Protective and Risk Factors, and Youth Demographics on Negative Body Image

	Male		Female	
	Model 1 Victim of Bullying	Model 2 Negative Body Image ¹	Model 1 Victim of Bullying	Model 2 Negative Body Image ¹
Youth Agency:				
A. Health Activity ²	-.05***	-.05***	NS	NS
B. Drugs ³	NS	-.08**	.07***	NS
C. Alcohol ⁴	NS	NS	NS	NS
Micro-System Protective and Risk Factors				
A. Friendship Circles ⁵	NS	-.05**	.04**	NS
B. Maternal Figures ⁶	-.05*	-.13***	-.09***	-.21***
C. Paternal Figures ⁷	NS	-.05*	NS	NS
Meso-System Protective Factors				
Academic Engagement ⁸	-.23***	-.14***	-.22***	-.18***
Meso-System Risk Factors:				
Victim of Bullying ⁹	-----	.15***	-----	.10***
Demographic Controls¹⁰:				
Grade	-.17***	NS	-.19***	.06***
Non-Hispanic/ Latino	NS	-.05***	NS	-.03*
U.S. Citizen	-.04**	NS	NS	NS
(Constant)	5.8***	10.35***	4.7***	11.43***
Adjusted R ²	.09***	.12***	.10***	.17***
DF 1 & 2	10 & 4439	11 & 4438	10 & 4542	11 & 4484

*** p \leq .001; ** p \leq .01; * p \leq .05.

1. Index of Negative Body Image= Range 2 (more positive) to 14 (more negative) Q8Thoughts on your body+ Q37Presently on a diet+ Q38AFrustrated with appearance+ Q38DFeel comfortable with body

Youth Agency:

2. Index of Health Activity= Range 2 (more sedentary) to 26 (more physical) Q20Out of breath, free time+ Q23Mode of travel to school+ Q10_2Hours use computer, weekends+ Q31How often eat fast food
3. Index of Drugs= Range 0 (no use) to 9 (more use) Q81CMarijuana in last 30 days+ Q74Smoke tobacco presently
4. Index of Alcohol= Range 0 (no use) to 10 (more use) Q79Gotten really drunk+ Q76BPast 30 days drunk alcohol

Micro-System Protective and Risk Factors:

5. Index of Friendship Circles= Range 2 (not involved) to 23 (more involved) Q57Days spend w/ friends after school+ Q58Nights spend w/ friends+ Q78DFriends use marijuana+ Q78BFriends drink alcohol
6. Index of Mother/Female Guardian= Range 0 (less involvement) to 20 (more involvement) Q51CKnows where after school+ Q51AKnows friends+ Q50CEasy to talk w/ problems+ Q54Satisfied w/ family relationships
7. Index of Father/Male Guardian= Range 0 (less involvement) to 20 (more involvement) Q52CKnows where after school+ Q52AKnows friends+ Q50AEasy to talk w/ problems+ Q54Satisfied w/ family relationships

Meso-System Protective Factors:

8. Index of Academic Engagement= Range 3 (less satisfied) to 13 (more satisfied) Q61Teacher opinion school performance+ Q62Feelings about school+ Q63CStudents accept me as I am

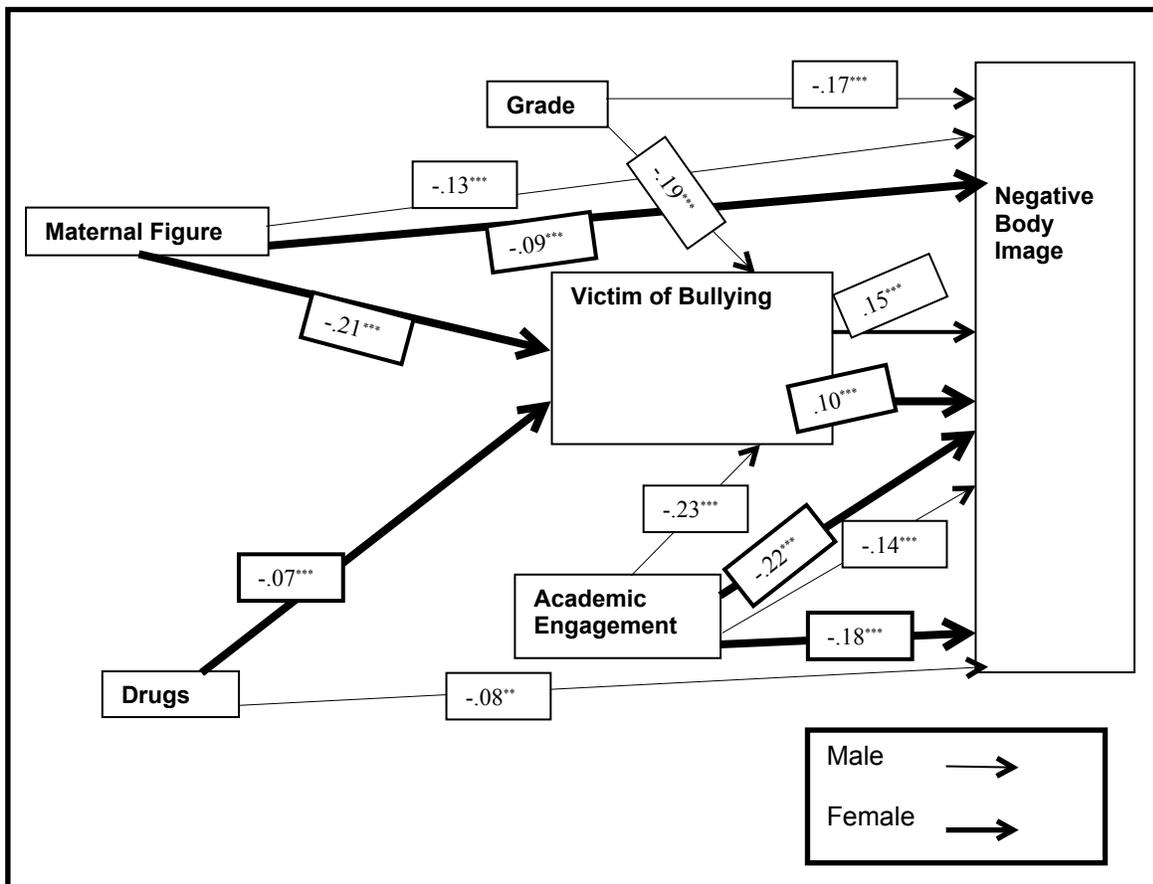
Meso-System Risk Factors:

9. Index of Victim of Bullying= Range 0 (no bullying) to 12 (more bullying) Q65Got bullied at school+ Q66CGot hit/kicked/pushed+ Q66JGot bullied using computer/email outside school

¹⁰. Grade Grade 5 – 10; Race/Ethnicity Hispanic/Latino=0, Non-Hispanic/Latino=1; Nationality Non-U.S. Citizen=0, U.S. Citizen=1.

In addition to the gendered direct effects of youth agency, micro-system and meso-system adults and peers on negative body image, interesting gendered indirect effects were evident on negative body image, through bullying. There was only one indirect pathway to protecting against negative body image for boys: males who were academically engaged → experienced less bullying ($\beta = -.23^{***}$) and less bullying → the more positive their body image ($\beta = .15^{***}$). In contrast, the indirect bullying pathways were more complicated for females. For one, similar to boys, academically engaged girls were less likely to be victims of bullying ($\beta = -.21^{***}$) and in turn had better body image ($\beta = .10^{***}$). But, girls were indirectly protected against negative body image when they had mothers who protecting them against bullying; mother protected female adolescents against bullying ($\beta = -.09^{***}$) and in turn (through bullying mitigation) against negative consequences in body image ($\beta = .10^{***}$). Drug use, on the other hand, increased girls' chances of being bullied ($\beta = .07^{***}$) and indirectly negatively affected their body image ($\beta = .10^{***}$). These relationships are modeled in Figure 1.

Figure 1. Gendered Regression (β) Effects of Youth Agency, Micro- and Meso-System Protective and Risk Factors, and Youth Demographics on Negative Body Image^{1,2}



^{***} $p \leq .001$; ^{**} $p \leq .01$; ^{*} $p \leq .05$.

¹. See Table 2 for variable coding and index construction;

². Non-significant effects not shown are: Health Activity, Alcohol, Friendship Circles, Paternal Figures.

Finally, the net variations (after controlling for parents/guardians) in bullying and negative body image (after controlling for bullying and parents/guardians) across the different demographics considered in this study yielded additional insights. Irrespective of parent protection and bullying, younger males (Grade $\beta = -.17^{***}$) and younger females (Grade $\beta = -.19^{***}$) were less likely to be victims of bullying.

To summarize, youth agency, micro- and meso-system factors (specifically positive maternal figure, academic engagement, less bullying) directly protected adolescents against negative body image. Some of these protective factors also indirectly shaped body image positively by reducing the negative consequences of bullying. Relevant to the central premise of this research about gendered differences: Female negative body image models varied from male models both in the complexity and salience of protective and risk factors.

The professional interviewees offered observations that endorsed and elaborated on negative body image of youth, particularly female youth. A counselor (Interviewee #1) and psychologist (Interviewee #2) had both noticed younger girls starting to recognize or talk about body image earlier than boys. The counselor had seen white females suffering from negative body image more so than other groups, although Hispanic/Latina females were not completely immune; and in her experience, older girls (Grades 7-8) were often more dissatisfied with their bodies. Interestingly, she added, “The majority of both boys and girls who were overweight tend to have negative body image, regardless of grade, race and/or ethnicity.”

The physical education teacher/coach (Interviewee #3) added, “It has been my experience that many students who have an eating disorder or are compulsive to a fault about exercising are high achieving young ladies; often with lots of pressure to be perfect.” He saw this to be a middle-class, Caucasian female students phenomenon. To further spotlight gender differences, a psychologist who was interviewed (Interviewee #5) commented based on her research on university aged students 18-23, “[Negative body image is] very common, estimated 70% of female students I meet with in therapy have some level of body image concern, and likely 50% of males students do as well. Probably 30% of female clients have significant concerns.” He attributed the gender differences to a set of more complex reasons for females than males reinforcing the regression findings. He elaborated, for girls the most common reasons were: “cultural socialization to reach and maintain some sort of perfect body, negative feedback from peers/romantic partners about their body, negative feedback from parents about their body, and history of bullying.”

The interviewees added more insights about negative body image of female adolescents. The social studies teacher (Interviewee #4) said, “For many females, school is a fashion show and beauty competition. I’m sure that kids are constantly comparing themselves to their peers, and I’m certain it has a role in shaping many students’ self-esteem. To a certain extent, physical appearance dictates social status/group acceptance, and kids are well aware of who fits in where/with whom.” Furthermore connecting body image to bullying, the social studies teacher continued, “Kids can be really cruel to one another, especially when they are themselves insecure

about their appearance. I have seen this most often among girls, who sometimes project their body image expectation, again from advertising and media, onto others, and it only takes one cutting remark to devastate a kid's sense of self-worth."

The direct and indirect roles that parental figures played in shaping adolescent's body image were endorsed by two school professionals who were interviewed for this research. To quote the school psychologist (Interviewee #2), "I think parent/guardian involvement is what lays the groundwork for a healthy self-esteem and body image. Without it, children are more likely to depend on their peers for support and acceptance, which can result in skewed perspectives. I think parents are the first models that children see for how to talk and think about your body. For instance, a young child sees his/her mother obsess over weight or father consistently degrade himself for being weak. These become the building blocks for how they perceive themselves."

Other professionals also elaborated on the parent-child negative body image connection. The health education teacher (Interviewee #6) noted, "Parental attitudes about weight are powerful and long lasting. In my experience, a student really struggling with weight issues or body image has some significant parental influence surrounding this." The psychologist (Interviewee #5) added, "Negative feedback from parents is reported as connected to negative body image."

The place of peer bullying in negative body image was another recurring theme in the interviews. A psychologist interviewee (Interviewee #5) who has observed the close connection between what happens in school and negative body image, commented thusly: "The biggest reason students report body image concerns to me in therapy is due to a history of bullying." He continued, "Most students with more severe negative body image report a significant history of negative feedback about their body alongside reinforcement of this negative feedback by others as they grow older, the media, and the culture around them." The two school counselor/psychologist interviewees expanded on some reasons for the bullying-body image connections. The first school counsellor (Interviewee #1), while endorsing the growing phenomenon of bullying in the lives of young students also noted, "I believe that the pervasive (media) portrayal of bullying behavior, the prevalent use/access to the Internet, social media, the ubiquitous use of phones for taking photos and videos to be posted/shared, and the impersonal/immediate nature of texting and communicating by means other than person to person" give rise to bullying behavior. The second school psychologist/behavior specialist (Interviewee #2) added: the day-long exposure to peers as well as to social media has made school bullying an additional factor in adolescent body image.

Speaking to the complex place of bullying, parents, and media in female body image were a health education teacher (Interviewee #6), a physical education teacher/coach (Interviewee #3), and a high school social studies teacher (Interviewee #4). The health education professional described media sources as "promoting an 'idealized' view of what is beautiful, sexy, masculine, and hip. Unfortunately, most young people do not measure up to the standard... The ways in which this standard plays out in a young person's daily life can add to the insult through bullying, teasing, and social rejection in various forms." "Media influence is definitely a factor," noted the high school social

studies teacher; “Businesses use models with rare/unrealistic body types, not to mention image manipulation and Photoshop, to advertise products to teens. The media perpetuates these myths in television and film productions, creating in teens an unreasonable expectation of how they should ideally look.” He went on to say, “Every year I have several students suffering with eating disorders, and many more who are, in my opinion, overly focused on their physical appearance. If I had to guess, I would say that possible a quarter of teens at my school are affected by negative body image.”

There were also counter perspectives on the female and protective parent narratives on adolescent body image. For example, the high school health teacher (Interviewee #6) noted: “Sadly, I believe negative body image is one of the most common concerns for both males and females, beginning in early adolescence.” However, while negative body image “seemed as though this was a ‘female’ issue, we need to have our eye on what negative body image might mean for boys. She added, “As a health teacher, I am really tuning into male body image issues, including eating disorders. I am definitely seeing an increase with my own male students, and I really wonder why this appears to be changing.” She suggested studying and targeting middle school boys, who seem to be at the root of the issue, since they seem to better identify with body issues compared to years ago. The physical education teacher/coach, while corroborating the notion that media and peer relationships worsened adolescent body image, hastened to add that: “strong or controlling parents can [also] negatively influence an individual’s self-image.” In his experience, many students in physical education classes often do not try or work very hard due to a poor self-image already instilled in their mind [from home] and the fear of standing out and “looking funny.”

In short, both the quantitative and qualitative analyses underscored the critical roles that parents/guardians played in protecting adolescents from school bullying. As predicted, parents proved to an important line of defense against reducing the negative consequences of bullying in adolescent lives. This research also showed that positive academic engagement was a strong protector from school bullying. Gender differences were also observed. For females, there were noticeably more complex pathways that led to negative body image. In contrast, these indirect pathways to negative body image were much simpler for males.

THEORETICAL IMPLICATIONS

In summary, the quantitative research and supplemental qualitative interviews have added to and expanded on the extant literature about negative body image and adolescents in at least four ways. First, parents/guardians did act as a protective buffer against school bullying victimization. Second, parents/guardians also indirectly protected their adolescents from the negative body image consequences of being bullied. These two protectants were seen most significantly through the protection of a maternal figure. Third and most significant, positive academic engagement also acted as a protective buffer against being bullied. Fourth, positive academic engagement also indirectly protected adolescents from negative body image consequences of being bullied. Thus, education professionals and other practitioners who are tasked with

stemming the negative consequences of school bullying, body image, and related health problems among adolescents need to focus on schools and parents/guardians in their health promoting efforts. Additionally, it was important to focus on both male and female youth, gender similarities and differences, and how body image affects each gender separately.

The multivariate findings supported all three hypotheses and their underlying theories. As expected from the Iowa School of self-concept and gendered identity frameworks, parent/guardian relationships had a more positive impact on the body image of females than males. At the same time, as per the Chicago School of self-concept framework, layered with gendered identity, being a victim of school bullying had a stronger negative impact on female body image than male body image. Parents/guardians offered adolescents protection against negative body image by indirectly shielding them from the negative consequences of bullying. But, parent/guardians protected females, more than males, against negative effects of school bullying and body image.

CONCLUDING REMARKS

This research showed that strong parent/guardian bonds, particularly the maternal figure, had a positive impact on body image. Also, being a victim of school bullying had a negative impact on body image. That both these effects were more salient for girls illustrated the gendered dynamics in body image socialization. Additionally, the indirect gendered pathways were more complex for females than for males. For example, the more academically engaged boys were, the less bullying they experienced, and in turn, a more positive body image. As for females, in addition to academic engagement, strong maternal relationships protected them from school bullying, which led to more positive body image. The narrative commentaries endorsed the quantitative findings. Yet, there is still much to be explored. The adjusted R^2 for the male and female negative body image models were only 0.12^{***} and .17^{***}. But the extant analyses indicated avenues for future research. For one, it would be advantageous to focus on measurement issues, such as using more robust and fuller indicators to define the protection offered by maternal relationships and academic engagement. Many interviewees also noted media influence on adolescent negative body image; with the growing use of technology, social media, and other media by adolescents, there needs to be renewed focus on how this medium might be negatively targeting adolescents if we are to limit their seemingly powerful presence. Using longitudinal designs to track the adolescent's development through their teenage years and into adulthood will also offer needed insights into the sustained influences of successful parenting and positive academic engagement.

APPENDICES

Appendix A. Table
Demographics
Health Behavior in School-Aged Children 2009-2010
(Male n=5547-5858; Female n=5394-5673)

Concepts	Dimensions	Variables	Response Values	Statistics	
				Male	Female
Demographic Controls	Grade	Q4. What grade are you in?	5= Grade 5 ¹	11.9% ^{**}	12.3% ^{**}
			6= Grade 6	15.7	15.9
			7= Grade 7	18.2	19.9
			8= Grade 8	21.5	18.4
			9= Grade 9	16.9	17.6
			10= Grade 10	15.7	15.9
	Race/Ethnicity	Q5. What do you consider your ethnicity to be?	0= Hispanic or Latino ¹	28.4%	27.7%
			1= Not Hispanic or Latino	71.6	72.3
	Nationality	Q85. Were you born in the United States?	0= No ¹	8.8%	8.3%
1= Yes			91.2	91.7	

*** p ≤ .001; ** p ≤ .01; * p ≤ .05.

¹. Recoded from original numerical codes.

Appendix B

Consent Form and Interview Protocol

Consent Form

Interview Date and Time: _____

Respondent ID#: __ (1-6)

Dear _____:

I am a Sociology Senior working on my Research Capstone Paper under the direction of Professor Marilyn Fernandez in the Department of Sociology at Santa Clara University. My research focuses on negative body image among school-aged children and the roles that physical activity, parents, bullying, and drugs/alcohol play in shaping children's body image.

You were selected for this interview, because of your knowledge of and experience working in the area of health and adolescence. I am requesting your participation, which will involve responding to questions about negative body image and will last about 20 minutes. Your participation in this study is voluntary. You have the right to choose to not participate or to withdraw from the interview at any time. The results of the research study may be presented at SCU's Annual Anthropology/Sociology Undergraduate Research Conference and published (in a Sociology department publication). Pseudonyms will be used in lieu of

Appendix C

Correlation Matrix: Indices of Negative Body Image, Youth Agency (Health Activity, Drugs/Alcohol), Micro-System Protective/Risk Factors (Friendship Circles, Maternal and Paternal Figures), Meso-System Protective/Risk Factors (Academic Engagement, School Bullying), Youth Demographics (Grade, Non-Hispanic/Latino, U.S. Citizen)
(Male n=5421-5858) (Female n=5337-5673)

		F	E	M	A	L	E							
	Negative Body Image	Health Activity	Drugs	Alcohol	Friendship Circles	Maternal	Paternal	Academic Engagement	Victim of Bullying	The Bully	Grade	Non-Hispanic/Latino	U.S. Citizen	
	Negative Body Image1	1	-.10***	.10***	.14***	.05***	-.34***	-.30***	-.32***	.17***	.09***	.14***	-.05***	-.01
	Health Activity2	-.09***	1	-.10***	-.14***	.20**	.22***	.20***	-.04**	-.14***	.23***	.06***	.02	
	Drugs3	.01	-.11**	1	.53***	.31***	-.25***	-.22***	-.20***	.13***	.23***	.20***	-.04**	-.02
	Alcohol4	.05***	-.11***	.61***	1	.37***	-.29***	-.27***	-.22***	.10***	.25***	.26***	-.06***	-.03*
M	Friendship Circles5	-.03*	-.06***	.38***	.39**	1	-.13***	-.15***	-.11***	.06***	.20***	.24***	-.05***	-.01
A	Maternal6	-.24***	.13***	-.22***	-.21***	-.09***	1	.79***	.43***	-.17***	-.18***	-.23***	.08***	.02
L	Paternal7	-.22***	.17***	-.20***	-.19***	-.10***	.76***	1	.41***	-.14***	-.16***	-.24***	.10***	.01
E	Academic Engagement8	-.25***	.11***	-.18***	-.18***	-.07***	.40***	.39***	1	-.25***	-.19***	-.19***	.01	-.02
	Victim of Bullying9	.21***	-.06***	.08***	.07***	.01	-.14***	-.12***	-.25***	1	.34***	-.09***	.00	-.01
	The Bully10	.11***	-.13***	.29***	.29***	.25***	-.18***	-.17***	-.19***	.33***	1	.02	-.03	-.02
	Grade11	.04**	-.14***	.23***	.26***	.28***	.20***	-.21***	-.14***	-.11***	.05***	1	-.01	-.02
	Non- Hispanic/ Latino11	-.08***	.02	-.02	-.02	-.07***	.05***	.05***	.03*	-.03*	-.07***	.05***	1	.15***
	U.S. Citizen11	-.04***	.07***	-.06***	-.04**	-.03*	.05***	.04**	.03*	-.05***	-.07***	.01	.19***	1

*** p ≤ .001; ** p ≤ .01; * p ≤ .05.

1. Index of Negative Body Image= Q8Thoughts on your body+ Q37Presently on a diet+ Q38AFrustrated with appearance+ Q38DFeel comfortable with body;
2. Index of Health Activity= Q20Out of breath, free time+ Q23Mode of travel to school+ Q10_2Hours use computer, weekends+ Q31How often eat fast food;
3. Index of Drugs= Q81CMarijuana in last 30 days+ Q74Smoke tobacco presently;
4. Index of Alcohol= Q79Gotten really drunk+ Q76BPast 30 days drunk alcohol;
5. Index of Friendship Circles= Q57Days spend w/ friends after school+ Q58Nights spend w/ friends+ Q78DFriends use marijuana+ Q78BFriends drink alcohol;
6. Index of Mother/Female Guardian= Q51CKnows where after school+ Q51AKnows friends+ Q50CEasy to talk w/ problems+ Q54Satisfied w/ family relationships;
7. Index of Father/Male Guardian= Q52CKnows where after school+ Q52AKnows friends+ Q50AEasy to talk w/ problems+ Q54Satisfied w/ family relationships;
8. Index of Academic Engagement= Q61Teacher opinion school performance+ Q62Feelings about school+ Q63CStudents accept me as I am;
9. Index of Victim of Bullying= Q65Got bullied at school+ Q66CGot hit/kicked/pushed+ Q66JGot bullied using computer/email outside school;
10. Index of The Bully= Q67Bullied another student+ Q68CHit/kicked/pushed others+ Q68JBullied using computer/email outside school;
11. Grade Grade 5 – 10; Race/Ethnicity Hispanic/Latino=0, Non-Hispanic/Latino=1; Nationality Non-U.S. Citizen=0, U.S. Citizen=1.

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“Children’s Health: Family, Social Environment, and Child Activity”

Anna Garvey⁷

Abstract. This research studied the effects of children’s activities, family and social environments on their health. Results from the National Survey of Children’s Health (2011-2012), supplemented by qualitative interviews with seven child development professionals, revealed that while children’s activities promoted health, parental control and distressed neighborhoods worsened it. These findings were supported by a set of theories, including Social Interactionism and Ecological Systems, and added to the literature on children’s health in today’s digital world.

INTRODUCTION

As our society is becoming more technologically driven, it important to take a step back and evaluate both the positive and negative effects of being constantly, particularly on children. In many ways, parents are the ones we should turn to since they have control over whether their child becomes addicted, or not, to certain technological devices. Of course, children may become technologically dependent on their own, but many parents have been known to hand over their iPhone or iPad to get a child to stay quiet. Many children these days are addicted to some technological device and there is the strong possibility that allowing children to become reliant on technology will negatively affect their development. Unfortunately, most parents are unaware of the debilitating effects such addictions could have on their children. In fact, entertaining children face-to-face rather than through the use of a device, could result in healthier children.

This study will evaluate some of the relevant factors, child activities (sedentary and physical), parent-child relationships (their involvement and control), and the child’s neighborhood, as they affected the body and minds of children. In addition to child and parents, their neighborhood will also be taken into account because neighborhood resources can enhance or limit children’s activities. Because the future health of our children is contingent on their health while growing, it is essential key to identify and understand the factors that might promote healthy child development.

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LITERATURE REVIEW

The research reviewed for this paper focused on the following factors as they affected children's health: children's sedentary and organized physical activities, parental involvement, parental control, and neighborhood resources.

Child Health Outcomes: Physical and Sedentary Activities

The normal life of a child changes each and every day with the changing social and normative expectations about what it means to be a child. Both physical and sedentary activities are important parts of a child's development. But, with the advent of a technological world, children's technological play has become more sedentary. It is important to question the extent to which technology driven sedentary activities are replacing physical activities.

Physical Activity and Health

That healthy activities, such as any form of fitness actions, are crucial for a developing child has been well documented. A study done by Ian Janssen and Allana LeBlanc (2010:1) suggested that a child getting at least a half hour of exercise a day was much healthier than those children not receiving any. However, even though the researchers identified the immediate benefits of different levels of exercise, they concluded "health and benefits will occur in most children who participate in 60 or more minutes of moderate-to-vigorous physical activity on a daily basis" (2).

Other researchers have pointed to the specific health benefits of physical exercise by children. Dr. Amika Singh and her colleagues noted that "regular participation in physical activity in childhood is associated with a decreased cardiovascular risk in youth and adulthood. There is also a growing body of literature suggesting that physical activity has beneficial effects on several mental health outcomes, including health-related quality of life and better mood states" (Singh et al. 2012:49). In addition, physical activity is known to stimulate and entertain a child the same way a video game might, but the former has important physical health benefits as researchers Tremblay, Boudreau-Lariviere and Cimon-Lambert (2012) noted. Besides, they provided evidence that physical activity benefitted a child's academic success.

Sedentary Life-styles and Technology Dependency

While the evidence for the benefits of physical activities are mounting, "sedentary behavior" such as, watching TV or sitting in a reclined position for an extended amount of time, has begun to take priority over exercising outside for children. Such shifts in their daily lives have ultimately disrupted and prevented children from honing fine motor

skills that they would otherwise have developed faster through active play (Tremblay et al. 2012: 280). Additional problems, including mental issues, can arise from lack of socialization. As Tremblay et al. wrote, “higher levels of early childhood TV exposure predicts greater chances of peer rejection experiences later in primary school” (281). The more time spent alone and inactive during TV viewing left less time for important social interactions. In contrast, Tremblay and his colleagues found that active play improved a child’s cardiorespiratory functioning, thermoregulation, and sleep patterns.

No doubt, sedentary technological play and interactions do not always have to be negative. Depending on the unique relationship each child has with digital devices, the outcome of technology can be either negative or positive. According to Ito and his researchers, young individuals spend a majority of their time online shaping and forming their identity (2010:31). The Internet has so many moving parts and information that developing children can learn infinite amounts of information; the question is whether they are learning “healthy” things. To quote from Ito et al., “...we have observed how many youth craft multiple media identities that they mobilize selectively depending on context; they may be active on Facebook and part of the party scene at school, but they may also have a set of friends online focused on more specific interests related to gaming or creative production” (37). They reported that the three main things children tend to do online, “hanging out, messing around, and geeking out” (77), each has their positive and negative contributors depending on context of the child. In other words, the central question that these researchers raised was whether these children and adolescents were forming their identity in a negative way (such as cyber bullying, using the internet to look up inappropriate sites) or a positive way (such as playing stimulating games, talking to friends, or doing research).

Internet Addiction. Internet addiction is now very common among the adolescent population. Researcher Huang found that individuals with feelings of loneliness found the Internet to be a form of emotional support that led them to develop a relationship with the Internet and ultimately addiction (2010: 347). Such addictions become a health issue on their own, as people have been known to experience withdrawals from technology and other health related problems (351). In a similar vein, Niculovic, Zivkovic, Manasijevic, and Strbac (2012) analyzed Internet addiction on a more global scale. Because people turn to the Internet when they are lonely or upset or to avoid life’s daily struggles, it becomes easy to become addicted as they become reliant on Internet for support (547). In short, healthy behavior online is similar to good behavior in everyday life. The difference is that, unlike in real life, things online can be undone or reversed allowing people not to be fearful of immediate negative or positive outcomes.

Can Technology be Positive for children?

Given the ubiquitous nature of technology, is it possible to integrate technology into the daily activities of children and adolescents. For one, is it possible to get children out of the house and moving while simultaneously using technology? Deborah, J. Chavez (2009) found that children over all enjoyed the activities that involved the use of

technology more than the non-technology games, which sparked her concerns about technology overriding the outdoors for today's (103). She suggested that this imbalance may be improved by using technology to get children outdoors, and teach them to love nature through the help of technology.

Building social connections is another important part of growing up. How can technology be integrated into this normal developmental process? Researchers, Ito et al. (2008:1) and Lee, Conroy, and Hii (2003) discovered that the younger generations, when using technology for pleasure, were most likely strengthening their preexisting connections with their friends. In fact, adolescent relationship building activities were quite complicated because they felt the pressure to be constantly connected. The researchers concluded that the children they studied were using technology to their advantage to stay connected and learn more, ultimately gaining social capital. Hence, they stated, "we have attempted to momentarily suspend our own value judgments about youth engagement with new media in an effort to better understand and appreciate what youth themselves see as important forms of culture, learning, and literacy" (2008:11).

Summary. Overall, both physical and sedentary activities are beneficial to a child's health, although history has proven that physical activity is always healthy. Yet, both types of activities need to be done in moderation and uniquely tailored to each child. In any event, monitoring children's level of activities, be they technology or physical, to be developmentally appropriate is crucial.

Parental Involvement

Moving beyond children to their parents, involved parents are typically a positive force in a child's life. For example, the music a family listens to is known to be beneficial for a child. Chee-Hoo Lum found that the emotional support a family provided to children when participating in musical activities led to an overall boost in child self-esteem (2008:102). Music could help strengthen family bonds, and in turn leads to positive outcomes such as good health.

Besides boosting self-esteem, parents are also instrumental in enhancing their children's academic success. For example, in El Nokali, Bachman, and Votruba-Drzal's (2010) study of children's academic success they found that parental involvement in elementary school, such as doing educational and physical activities inside and outside the home with children, lead to improved literacy. That is, parental support and involvement helped children succeed in school because they felt confident to try their hardest (989).

Scholars have also focused on parental monitoring as it affected a child's educational experience. In a study by McCormick, Cappella, O'Connor, and McClowry, parents who monitored their child's behavior taught them to distinguish right from wrong and reduced

behavioral problems (2013:279). Such emphasis on behavioral issues early on in a child's schooling career was important to prevent these issues from worsening.

Parent involvement and monitoring can take a variety of forms. Researchers Carlson and Berger examined how mothers and fathers differed in the activities in which they engaged with their children. When fathers were not-married-biological fathers, they were more likely to watch a movie or TV with their child while mothers and married biological fathers, were more likely to spend time reading to their child (2013:233).

Neighborhood Resources

The neighborhood context in which children and their parents live is an important part of their lives. According to the National Institute of Health, there is a positive correlation between poor neighborhoods and poor health of its residents (2011:2). Some reasons for the poor neighborhood-health connections were lack of funding for outdoor and indoor recreational centers, making it difficult for children to socialize and get exercise in a safe area (2011:2). The National Institute of Health went on to make the case that, "high-poverty neighborhoods have substantially higher levels of depression, infant mortality, low birth weight, teenage childbearing, dropping out of school, child maltreatment, adolescent delinquency, injuries, homicide, suicide, and overall self-reported health problems" (2011:2). Because these neighborhoods are not fit for children and adolescents to play and socialize safely, they may stay inside on their digital devices and turn to them to do all of their socializing. By choosing to stay inside where it is safer, these children are much more likely to become depressed and obese due to their sedentary behaviors.

However, not all poor neighborhoods are the same. For example, even in a broken neighborhood, parents may trust their children and neighbors enough to let their children play outside even though it is not safe. This trusting relationship can lead to a positive relationship between parent and child which ultimately will keep them from relying on technological devices, particularly if children do not feel like their device is their only form of support. In other words, trust and control, on the part of parents and the community members, are critical for the health of a child. Another study from National Institute of Health recognized a positive correlation between those who felt powerless and lacked trust (2011:2). The best way for one to overcome their broken community is to gain power through control over their environment (2011:2).

Summary and the Way Forward

On balance, researchers have concluded that there are many healthy child outcomes that come from positive parenting and many negative outcomes that come from overuse of technology and sedentary activities. Internet addiction, early in a child's life, can lead to more severe health issues down the road if there is no appropriate intervention. The lessons children learn from their parents is more beneficial than the lessons they learn

from any technology because parents offer real life experience and understanding of what is right from wrong.

However, as children become increasingly dependent on technology, it is important to find ways in which they are able to use technological devices in positive ways. One way to limit use of technology is by making it more special for a child when they get to play with it. Through limiting technology related activities they are not taking the pleasures of technology for granted. Another is finding a way for children to use technology to get outside and engage in healthy activities. As Chavez (2009) suggested, we can use technology in outdoors activities to help enhance children's love of nature.

RESEARCH QUESTION

Due to the exponential increase in technological stimuli that surrounds our society today, it is important to examine the possible negative effects of this exposure on children. In contrast, it is also important to understand how other factors in a child's life, such as their social circles, parental involvement and control might balance out children's possible dependence on sedentary technology use. Against this background, the following question was posed for this research: what are the impacts of children's sedentary and organized physical activities, parent involvement and control and neighborhood resources on the child's overall health?

A child's dependence on technological gadgets is more likely than not to promote sedentary behavior, which can potentially hurt a child's health both physically and mentally. On the other hand, organized physical activities, by promoting exercise, is beneficial to a child's health. Strong parental involvement forms a bond between child and parent, establishing a healthy relationship between the two, while too much or too little parental control can break apart a child-parent relationship. When parents are involved with their children, it allows for children to trust their parents when talking about serious issues instead of turning to impersonal sources, such as the Internet, on their own. Parental control is the other side of the coin. Too much parental control can ruin the trust between parent and child, making a child feel more comfortable asking questions of other sources, which may not give them the best answers. Finally, the resources available (or not as the case may be) to children and parents in their neighborhood were expected to affect children's health, Positive environments allow children to get enough exercise and socialize on a face-to-face basis with their neighbors while a distressed environment inhibits children from accessing the socialization and educational sources they need.

THEORETICAL FRAMEWORKS

This research was theoretically set within Bronfenbrenner's Ecological Model (as cited by Carroll-Scotta, et al. 2013: 2), which will assist in identifying a child's multiple ecologies. As per the Ecological Model, parents and other social relationships are the primary, face-to-face agents of socialization in the early stages of children's life; these agents represent the microsystem surrounding the individual child. In the exo-system environment lie the child's access to technology and neighborhood resources, which also play socializing roles, albeit of a secondary nature.

The primary and secondary agents of socialization are similar and yet different in the ways they socialize children. Cooley, in his Theory of Socialization (Cooley 1964) explained how the primary socializing agents directly affect the child through face-to-face interactions. Parents and other familial adults in the child's life operate as direct mirrors or "looking glasses" for the child, as he or she learns to discern socially appropriate from inappropriate behaviors. The primary socializing agents also serve as resources providing structured advice for their children, ideally in a loving, supportive environment. To rephrase these ideas in Lareau's (2011:2) "concerted cultivation" terms, parents (particularly middle class) try to ensure that their children have specific experiences that will help them be successful later in life. In turn, under the guidance of the parent, the child begins to understand the limits of their own power, avoids over exerting control on their life, and making unforeseen mistakes. In short, when socializing is successful, children understand, early on, the unequal power dynamics between them and their parents and the consequences of rebelling against the parent.

Yet, in some cases, parents can over-socialize their children with detrimental consequences to a child's development. No doubt, parents do control and limit their children's activities and reactions. And such control, in moderation, is important in a child's life. However, if parents start to control every experience of their child's life, problems are likely to arise. According to Lareau it is important that children are free to learn about how society works on their own, and explore their own creativity. But in order for children to have these individual experiences parents must positively guide the "accomplishment of natural growth" (Lareau 2011:3). Overly controlling parents, commonly known as "helicopter parents", are likely to break down the parent-child bonds of trust, prevent children from coming to them for important issues, and ultimately even lead them to unhealthy behaviors. Children of controlling, "helicopter parents", may binge on unhealthy activities to compensate for what they see as "normal" (as in what their friends are doing) behavior.

The concept of looking-glass self is also relevant to the indirect, impersonal socialization experiences a child has with exo-system agents like technology. In the socialization process, many children understand that they can manipulate a situation in their favor and act according to how they believe people view them (Pascale 2008:80). However, while parents and other family members can provide direct, interactional, almost immediate corrective feedback, to the child, and can do so in a supportive environment, technological feedback is not the same. When using technology, the user

is in charge; this sense of power and entitlement can give the user confidence in manipulating technologies for their use. But, a technological device, unlike parents, cannot monitor a child, leaving children to decipher what is right from wrong on their own. Such unrestricted technological control can lead children to wanting more, ultimately leading them to technology dependence and even addictions. And because technology use is more sedentary than physically active, over-dependence can lead to physical health issues such as obesity, cardiovascular disorders, vision problems, and even more serious problems.

The socializing role of the neighborhood system, with its resources or lack thereof as the case may be, in which the child lives, represents a structural model of “collective socialization” (Gephart 1997; Jencks and Mayer 1990). More importantly, apart from the child’s primary socialization experiences, the neighborhood structure operates as an additional, positive and/or negative, collective socialization agent (Crowder and South 2003: 661). For example, a child living in neighborhoods that are resource rich will have access to enriching recreational venues, activities, medical resources, alternative grocery stores, and positive role models. In other words, these neighborhood resources provide children the opportunities to cultivate the social (social connections) and cultural (values, beliefs, goals, and language) capital (Coleman 1990) they will need to live a healthy life and accumulate human capital like education to help them succeed later in life (Crowder and South 2003:662). On the other hand, distressed neighborhoods (Wilson 1987, 1996), by virtue of the lack of physical, social, and cultural connections, are often associated with poorer outcomes, be they economic, health, or gang violence, for adults and children alike (Crowder and South 2003:662). For example, these forms of activity can lead to physical harm as well as mental health issues including depression and anxiety.

Hypotheses

Because of the differential nature and quality of socialization experiences provided to the child by the primary, secondary, and structural agents of socialization, the following hypotheses were posed:

1. The more parents were involved in the child’s life, the healthier the child will be, net of parental control, technology and sedentary activities, physical activity, neighborhood context, family SES, child’s race and age.
2. On the other hand, children whose parents exert parental control are more likely to have poorer health, net of parent involvement, technology and sedentary activities, neighborhood context, child’s race and age.
3. In contrast to the positive health outcomes associated with being physically active, children who engaged in technology and other sedentary activities will have poorer health, net of net of parental involvement, control, neighborhood context, family SES, child’s race and age.
4. Finally, the neighborhood resource context was expected to have positive consequences for children’s health, net of parental involvement, control, child activities (both physical and sedentary), family SES, child’s race and age.

METHODS

This research utilized both primary and secondary sources. Secondary survey data were especially important in testing the hypotheses. And the primary interviews with a few established professors, medical professionals, and an elementary school teacher helped to explain the quantitative findings.

Secondary Survey Data

The National Survey of Children's Health, which collected data from February 2011 through June 2012 in the United States and from July 2011 through January 2012 in the U.S and Virgin Islands were used to answer and test hypotheses (CDC 2011-12). The interviews were done over the phone with a parent or guardian who could respond on the child or children's behalf. Researchers aimed to discuss the health of a child or children (between the ages of 0 to 17) who are or were current residents of a household. The total sample was 95,677 in the US and 2,342 in the US Virgin Islands.

Only a sub-set of 36326 children in the 5-11 age range was used in this analyses as they are the closest to the definition of a "child" (See Appendix A. Table). The majority (73.8%) of the parents defined themselves and their children as white. The average age of the child was 10. Female children (48.7%) were slightly out-numbered by male children (51.3%). These variables will be controlled for in the multivariate analyses to hold constant the possible effects of race, age, and gender on a child's health.

Primary Qualitative Interviews

To elaborate on the survey findings about effects of organized physical activities, sedentary activities, parental involvement, parental control, and neighborhood resources on child health, I conducted interviews with seven professionals. The first interviewee is a psychology professor (Interviewee #1) knowledgeable about child development. This professor has been studying the subject for the past twenty-five years and is especially educated on the influence of family involvement and technology on a child's health and development. The second interviewee was an elementary school teacher (Interviewee #2) at a very affluent school. This teacher has worked in many elementary schools and school systems on and off for the past 20 years and therefore has witnessed the growing use of technology in the elementary school classroom and its overall effects. A family physician (Interviewee #3) was helpful when responding to questions about children's health. This doctor expressed his hope for "letting kids be kids" and exploring their creativity in all sorts of activities. The communications professor (Interviewee #4) interviewed was proficient on the topics of today's technological society and was able to shed helpful insight on how parents are starting to set a poor example of technology use for their children. The idea of monitoring how much children participate in sedentary activities was the main topic in the fifth interview with a professional (Interviewee #5) in Silicon Valley. A sociology professor (Interviewee

#6) was knowledgeable on the topics of neighborhood and family health and commented on access to health care and the lack of attention minorities are receiving in health care. The seventh interviewee, an experienced nurse (interviewee #7) of 30 years, focused on the positive side of technology for its utility in staying in touch with friends and family but acknowledged that the long hours of being sedentary can cause physical health issues. A copy of the interview protocol can be found in Appendix B.

DATA ANALYSIS

Three levels of statistical analyses were conducted. They were descriptive, bivariate correlations, and multivariate linear regression.

Operationalization and Univariate Analysis

A Child's Health

The dependent concept, Child's Health, captured the mental and physical well-being of children aged 5-11. The questions were responded to by parents and guardians who were expected to have the closest relationship with the child and knew better than others how the child did (Table 1.A).

TABLE 1.A. Child Health (n=36326-34740)
National Survey of Children's Health 2011-2012, National Center of Children's Health

Concepts	Dimensions	Variables	Values	Statistics
Child's Health	Practices/ Management: Child Well-being	K2Q01. ¹ In general, how would you describe [S.C.]'s health?	1= Poor 2= Fair 3= Good 4= Very Good 5= Excellent	0.30% 2.20 10.1 23.8 63.5
		K2Q13. ¹ Does (S.C.) need or use more medical care, mental health, or educational services than is usual for most children of the same age?	0= Yes 1= No	14.8% 85.2
		K2Q17. Is [his/her] limitation in abilities because of ANY medical, behavioral, or other health condition?	0= No 1= Yes	5.20% 94.8
		K2Q16. ¹ Is (S.C) limited or prevented in any way in [his/her] ability to do things most children of the same age can do?	0= Yes 1= No	6.8% 93.6
		Index of Child's Health ²	Mean (SD) Min-Max	8.33(2.36) 0-10

^{1.} K2Q01, K2Q13, K2Q16 were recoded to show higher values as equivalent to better health;

^{2.} Index of Child's Health = (K2Q17 +K2Q13 +K2Q16)*K2Q01 (positive correlations among index variables were statistically significant).

When asked how parents and guardians would describe a child’s health overall, only 0.3% referred to their child’s wellbeing as poor in contrast to the 63.5% who reported their child as having excellent health. Only 14.8% of children needed to utilize more medical/educational services than other children of the same age. Similarly, only 6.8% (according to the parents interviewed) were unable to perform tasks and act like children of their own age; 5.2% were also limited because of their physical condition. Judging from the results of the cumulative index of children’s health, the children surveyed were overall healthy (=8.33 and sd=2.36 on a range of 0-10).

Child’s Activities

A measure of sedentary and organized physical activity was taken to examine their effects on child health. Sedentary activity referred to children’s time spent using technological devices. Responses were measured in hours spent or at least 60 minutes a weekday using technology, which is a dramatic increase from those who just spend minutes. Organized physical activity a healthier form of activity, was measured by “yes” or “no” responses (Table 1.B).

Table 1.B. Sedentary and Physical Activities (N=36326-34740)
National Survey of Children’s Health 2011-2012, National Center of Children’s Health

Concepts	Dimensions	Variables	Values	Statistics	
Child’s Activity	<u>Sedentary:</u> TV, Video Games, Videos	K6Q65 ¹ . On an average weekday, about how much time does (S.C.) usually spend in front of a TV watching TV programs, videos or playing video games? (unit of measure)	0= Missing 1= Minutes 2= Hours	86.2% 3.30 10.5	
		Computer, Cell phone, Hand Held games, Etc.	K6Q66 ¹ . On an average weekday, about how much time does (S.C.) usually spend computers, cell phones, handheld video games, and other electronic devices? (unit of measure)	0= Missing 1= Minutes 2= Hours	90.1% 5.4 4.5
		<u>Index of Sedentary Activity</u> ²	Mean (SD) Min-Max	0.38(1.02) 0-4	
	<u>Child’s Physical and Organized Activity</u>	K7Q30. During the past 12 months was [S.C] on a sports team or did [he/she] take sports lessons after school or on weekends?	0=No 1=Yes	45.4% 54.6	
		K7Q31. During the past 12 months did [he/she] participate in any clubs or organizations after school or on the weekends?	0=No 1=Yes	49.2% 50.8	
		K7Q32. During the past 12 months, did [he/she] participate in any other organized activities or lessons, such as music, dance, language or other arts?	0=No 1=Yes	67.2% 32.8	
		<u>Index Of Physical Activity</u> ²	Mean (SD) Min-Max	1.38(1.07) 0-3	

¹. K6Q65A and K6Q66A were recoded to show more sedentary activity and include missing cases as 0;

². Index Of Sedentary Activity= K6Q65A + K6Q66A (positive correlations among index variables were statistically significant);

^{3.} Index of Physical Activity= K7Q30 +K7Q31 +K7Q32 (positive correlations among index variables were statistically significant).

Approximately 10.5% of children spent hours using the TV, playing video games, or watching videos whereas 3.3% spent only some minutes. When using a computer, cell phone, or handheld devices more children spent minutes (5.4%) on these devices rather than hours (4.5%).

As for participation in organized activities, majority of children did not partake in organized sports (54.6%) or other clubs after school or on weekends (50.8%). However 32.8% of children participated in activities such as music and dance. As indicated by the mean score on the index of physical activities (=1.38 on a range of 0-3), children were active in one of the three organized physical activities.

Family Involvement

To measure how much time children spent socializing face-to-face in their families, the second independent concept, time spent doing different activities with family members was used (Table 1.C).

When asked about how many times a week parents or other family members read a story to a child, a majority (85.9%) never read throughout the week. Similarly, parents were not likely to sing songs to their children at all throughout the week (86.4%); only 6.5% sang songs every day of the week. Parents and family members were also not likely to take their child on outings (i.e. the park, shopping, etc.) at all throughout the week (85.8%) compared to the 1.8% that took their children out seven times a week. Gathering from the mean on the index of family involvement (2.1 on a range of 1-21) parents were not likely to be interacting with their children, or be overly involved in their lives, if at all.

As for how much a parent controls their child, the parents responded thusly: 77.9% reported that they did limit their child's use of electronic devices and 62.6% did not allow their child to keep a TV in their room. Approximately 62.9% of parents never felt threatened by their child, perhaps because the lack of control might build a sense of trust. The mean of 2.8 on a range of 1-9 suggested less than more parental control.

Table 1.C. Parent Involvement and Control (N=36326-34740)
National Survey of Children's Health 2011-2012, National Center of Children's Health

Concepts	Dimensions	Variables	Values	Statistics
Family	Parents: Involvement	K6Q60 ¹ . During the past week, how many days did you or other family members read to (S.C.)?	0= 0 times	85.9%
			1= 1 time	0.30
			2= 2 times	0.70
			3= 3 times	1.20
			4= 4 times	1.30
			5= 5 times	2.20
			6= 6 times	0.70
		K6Q61 ¹ . During the past week, how many days did you or other family members tell stories or sing songs to (S.C.)?	0= 0 times	86.4%
			1= 1 time	0.60
			2= 2 times	1.20
			3= 3 times	1.60
			4= 4 times	1.20
			5= 5 times	2.10
			6= 6 times	0.50
		K6Q64 ¹ . During the past week, how many days did you or a family member take (S.C.) on any kind of outing, such as to the park, library, zoo, shopping, church, restaurants or family gatherings?	0= 0 times	85.8%
1= 1 time	0.90			
2= 2 times	2.40			
3= 3 times	3.20			
4= 4 times	3.00			
5= 5 times	2.10			
6= 6 times	0.70			
Index of Child's Family and Social Involvement ²			Mean (SD)	2.06 (5.27)
			Min-Max	1-21
Parental Control		K7Q61 ³ . Do you limit the amount of time [he/she] spends watching TV, playing on the computer, or using electronic devices?	0=No	22.1%
			1=Yes	77.9
		K7Q62 ³ . Does [he/she] have a TV, computer, or access to electronic devices in [his/her] bedroom?	0=No	62.6%
			1=Yes	37.4
		K8Q31. During the past month, how often have you felt [S.C.] is much harder to care for than most children [his/her] age?	1=Never	62.9%
			2=Rarely	17.7
			3=Sometimes	12.9
			4=Usually	3.30
			5=Always	3.00
Index of Parental Control ⁴			Mean (SD)	2.81(1.24)
			Min-Max	1-9

1. K6Q60, K6Q61, and K6Q64 were recoded to include missing cases as 0 times;
2. Index of Family Involvement=K6Q60 +K6Q61 +K6Q64 (Positive correlations among indicators were significant at least at the .05 level);
3. K7Q61 and K7Q62 K8Q31 were recoded to include missing cases as 0 (No) or 1 (never);
4. Index of Parental Control = K7Q61+K7Q62 +K8Q31 (Positive correlations among indicators were significant at least at the .05 level).

Neighborhood Resources

In order to get a sense of the environment children are growing in, it was important to analyze the neighborhoods that they live in (Table 1.D).

Table 1.D. Neighborhood Resources (n=36326-34740)
National Survey of Children's Health 2011-2012, National Center of Children's Health

Concepts	Dimensions	Variables	Values	Statistics
Neighborhood Resources	Neighborhood : Physical	K10Q11. Do sidewalks and paths exist in neighborhood? ¹	0= No 1= Yes	26.6% 73.4
		K10Q12. Does a park or playground area exist in your neighborhood? ¹	0= No 1= Yes	17.3% 82.7
		K10Q13. Does a recreation center, community center, or 'boys and girls' club exist in your community? ¹	0= No 1= Yes	31.8% 68.2
		K10Q14. Does a library or bookmobile exist in your neighborhood? ¹	0= No 1= Yes	11.5% 88.5
		K10Q20. In your neighborhood, is there litter or garbage on the street or sidewalk? ¹	0= No 1= Yes	85.4% 14.6
		K10Q22. How about poorly kept or dilapidated/run-down housing? ¹	0= Yes 1= No	15.9% 84.1
		K10Q23. How about vandalism or broken windows or graffiti ¹	0= Yes 1= No	9.50% 90.5
	Neighborhood : Support	K10Q30. People in this neighborhood help each other out ²	1= Definitely Disagree 2= Somewhat Disagree 3= Somewhat Agree 4= Definitely Agree	3.50% 5.80 41.6 49.1
		K10Q31. We watch out for each other's children in this neighborhood. ²	1= Definitely Disagree 2= Somewhat Disagree 3= Somewhat Agree 4= Definitely Agree	3.20% 4.80 32.4 59.6
		K10Q32. There are people I can count on in this neighborhood. ²	1= Definitely Disagree 2= Somewhat Disagree 3= Somewhat Agree 4= Definitely Agree	4.10% 4.90 25.9 65.2
		K10Q34. If my child were playing outside and got hurt or scared, there are adults nearby who I trust to help my child. ²	1= Definitely Disagree 2= Somewhat Disagree 3= Somewhat Agree 4= Definitely Agree	3.9% 4.00 21.6 70.5
		K10Q40. How often do you feel [S.C.] is safe in your community? ²	1= Never 2= Sometimes 3= Usually 4= Always	1.70% 8.50 32.4 57.3
		Index of Neighborhood Context ³	Mean (SD) Min-Max	22.52(3.2) 6-27

1. Recoded to show 1= better the neighborhood and Missing cases indicated No (0);

2. Reverse coded K10Q30; K10Q31; K10Q32; K10Q34; K10Q40;

3. IndexNeighborhoodContext=K10Q11+K10Q12+K10Q1+K10Q14+K10Q20+K10Q22+K10Q23+K10Q30+K10Q31+K10Q32 +K10Q34+K10Q40.

Majority of children's neighborhood had the following resources: sidewalks or paths (74.7%); parks or playgrounds (82.7%); recreation centers (68.2%); and a library (88.5%). And the neighborhood of the majority of children did not have run down housing (84.1%), graffiti and vandalism (90.5%), or litter or garbage on the streets (85.4).

In addition to the richness of physical resources in the neighborhood, the neighbors were also socially connected. Half (49.1%) the parents said their neighbors help each other out; 59.6% said that the neighbors watch out for each other's children; 65.2% can count on their neighbors; and 70.5% trust their neighbors. Overall (57.3%) felt safe in their neighborhoods. In short, the children lived in neighborhoods that had sufficient resources (= 22.5 on a range of 6-27).

Bivariate Analysis

In the second analytical step, bivariate empirical relationships were explored between child health, sedentary and organized physical activity, family involvement and parental control, neighborhood resources, race, gender, and age (See **Table** in **Appendix C**.) Parental control was definitely unhealthy for the child ($r = -.32^{**}$), but parental involvement was slightly better ($r = .04^{**}$). A child's health was better, the more involved they were in organized physical activity ($r = .13^{**}$). As for neighborhood resources, the better the neighborhood was, the better a child's health ($r = .17^{**}$). As for a child's demographics, those of white ethnicity ($r = .09^{**}$), of younger age ($r = -.05^{**}$), and of the female children ($r = .09^{**}$) proved to be much healthier. The robustness of these relationships was tested in multivariate analysis presented in the next section.

Linear Multiple Regression

The regression of child's health on children's sedentary and organized physical activities, family involvement and parental control, and neighborhood resources, net of race, gender, and age gave a clearer idea of their unique effects on a child's well-being. The results also provided a test of the hypotheses.

Several interesting comparisons were evident in Table 2. One, the more time the children spent in organized activities, the better their health was ($\beta = .13^{***}$). In contrast, sedentary activities ($\beta = -.04^{***}$) worsened children's health. As predicted, organized physical activity promoted a healthy lifestyle for children as they are able to be physically active and foster healthy friendships.

When the roles of parents on a child's health were compared parental control was relevant but parent involvement was not. That is, the more the parents controlled their child's activities, the worse their health was ($\beta = -.32^{***}$); which might suggest that parents

were too over bearing with their children. Parental control, perhaps, inhibited the children from gaining their own independence and learning about themselves in a holistic way. As Mead’s theory of primary socialization had suggested, one-to-one personal interactions are beneficial to a child’s health as they learn behaviors such as social etiquette, manners, basic life skills, and learn to discern right from wrong. However, too much parental control may become to over powering and take time away from the child to interact with other children their age or participate in other activities. It is also quite possible that the child may already be sick and must be dependent on their parents to be constantly involved in their lives.

The effects of neighborhood resources on a child’s health were as predicted. The more neighborhood resources the child’s family had access to, the better their child’s health ($\beta = .11^{***}$). In a neighborhood with safe areas for outdoor play, libraries, and a supportive neighborhood, children will feel more comfortable to explore and build relationships in a safe and healthy environment. Healthy neighborhood relationships offer added benefits; they support the sense of trust between parent and child.

Table 2. Regression Analysis of Child Health¹ on Technology Dependence and Family Involvement (Low Income Status and Race as controls): (National Survey of Children’s Health 2011-2012)

	Child Health Beta (β) ¹
Child Sedentary Activity ²	-.04 ^{***}
Child Organized Physical Activity ³	.13 ^{***}
Parental Involvement ⁴	-.01
Parental Control ⁵	-.32 ^{***}
Neighborhood Resources ⁶	.11 ^{***}
Race ⁷	.03 ^{***}
Child Age ⁸	-.05 ^{***}
Child Gender ⁹	.07 ^{***}
Constant	8.6
Adjusted R ²	.16 ^{***}
DF 1 and 2	9 & 34144

*** p <= .001; ** p <= .01; * p <= .05

¹ IndexChildHealth=(K2Q17 +K2Q13 + K2Q16)*K2Q01; Range = 0-10;

² IndexOfSedentaryActivity= K6Q65A + K6Q66A; Range = 0-4;

³ IndexOfPhysicalActivity= K7Q30 +K7Q31 +K7Q32; Range = 0-3;

⁴ IndexFamilyInvolvement=K6Q60 +K6Q61 +K6Q64; Range = 1-21;

⁵ IndexParentalControl= K7Q61 +K7Q62 +K8Q31; Range = 1-9;

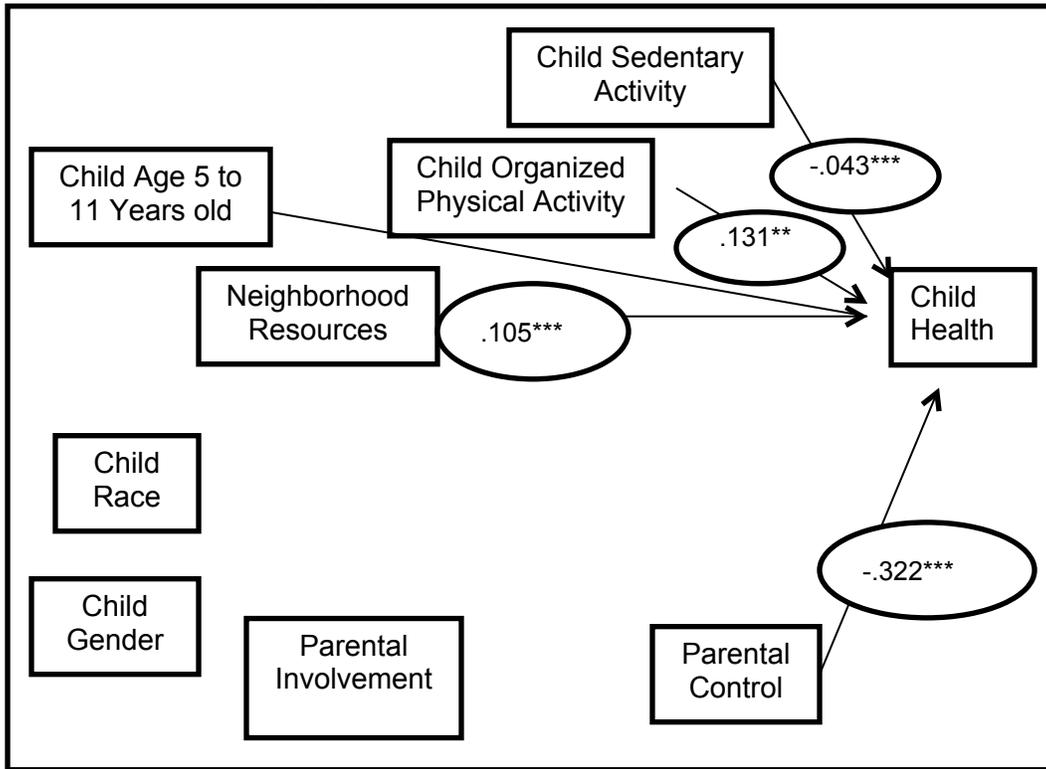
⁶ IndexNeighborhoodContext=K10Q11+K10Q12+K10Q13+K10Q14+K10Q20+K10Q22+K10Q23+K10Q30+K10Q31 +K10Q32 +K10Q34 +K10Q40; Range = 6-27;

⁷ Race: 1= White; 0=Other;

⁸ Age: 5-11;

⁹ Sex: 1= Female; 0=Male.

Figure 1. Empirical Model of Effects of Child Activities, Parents, and Neighborhood on Children’s Health¹



*** $p \leq .001$, ** $p \leq .01$, * $p \leq .05$;

¹ Refer to Table 2 for coding of indices and other variables.

CONCLUSION

Empirical Implications

As illustrated in the multivariate analyses, organized physical activities had a positive effect on a child’s health while sedentary activities had only a slight negative effect. As illustrated by the professor of the psychology of child development, the fear that technology has been tainting the health of the youth has always been there, this is not new. When the TV was first introduced to the American society, parents and researchers worried that it would be teaching the children unhealthy habits; parents still fear with newer technologies. Sure, she said, society today is much more surrounded by technology than back then but it is not the technology that creates unhealthy behaviors it is the relationships between parents and children. When parents create a positive and open environment for their children, the amount they use technology does not really matter. Those one-to-one interactions can be so impacting on a child that it will keep them from either using technology in a positive or negative light, later affecting their health. Another big factor this professor touched on was how socioeconomic status can

affect how technology and family involvement improve or worsen a child's health. Those who have lower socioeconomic status are more likely to be stressed, which create a negative environment for their children, which force them to turn to technology as a form of support, which then can lead to the negative health outcomes.

On the other hand, physical activity has always proven to be beneficial to healthy child development throughout time. As the nurse (Interviewee # 7) stated in her interview, physical activity is always a good thing unless it is high impact sports, which can potentially physically harm a child. Some of these physical ailments include concussion, contusions, broken bones, and etc.

The family physician interviewed for this study (Interviewee #3) spoke exclusively about parents. In his experience, both too much and lack of parental involvement can be detrimental to a child's well-being. Parents who are on strict work schedules and do not make time for their children can lead their children to discover other forms of recreation which may not be healthy. For example older children who are home by themselves after school may turn towards digital devices for hours of entertainment. On the opposite spectrum, overly involved parents inhibit their kids from "just being kids" and not allowing these children to have creative play or time to grow on their own. The family physician agreed with the study findings that too much parental control proved to be harmful to a child's health.

The family physician also commented on the importance of safe neighborhoods. In his experience, one important way for children to grow independently is in a healthy neighborhood. If a neighborhood is safe, with supportive inhabitants, it can provide a social structure that can "keep kids accountable for their behavior" ultimately teaching them how to behave in society. Yet, while an abundance of neighborhood resources had a positive effect on a child's health, as the sociology professor (Interviewee #6) noted, they must be willing to use the resources in the right way.

Theoretical Implications

Theoretically speaking, all the ecological systems in the life of a child captured in this study impacted the health of children. Neighborhood resources and physical activity were positive for a child's health while sedentary behavior and parental control were not. Each of these systems did play an important role in giving children a chance at gaining their own independence. Yet, as the study revealed too much or too little of any of the factors, be they parents or technology, can inhibit them from experiencing their own sense of freedom in a positive way.

In the final analyses, the social capital theory as applied by Garson (2006) may explain the findings better than the previous theories outlined. The more social capital an individual has the more positive outcomes (more confidence, a better understanding of priority, more support for problem solving) in a child's life. The way a child gains social capital is through parents teaching them how to behave appropriately. As Swinarski and colleagues noted (2010:24), parents play the largest role in their child's development

since they begin socializing their child from day one. Yet, in order to obtain positive social capital the child must learn to do so on their own with positive guidance, rather than control, from adults and society. Too much involvement and control in a child's life can keep them from establishing a healthy balance in their own social relationships, activities (both sedentary and physical), and education.

Limitations and Suggestion for Future Research

As the multivariate findings have suggested, only 15% of the variability in child health was explained by children's sedentary and organized physical activity, family involvement and parental control, neighborhood resources, race, gender, and age. One major problem was measurement. Whether it was limited measurement of technology use or family income, future studies can benefit from more robust measures. Another factor of vital importance in health that was not considered in this paper (because of lack of data) is a child's nutrition. In an interview with a mother working in the professional field (Interviewee #5), nutrition was stressed. Nutrition is known to aid in both physical and mental growth throughout a child's development, and can be impacted by parental control. Too little parental control of a child eating habits can lead to poor nutrition because a child is likely to turn towards sugary foods. On the other hand, too much control can prevent a child from having a healthy balance (including sugary foods), pushing them to binge on unhealthy snacks when away from home.

APPENDICES

Appendix A. Table

**Demographic Characteristics
National Survey of Children's Health 2011-2012,
National Center of Children's Health (N=36326-34740)**

Concepts	Dimensions	Variables	Values	Statistics
Demographic	Children: Race	RACER ¹ . Race classification for all states (White, Black, Other)	0=Other	27.6%
			1=White	72.4
	Children: Age	AGEYR_CHILD. Selected child's age in years at interview	5 6 7 8 9 10 11	14.4% 13.9 14.0 14.6 13.6 14.9 14.6
	Children: Gender	SEX. Sex of selected child	0=Male 1=Female	51.3% 48.7

¹RACER has been recoded to distinguish "white" from other races

Appendix B Consent Form and Interview Schedule

Consent Form

Dear _____:

I am a Sociology Senior working on my Research Capstone Paper under the direction of Professor Marilyn Fernandez in the Department of Sociology at Santa Clara University. I am conducting my research about children's health and some factors which might positively or negatively influence child well being.

You were selected for this interview, because of your knowledge of and experience working in the area of _____

I am requesting your participation, which will involve responding to questions about your experiences with children's health and your professional judgment about things that are helping and hurting children's health. The interview will last about 20 minutes. Your participation in this study is voluntary. You have the right to choose to not participate or to withdraw from the interview at any time. The results of the research study may be presented at SCU's Annual Anthropology/Sociology Undergraduate Research Conference and published (in a Sociology

Appendix C

Correlation Matrix: Indices of Child Health (n= 36326-34740)

	Index of Child Health	Index of Child Sedentary Activity	Index of Organized Physical Activity	Index of Parental Involvement	Index of Parental Control	Index Of Neighborhood Resources	Child Race	Child Gender	Child Age
Index of Child Health ¹	1	.02**	.13**	.04**	-.32**	.17**	.09**	.09**	-.05**
Index of Child Sedentary Activity ²		1	-.49**	.86**	-.35**	-.04**	-.03**	-.01*	-.57**
Index of Organized Physical Activity ³			1	-.50**	.09**	.17**	.09**	.06**	.41**
Index of Parental Involvement ⁴				1	-.37**	-.01*	.003	-.001	-.59**
Index of Parental Control ⁵					1	-.12**	-.09**	-.06**	.26**
Index Of Neighborhood Resources ⁶						1	.150	.002	.021*
Child Race ⁷							1	-.01*	.02**
Child Gender ⁸								1	.003
Child Age ⁹									1

*** p <=.001; ** p <=.01; * p <=.05

¹ IndexChildHealth=(K2Q17 +K2Q13 + K2Q16)*K2Q01; Range = 0-10;

² IndexOfSedentaryActivity= K6Q65A + K6Q66A; Range = 0-4;

³ IndexOfPhysicalActivity= K7Q30 +K7Q31 +K7Q32; Range = 0-3;

⁴ IndexFamilyInvolvement=K6Q60 +K6Q61 +K6Q64; Range = 1-21;

⁵ IndexParentalControl= K7Q61 +K7Q62 +K8Q31; Range = 1-9;

⁶ IndexNeighborhoodContext=K10Q11+K10Q12+K10Q13+K10Q14+K10Q20+K10Q22+K10Q23+K10Q30+K10Q31 +K10Q32 +K10Q34 +K10Q40; Range = 6-27;

⁷ Race: 1= White; 0=Other;

⁸ Sex: 1= Female; 0=Male;

⁹ Age: 5-11;

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Interviewee #5. March 1, 2015. Professional in Silicon Valley.

Interviewee #6. March 5, 2015. Sociology Professor.

Interviewee #7. March 16, 2015. Nurse.

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Family, Intimate Partners, and Adult Self-Concept

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(Honorable Mention in the 2015 Sociology Krassowski Award for Student Research)

ABSTRACT. This study evaluated the ways family (in childhood and adulthood) and romantic relationships differentially affected the self-concept of those raised in traditional and non-traditional families. Analyses of survey data from the 2012 New Family Structures survey (n=2,765, a subset of the original 15,058 respondents), and interviews with eight helping professionals, revealed that romantic relationships were the most relevant for positive adult self-concept, irrespective of early family structure. These findings reinforced the Chicago school of symbolic interactionism and self-concept. However, childhood family, and to some extent romantic relationships, were more influential for the self-concept of those who grew up in traditional than in non-traditional families, specifying the “boundary limiting” parameters of family influence. The findings also added to the literature on family structures, relationships, and well-being.

INTRODUCTION

The American Declaration of Independence declared that, “all men are created equal, that they are endowed by their Creator with certain inalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness” (Declaration of Independence 1776). In other words, emotional well-being, an essential part of one’s self-concept or identity, is important in American society. Many different factors can arguably influence an adult’s self-concept, including one’s choice in romantic relationships. Depending on the type and quality of the relationship, one’s emotional health can be negatively or positively affected. But, emotional well-being is also shaped by other relations, such as familial relationships. Findings from this study, which evaluated the comparative influence of family and romantic relationships on adult self-concept, will add to the sociology of childhood family and adult relationships, be they with parents or romantic partners.

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LITERATURE REVIEW

A review of the extant literature on family and intimate relationships identified many influential factors in individuals' life course. Some of the influences were: romantic relationship quality, parental support, family structure, socioeconomic status, and health of familial relationships.

Family in Childhood and in Adulthood

Given that the family is a fundamental social institution, it is not surprising that scholars of well-being have honed in on different aspects of family life. Some important dimensions of family life that support wellbeing were: socioeconomic resources, quality of familial relationships, family structure, and continued parental support.

Socioeconomic Resources and Children

Children's overall health and academic performance is partly dependent on their parents' finances (Mazumder and Davis 2013). For instance, children whose parents made higher wages were more likely to be healthy and to keep up with the school curriculum. Parents' salaries could also make a difference in their children's future, specifically with their college enrollment and future earnings in adulthood.

Researchers have identified some illustrative examples of the salience of parental socioeconomic status during a child's early developmental stages for their later success. As reported by Mollborn, Lawrence, James-Hawkins, and Fomby (2014), children born to financially struggling teen parents increasingly lagged behind, developmentally, their peers, even if the parents improved their socioeconomic standing. Although Mollborn and colleagues only followed children until they reached kindergarten, they highlighted similar studies in the literature that tracked children into later school years. Disadvantages experienced by children of teen parents either remained constant in Turley's study (cited by Mollborn et al. 2014) or even worsened, in Brooks-Gunn and Furstenberg's study; children actually increasingly fell behind their peers from school entry throughout childhood and adolescence.

Quality of Familial Relationships

Aside from financially struggling parents, unhealthy familial relationships have also been shown to be detrimental to children, enticing them to engage in troubled behaviors. As seen in Fosco, Stormshak, Dishion, and Winter's (2012) study of 179 middle school aged students, sibling conflict led to more behavioral problems while father-youth connectedness and strong parental monitoring led to fewer problematic behaviors.

Researchers have specified the particular aspects of parent relationships that are protective of problem behaviors in children. A case in point; Murray, Dwyer, Rubin, Knighton-Wisor, and Booth-LaForce (2013) found that aggressive behavior in children was jointly evoked by low quality child-parent relationships and parental control. For instance, paternal control generated aggression when children had a low quality relationship with their mother, and vice versa; maternal control led to aggressive behavior when children had a poor quality relationship with their father. Another dimension of parent-child relationships is the frequency, or infrequency as the case might be, of family activities, such as sharing meals. Along with very low quality child-parent relationships, infrequent sharing of family meals, were proven to damage children's well-being (Meier and Musick 2014). Conversely, children who had regular family meals and high quality parent relationships experienced lower levels of depressive symptoms, fewer delinquent behaviors, and a reduced probability of substance use. It is worth noting that sharing family meals were only beneficial to children who had strong child-parent relationships.

Family Structure versus Relationships

Relationship quality has been a strong indicator of children's well-being, irrespective of family structure. For example, children living with both parents generally did better emotionally when compared to those living with only their mother. However, parental relationship hostility proved to be a stronger detriment to a child's well-being (Baxter, Weston, and Lixia 2011) than their family structure. That is, healthy parental relationships were more important for children's emotional well-being than the number of parents they lived with. However, living with parents, even if it is one parent, is beneficial to children. Health insurance status of children and their health can vary depending on who raises them (Ziol-Guest and Dunifon 2014). For instance, children of single mothers were more likely to be insured, while those of single fathers were the healthiest. But, children raised by grandparents seemed to be the worst off, not having health insurance and having the poorest health.

Yet, when children transition into adulthood is when family structure regains its relevance. In a study of 8,841 participants, frequent changes in children's family structure resulted in a quicker transition into adulthood, meaning earlier entry into the work force, lower rates of college completion, and earlier progression into parenthood (Fomby and Bosick 2013). And females were more sensitive towards the family structure in which they grew up than men. A study by Hofferth and Goldscheider (2010) found that women (n=2,853) who had never lived with their father had the most rapid progression into motherhood. In contrast, the family structure in which men (n=2,949) grew up was not deemed to be important in determining early transition into fatherhood.

Another life course stage where early family structure and parent's marital status can spill over into is one's romantic life. In particular, adults with married biological parents had the best quality relationships, followed by those with divorced parents; adults whose parents never married had the worst romantic relationships. In other words, the

romantic relationships of one's parents can set a trend for their own intimate relationships.

Continued Parental Support

Parents are known to support their children not only early in life but throughout their children's life as well. When parents continued to monitor and support their children into adulthood, their grown children were less likely to engage in criminal behaviors (Johnson, Giordano, Manning, and Longmore 2011). Moreover, the amount of support a parent provides to their adult children also matters. Grown children who received sustained parental support were more satisfied with their lives than those who did not get the same amount of support (Fingerman, Cheng, Wesselmann, Zarit, Furstenberg, and Birditt 2012; Rhoades, Galena, Scott Stanley, Howard Markman, and Erica Ragan. 2012).

Relationships in Adulthood

The transition into adulthood can be defined in a number of different ways, including getting married. However, before making a marriage commitment, many young adults often get involved in intimate relationships that do not last. The quality and permanence of romantic relationships have been noted as additional precursors to well-being, or lack thereof, in adulthood.

Romantic Relationships

According to Fleming, White, Oesterle, Haggerty, and Catalano's (2010) study, terminating a romantic relationship led to increases in substance use, particularly cigarette smoking and marijuana use. And those who used drugs had a lower quality of life than those who did not use drugs (Low, Koh, and Wong 2011).

Even after a couple gets married and starts their own family, the quality of their marriage has consequences for the couple and their children. For one, since raising children can be challenging, spouses often rely on each other for support. When a couple is not supportive of each other, there can often be distress within the family. On the other hand, when couples had satisfying relationships, that translated into having a better relationship with their children (Malinen, Kinnunen, Tolvanen, Rönkä, Wierda-Boer, and Gerris 2010).

But, what exactly makes a marriage satisfying? Economic pressures can put a huge dent in marital health (Choi and Marks 2013), but the effects can vary if the male or female partner (Hardie, Geist, and Lucas 2014). On the one hand, women were happier in their marriages when they were not financially struggling. But, economic stability was

not as important factor to men, as it was to women. Men were more satisfied in their marriage if their partner also contributed financially.

Summary

On balance, the research reviewed above focused on the unique and separate ramifications of family and romantic relationship in two key stages of the life course: childhood and adulthood. The study conducted for this paper examined the comparative impacts of family structure, relationships (early and in adulthood) and romance on adult self-concept. The research goals were to provide better insights into how family and romantic relationships during different life course stages affected persons differently, if at all, depending on the family structures in which they were raised.

RESEARCH QUESTION

The following set of research questions were posed for these analyses: What are the differential impacts of family relationships, both in childhood and in adulthood, as well as romantic relationships on adult self-concept? And how were the effects of family and romantic partners different, if the adult grew up in a traditional or nontraditional family structure? Drug use (Low, Koh, and Wong 2011), economic resources (Mazumder and Davis 2013), and gender (Hofferth and Goldscheider 2010) were used as controls in the multivariate analyses, since they have been reported to be mediating factors in well-being or relationship quality.

THEORETICAL FRAMEWORK

This research was framed within the Chicago and Iowa schools of symbolic interactionism and self-concept (Herbert Blumer 1969; Manford Kuhn 1964; Powers 2010:192-202) as well as Glenn Elder's life course perspective (as cited in Fugita and Fernandez 2004:11). The effects of childhood and adult (later) family relationships on the adult self-concept have been theoretically elaborated by the Iowa and Chicago schools of symbolic interactionism, respectively. The life course perspective was then used to specify the "boundary limiting conditions" (Powers 2010: 76) of the symbolic interactionist dynamics of family and romantic relationships with adult self-concept.

According to the symbolic interactionists, people's social selves are products of social interactions. For instance, social relationships, such as family, both during childhood and adulthood, and romantic relationships, operate as "looking-glasses" (Cooley 1902: 136-178) as people are socialized into developing their sense of their own being. All relationships, whether negative or positive, are socializing experiences that help shape how individuals think about themselves and ultimately contribute to their self-concept.

However, not all socialization experiences have the same effects on the development of self-concept. For example, according to the Iowa School, the 'core self-concept,' developed early on through family socialization, does not change much throughout one's life (Manford Kuhn 1964; Powers 2010:198-201). Therefore, based on the Iowa School's symbolic interactionism, it was hypothesized that early family relationships will have a stronger positive effect on adult self-concept than later adult relationships (both with the family and a romantic partner), net of economic resources, drug use, and gender.

On the other hand, the Chicago School of symbolic interaction claimed that one's self-concept is often altered or changed by experiences later in life (Herbert Blumer 1969; Powers 2010:200-01). According to this premise, people's more recent experiences with social interactions will be more predictive of their social self than childhood experiences. This reasoning led to the hypothesis that adult relationships, both romantic and family, will have a stronger impact on a positive adult self-concept, net of economic resources, drug use, and gender.

It is not only true that all socialization events, be they in childhood or in later life, do not mean the same for all, the effects can differ depending on when in the life course those events were experienced. As per the life course concept, earlier and later life experiences can impact individuals and their life course differently (Fugita and Fernandez 2004:11), depending on the contexts in which critical events happen. For example, childhood family experiences can have different consequences over the life course of adults, contingent on whether they grew up in traditional or non-traditional families. The life course perspective offered a theoretical tool to specify the "boundary conditions" (Powers 2010:76) in the effects of family relationships.

For example, George Murdock (as cited in Morgan 1975:20-2), in his evaluation of the family unit, identified the nuclear or traditional family as a universal social unit because it is an essential aspect for a functioning society. He defined the nuclear family as "a social group characterized by common residence, economic co-operation, and reproduction. It includes adults of both sexes, at least two of whom maintain a socially approved sexual relationship, and one or more children, own or adopted, of the sexually cohabiting adults" (Morgan 1975:20). In other words, the nuclear family was the normative locus for not only meeting the sexual and reproductive needs of individuals and society at large, but also their economic and educational needs. If we accept Murdock's reasoning, those raised in nuclear or traditional families may be more privileged in having more resources from societal institutions, making it easier to meet their needs; in turn these privileges can result in a more positive self-concept. Recast in a life course paradigm, the structure of early upbringing, whether traditional or non-traditional, can place boundary limits on the effects of socializing experiences. That is, early and adult relationships can be expected to mold the self-concept of adults differently, depending on their childhood family structure. For example, since, according to Murdock, nuclear families have more resources, these families might be protected from familial tensions, that usually arise when trying to acquire much needed resources

and to balance allocations, bringing family members closer to each other. Therefore, it was hypothesized that family relationships will have a stronger impact on the adult self-concept of those who grew up in traditional families than in non-traditional families, net of economic resources, drug use, and gender. On the other hand, romantic relationships will have a stronger effect on adult self-concept in non-traditional than traditional families, net of economic resources, drug use, and gender.

METHODS AND DATA

Mixed methods were used to test these research hypotheses. The quantitative secondary data were drawn from the 2012 New Family Structures survey (Regnerus 2012). To supplement the quantitative analysis, primary qualitative interviews were conducted with 8 professionals knowledgeable about family and romantic relationships.

Quantitative Survey Data

The 2012 New Family Structures survey looked at a variety of relational, emotional, and social outcomes of young adults raised in different family structures in the United States. Survey researchers (Regnerus 2012) used participants from a web panel designed to approximate the United States population. A weighted sample of 15,058 young adults ranging in age from 18 to 39 completed an online survey. Response rate was 61.6% for active panelists and 21.6% for withdrawn panelists.

Of the total Regnerus sample, a sub-sample of 2,957 respondents who had complete information on the variables relevant to these analyses was selected for this paper. Since familial structures can affect family members differently, the sub-sample was split into non-traditional (634) and traditional (1,161) families. Traditional families were classified as families where the biologically related parents were married. Non-traditional families were defined as families where the parents were of the same sex or biologically unrelated parents adopted the respondent, or parents who were unmarried but co-habiting, or biological mother had a romantic relationship with another man, or biological mother who did not have a romantic relationship with another man.

Overall (see Appendix A. Table), adult respondents from traditional families were more likely to be in a higher income bracket (=\$30K to \$39,999) and to have never tried drugs (68.7%), in contrast to non-traditional families (bracket =\$20K to \$29,999) (55.9%). In terms of gender, the non-traditional family group had more women (70.1%), relative to men (29.9%); the traditional family group was made up of 66.5% women and 33.5% men. Since economic resources, drug use, and gender have been shown in the literature review to affect one's relationship quality, well-being and emotional state, a proxy for self-concept, they will be controlled for in the multivariate analyses.

Qualitative Interview Data

In addition, interviews were conducted, for this study, with eight helping professionals, all who were located through networking. Three of the interviewees were professors from the psychology department at a local university (Interviewees #1, #5, and #7), four were female therapists (Interviewees #2, #3, #6, and #8), and one was a psychiatrist who primarily works with adolescents and adults (Interviewee #4). The interviewees were asked a series of questions (Appendix B) via email, on the phone, or in person, inquiring about their opinion on how adult self-concept and emotional well-being are impacted by childhood family relations, adult romantic relationships, adult child-parent relationships, economic resources, drug use, and gender.

DATA ANALYSES

Responses from the 2012 New Family Structures survey were analyzed at three different levels: univariate, bivariate, and multivariate. Descriptive and bivariate analyses set the stage for discovering the net effects of early family relationships, grown child-parent relationships, and adult romantic relationships on the adult self-concept.

Operationalization and Descriptive Analyses

Adult Self-Concept

The Adult Self-Concept was indicated by the emotional state of respondents at the time of the survey in 2011 and 2012. In keeping with the research design, the responses were disaggregated into two different family structures in which the adults were raised, whether traditional or non-traditional (Table 1.A.).

On balance, participants from both family structures had a relatively positive adult self-concept; traditional upbringing or mean = 35.4, non-traditional =36.7, on the index ranging from 11-48. However, there were a few notable differences between the two groups. For instance, 36.2% of adults who grew up in traditional⁹ families were very happy with their current lives, compared to only 30.1% from non-traditional families. Additionally, those from conventional¹⁰ families reported enjoying their lives (68.8%) somewhat more than those from nonconventional families (60.4%)¹¹. In short, respondents from traditional families had a slightly more positive self-concept than those from non-traditional families.

⁹ Conventional and traditional families were used interchangeably.

¹⁰ Non-conventional was used interchangeably with non-traditional families.

¹¹ Percentages were calculated by combing the “most of the time” and “a lot of the time.”

Table 1.A. Descriptive Statistics for Adult Self Concept: Emotional State by Childhood Family Upbringing; New Family Structures Study, 2011- 2012

Variables (Questions)	Values/Response	Statistics ¹	
		Traditional Family (n=1763)	Non-Traditional Family (n=1002)
Q79. How happy are you with your life these days?	3=Somewhat happy 4=Very happy	42.3 36.2	43.0** 30.1
Q76 ² A. Were bothered by things that usually don't bother you.	2=Sometimes 3=Never or rarely	41.5 45.5	43.5* 40.5
B. Could not shake off the blues, even with help	2=Sometimes 3=Never or rarely	28.1 55.9	30.4** 49.5
C. Felt you were just as good as other people.	2=Sometimes 3=A lot of the time 4=Most of the time	25.3 37.8 26.8	30.7*** 30.3 27.8
D. Had trouble keeping your mind on what you were doing.	2=Sometimes 3=Never or rarely	45.8 32.5	44.5* 28.9
E. Felt depressed	2=Sometimes 3=Never or rarely	31.9 51.5	34.4*** 44.2
F. Felt that you were too tired to do things	1=A lot of the time 2=Sometimes 3=Never or rarely	18.5 46.5 25.0	20.6* 45.6 21.4
G. Felt happy	2=Sometimes 3=A lot of the time 4=Most of the time	27.6 38.1 29.9	33.4** 35.7 25.8
H. Enjoyed life	2=Sometimes 3=A lot of the time 4=Most of the time	26.8 36.4 32.4	33.8*** 33.3 27.1
I. Felt sad	2=Sometimes 3=Never or rarely	50.3 34.9	51.1 31.7
J. Felt that difficulties were piling up so high that you couldn't overcome them.	2=Sometimes 3=Never or rarely	35.2 44.1	34.3* 40.6
K. Felt confident in your ability to handle your personal problems.	2=Sometimes 3=A lot of the time 4=Most of the time	32.7 34.8 25.8	35.0 32.2 24.7
Index of Adult Self Concept³	Mean/ \bar{X} (SD) Min-Max	36.7(7.6) 11-48	35.4(7.6)*** 11-48

*** p <=.001; ** p <=.01; * p <=.05

1. In the interest of brevity, responses that accounted for less than 20% of the sample were omitted from the table;

2. Q76=Now, think about the past seven days. How often was each of the following things true about you? Please use scale by selecting an option between "never or rarely" and "most or all of the time" for each statement;

3. The indicators were positively correlated at the .01 level (r= .181 to .855) and so they were combined into Index of Adult Self-Concept= RecodedQ76A + RecodedQ76B + Q76C + RecodedQ76D + RecodedQ76F + QG + Q76H + RecodedQ76I + RecodedQ76J + Q76K + RecodedQ79.

Childhood Family Relations

Childhood family relations were indicated using the participant's relationship with parent one, parent two, and the family. Considering that parent 1 was primarily a female family member (90.4%) and parent 2 was mainly male (87.1%), parent one was treated as a maternal figure and parent two was a paternal figure. As seen in the table in Appendix C, regardless of family structure, participants had a better relationship with their

maternal parent than with their paternal parent. However, respondents raised in traditional families had a better relationship with both parental figures, compared to those raised in non-traditional families. For instance, participants from a traditional structure had a slightly higher quality relationship with their maternal parent ($\bar{x}=36.9$) than those from a non-traditional structure ($\bar{x}=34.4$, range of 9-49). Additionally, those from conventional families had a fairly positive relationship with their paternal figure ($\bar{x}=26.2$) while participants from non-conventional families had a somewhat negative relationship with their parental parent ($\bar{x}=17.1$, on a range of 9-49).

TABLE 1.B Descriptive Statistics for Childhood Family Relations: Family; New Family Structures Study, 2011- 2012

Variables (Questions)	Values/Response	Statistics ¹	
		Traditional (Family Upbringing) (n=1619-1763)	Non-Traditional (Family Upbringing) (n=854-1002)
Q28. ² A. My family relationships were safe, secure, and source of comfort.	4=Agree	43.6	39.6...
	5=Strongly Agree	34.4	18.1
B. Had a loving atmosphere in our family	4=Agree	44.8	40.0***
	5=Strongly Agree	30.4	17.5
C. All things considered, my childhood years were happy.	4=Agree	44.0	41.9***
	5=Strongly Agree	32.8	16.5
D. There are matters from my family experience that I'm still having trouble with or coming to terms with	1=Agree	23.4	33.1***
	3=Disagree	26.2	22.9
	4=Strongly Disagree	24.6	11.2
E. There are matters from my family experience that negatively affect my ability to form close relationships.	1=Agree	20.9	28.1***
	3=Disagree	26.1	22.0
	4=Strongly Disagree	29.7	16.4
G. My family relationships were confusing, inconsistent, & unpredictable	1=Agree	15.5	22.3***
	3=Disagree	27.7	24.9
	4=Strongly Disagree	40.3	22.8
H. I don't feel like I can depend on my family.	3=Disagree	22.3	22.6***
	4=Strongly Disagree	52.4	34.2
	Disagree		
Index of Childhood Family ³	Mean/ \bar{X} (SD)	22.9(4.8)	20.16(5.5)***
	Min-Max	4-32	4-32

*** p <=.001; ** p <=.01; * p <=.05

1. For brevity, responses that accounted for less than 20% of the sample were omitted from the table;
2. Q28. How much do you agree with the following statements about your family, based on your years growing up? Please use the scale below to answer the questions;
3. The indicators were positively correlated at .01 level (r = .413 to .849); so they were combined into Index of Childhood Family = Q28_A+ Q28_B+ Q28_C+Recoded_Q28_D+Recoded_Q28_E+Recoded_Q28_G+ Recoded_Q28_H.

Although both groups had a relatively positive relationship with their family growing up ($\bar{x}=22.9$ and $\bar{x}=20.1$ respectively, on a range of 4-32), as seen in Table 1.B, almost half

of non-traditional (49.1%, 42.5%)¹² and over a quarter of traditional (32.8%, 27.9%)⁴ reported that childhood family problems still affected them as adults or at least have negatively affected their ability to form close relationships. That is, negative family experiences were more likely to affect those raised in non-conventional families later in life than those raised in conventional families. In sum, those from traditional families had a healthier relationship with their family than those coming from non-traditional families.

Since the quality of childhood family relations was based on memory from two or more decades before the survey, participants were more likely to accurately depict the quality of their relationship with their family as a whole than to correctly remember details about their separate relationships with their maternal or paternal figures. Therefore, for the purpose of accuracy, only the index of family relationships was used to represent childhood family relations in the multivariate analyses.

Current Child-Parent Relationships

The third predictor of adult self-concept, current child-parent relationships, had two dimensions: maternal (parent 1) and paternal (parent 2). Since this independent concept measures the quality of current child-parent relationships, missing values (indicative of not having a living parent) were included to represent no relationship. If they do not have a parent, it can be assumed that they do not have a relationship with that parent (Table 1.C).

On balance, participants from traditional and non-traditional families reported having a negative relationship with their maternal figure, mean= 17.1 and 15.2, range of 7-35. However, both groups reported having a worse relationship with their paternal figure compared to their relationship with their maternal parent. In particular, those from non-conventional families claimed to have a lower quality relationship with their paternal parent (\bar{x} =9.9, range of 7-35) than those from conventional families (\bar{x} =14.0, range 7-35). Overall, those from traditional families had slightly less negative relationships with their parents as adults (\bar{x} =31.1), as compared to those from non-traditional families (\bar{x} =25.1, range of 14-70).

¹² Percentage was calculated by combing the percentages of “agree” and “strongly agreed.”

**TABLE 1.C. Descriptive Statistics for Current Child-Parent Relationships;
New Family Structures Study, 2011- 2012**

Variables (Questions)	Values/Responses	Statistics ¹			
		Traditional (Family Upbringing) (n=1763)		Non-Traditional (Family Upbringing) (n= 1002)	
		Parent 1 (Maternal)	Parent 2 (Paternal)	Parent 1 (Maternal)	Parent 2 (Paternal)
Q27. ² A. Openly talk to parent about things that are important to you.	3=Sometimes 4=Most of the time 5=Always		31.2		21.9 ^{***}
B. Frequency that your parent really listens to you when you want to talk.	4=Most of the time 5=Always	34.1 32.8	27.6	26.3 ^{***} 31.4	21.1
C. How often does your [parent] explicitly express affection or love for you?	5=Always	27.2	28.9	23.9 ^{***}	18.4 ^{***}
D. Would your [parent] help you if you had a problem?	5=Always	49.6	35.6	41.2	32.4
E. If you needed money, would you ask your [parent] for it?	5=Always	50.9	33.5	43.5 ^{***}	27.7 ^{***}
F. How often is your [parent] interested in the things you do?	5=Always	71.1	59.3	61.0 ^{***}	39.1 ^{***}
G. Does your [parent] show interest in your own children and family?	1=Never 5=Always	34.4	15.5	33.5 ^{***}	34.2 ^{***}
		25.6	28.1	25.0 ^{***}	20.3 ^{***}
		53.4	38.5	42.2	28.3
		72.3	61.7	63.0 ^{***}	46.0 ^{***}
<u>Index of Current Child-Parent Relationships Parent 1³ and Parent 2⁴</u>	Mean/ \bar{X} (SD) Min-Max	17.1(11.6) 7-35	14.0(10.3) 7-35	15.2(10.9) ^{***} 7-35	9.9(7.4) ^{***} 7-35
<u>Index of Adult Child-Parent Relationships⁵</u>	Mean/ \bar{X} (SD) Min-Max		31.1(20.0) 14-70	25.1(15.4) ^{***} 14-70	

*** p <=.001; ** p <=.01; * p <=.05; test of differences between Parent 1 or Parent 2 in traditional versus non-Traditional Families;

- Responses that accounted for less than 20% of the sample were omitted from the table;
- Q27. Using the same 5-point scale spanning from “never” to “always,” please answer the following questions about your current relationship with your [parent];
- The indicators were positively correlated at .01 level (r = .413 to .753), so they were combined into Index of Current Child-Parent Relationships Parent 1 = Q27_Parent1_A + Q27_Parent1_B + Q27_Parent1_C + Q27_Parent1_D + Q27_Parent1_E + Q27_Parent1_F + Q27_Parent1_G;
- The indicators were positively correlated at the .01 level (r = .535 to .828), so they were combined into Index of Current Child-Parent Relationships Parent 2 = Q27_Parent2_A + Q27_Parent2_B + Q27_Parent2_C + Q27_Parent2_D + Q27_Parent2_E + Q27_Parent2_F + Q27_Parent2_G;
- The Parent 1 and Parent 2 indices were positively correlated at the .01 (r = .588) level; so they were combined into Index of Adult Child-Parent Relationships= Index of Current Child-Parent Relationships Parent 1 + Index of Current Child-Parent Relationships Parent 2.

Adult Romantic Relationships

The indicators of Adult Romantic Relationships (presented in Table 1.D.) aimed to capture the quality of respondents' romantic relationships.

Table 1.D. Descriptive Statistics for Adult Romantic Relationships: Quality of Relationships; New Family Structures Study, 2011- 2012

Variables (Questions)	Values/Responses	Statistics ¹	
		Traditional Family Upbringing (n=1314)	Non-Traditional Family Upbringing (n=741)
Q106. Current relationship	1=Several Times	18.8	23.5**
A. How often have you thought your relationship might be in trouble?	2=Once or Twice	44.5	42.1
	3=Never Once	25.9	20.7
B. How often have you and your partner discussed ending your relationship?	2=Once or Twice	30.1	34.9***
	3=Never Once	53.8	41.6
C. How often you broke up or separated and then gotten back together?	2=Once or Twice	16.7	25.9***
	3=Never Once	74.3	61.1
Q107. ² A. We have a good relationship.	3=Agree	34.7	37.8
	4=Strongly Agree	49.1	43.1
B. Healthy relationship with my partner.	3=Agree	35.5	32.7**
	4=Strongly Agree	42.2	37.4
C. Our relationship is strong.	3=Agree	32.0	35.1
	4=Strongly Agree	47.0	42.3
D. My relationship with my partner makes me happy.	3=Agree	33.1	35.6*
	4=Strongly Agree	49.6	44.2
E. I really feel part of a team with my partner.	3=Agree	32.1	33.9
	4=Strongly Agree	45.2	39.2
F. Relationship is pretty much perfect.	3=Agree	32.1	30.2**
	4=Strongly Agree	22.3	19.2
<u>Index of Adult Romantic Relationships</u> ³	Mean/ \bar{x} (SD)	25.0(7.2)	23.7(7.5)***
	Min-Max	0-33	0-33

*** p <=.001; ** p <=.01; * p <=.05

1. Responses that accounted for 20% or less of the sample were omitted from the table;

2. Q107= Please read each statement through carefully and decide how much you agree or disagree with the following statements about your current relationship.

3. The indicators were positively correlated at the .01 level (r= .351 to .888); so they were combined into Index of Adult Romantic Relationships = Recoded_Q106A + Recoded_Q106B + Recoded_Q106C + Recoded_Q107A + Recoded_Q107B + Recoded_Q107C + Recoded_Q107D + Recoded_Q107E + Recoded_Q107F.

While adults in both groups generally reported healthy romantic relationships, those from traditional families claimed to have better quality relationships than those from non-traditional families. Adults from conventional families were more likely to be in a healthy romantic relationship (77.7%)¹³ than those from non-conventional families (70.1%)⁵. In short, participants from both groups reported having strong relationships; however, those who grew up in traditional family structures indicated having somewhat better

¹³ Percentage was calculated by combing the percentages of “agree” and “strongly agreed.”

romantic relationships than those from non-traditional families ($\bar{x}=23.7$, 25.0, range 0-33).

Summary

In general, the survey participants were emotionally healthy (healthy self-concept), reported high quality family relations during their childhoods, and positive romantic relationships in adulthood. But, the quality of their adult relationships with their parents was not as high. Respondents raised in traditional families had a more positive emotional well-being and better quality relationships (both in their childhood and with romantic partners) than those raised in non-traditional families.

Bivariate Associations

In the second analytical step, bivariate correlations offered preliminary glimpses into the association of early (family) and later (family and romantic) relationships with the self-concept of those who had been raised in traditional families compared to those raised in non-traditional (Appendix D). Irrespective of the family structure in which respondents were raised, the more supportive early family relations (traditional $r=.39^{***}$; non-traditional $r=.31^{***}$) and adult romantic relationships (traditional $r=.46^{***}$; non-traditional $r=.44^{***}$) were, the better the emotional well-being of adults. Yet, participants who had satisfying adult romantic relationships were more likely to be emotionally healthier (traditional $r=.46^{***}$; non-traditional $r=.44^{***}$) than if they had strong family relations as children (traditional $r=.39^{***}$; non-traditional $r=.31^{***}$). However, these associations were clearer if they were raised in traditional families than in non-traditional families. On the other hand, the emotional consequences of economic resources were distinctly different depending on early family structure and even relationships. For instance, only adults who grew up in a conventional household with more economic resources (specifically homeownership and household income), had higher quality relationships with both parental figures (homeownership $r=.32^{***}$; income $r=.19^{***}$ respectively).

Furthermore, regardless of family structure, women were more inclined to have better relationships with their parents as adults (traditional: $-.11^{***}$; non-traditional $-.11^{***}$). Men were more likely to have a higher self-concept (traditional $r=.06^{*}$; non-traditional $r=.11^{***}$) and used drugs (traditional $r=.07^{**}$; non-traditional $r=.10^{**}$). Additionally, low engagement in drug use resulted in a healthier emotional well-being (traditional $r=-.21^{***}$; non-traditional $r=-.23^{***}$), better childhood family relations (traditional $r=-.17^{***}$; non-traditional $r=-.10^{***}$), and higher quality adult romantic relationships (traditional $r=-.14^{***}$; non-traditional $r=-.20^{***}$). Participants were also more likely to have more economic resources if they did not use drugs (traditional: income $r=-.20^{***}$; homeownership $r=-.12^{***}$) (non-traditional: income $r=-.30^{***}$; homeownership $r=-.14^{***}$).

In the next analytic stage, the robustness of the relevance of childhood family relations, adult child-parent relationships, adult romantic relationships for adult self-concept will be tested, net of economic resources, drug use, and gender. In keeping with the research

design, separate multivariate regression analyses will be run for those raised in traditional and non-traditional families.

Multivariate Analyses

The linear regression presented in Table 2 estimated the impact of family (in childhood and adulthood) and romantic relationships on adult self-concept, net of economic resources, drug use, and gender. The analyses were disaggregated by conventional and non-conventional early family structures. Professional opinions of interviewees were used to illustrate and elaborate on the quantitative findings.

Three clear patterns about the adult self-concept emerged from the regression evidence presented in Table 2. For one, irrespective of the childhood family structure in which respondents were raised, participants who had quality romantic relationships (Traditional Family Beta= .36***; Non-traditional Beta= .34***) and supportive early family relations (Traditional Family Beta= .29***; Non-traditional Beta= .22***) were more likely, than not, to have a positive self-concept. However, confirming the second hypothesis, which was based on the Chicago School of symbolic interaction, it was adult romantic relationships that were more relevant to a positive or healthy adult self-concept (Conventional Family Beta=.36***; Non-conventional Family Beta=.34***), compared to childhood family relationships. A psychology professor from a local university, who was interviewed for this study, affirmed this finding. He noted, “there is no question that the here and now matters and there’s no question that the earlier experience also matters” (Interviewee #1).

Table 2. Impacts of Childhood Family Relations, Adult Child-Parent Relationships, and Romantic Relationships on Self-Concept among adults raised in traditional or nontraditional families¹: Beta Effects (β)

	Traditional Family Upbringing Beta (β)	Non-Traditional Family Upbringing Beta (β)
Childhood Family Relations	.29***	.22***
Adult Child-Parent Relationships	.04	-.02
Adult Romantic Relationships	.36***	.34***
Income	.14***	.15***
Drug Use	-.07**	-.07
Gender (Male)	.07**	.13***
(Constant)	18.213***	22.004***
Adjusted R ²	.36***	.31***
DF 1 & 2	6 & 1161	6 & 634

*** p <=.001; ** p <=.01; * p <=.05

¹ Index of Adult Self-Concept = Emotional State (11-48) (Positive = 48);

Index of Childhood Family Relations = Index of Childhood Family Relations (4-32) (High Quality = 32);

Index of Adult Child-Parent Relationships = Index of Current Child-Parent Relationships with Parent 1 + Index of Current Child-Parent Relationships with Parent 2 (14-70) (High Quality = 70);

Index of Adult Romantic Relationships = Quality of Adult Romantic Relationships (0-33) (High Quality = 33);

Household Income ranged from 1 (less than \$5,000) to 13 (more than \$200,000);

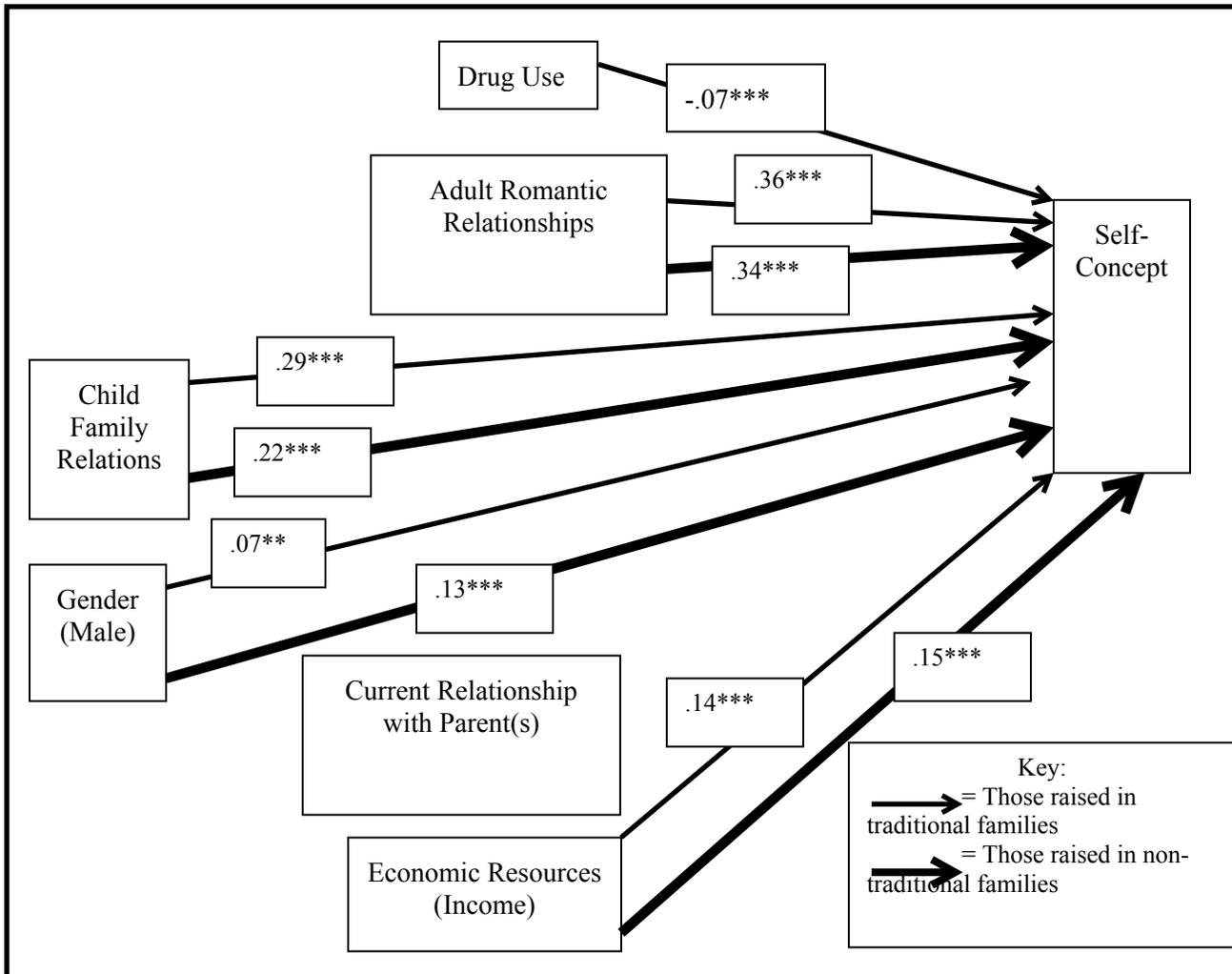
Index of Drug Use = Marijuana + Other Illegal Drugs + Cigarettes (3-18);

Gender: Male=1, Female=0.

Moreover, as predicted by the third hypothesis based on boundary limiting conditions, family relationships had a stronger impact on the adult self-concept of those who grew up in traditional families (Beta=.29^{***}) than in non-traditional families (Beta=.22^{***}). Providing a possible explanation for this boundary condition, a male psychiatrist (Interviewee #4) stressed the importance for children of having both a paternal and maternal role model. For example, a girl who grew up in a non-traditional family, specifically in a single-father household, could have struggled with identity issues because she most likely lacked a mother figure who could have guided her through important female milestones, such as puberty. Since conventional families include both a mother and father, children living in these situations are more likely to have a positive role model that can help them get through gender specific situations and turning points.

These regression results were diagrammed in Figure 1 below.

Figure 1. Net (of economic resources, drug use, and gender) Impacts of Childhood Family, Current Child-Parent, and Adult Romantic Relationships 2014 New Family Structures Survey (Beta Effects)¹



¹ See Table 2 for variable coding and index construction.

Apart from the parent and romantic relationships, economic resources, sex, and drug use of the respondent were also important for adult self-concept. Those with more household economic resources, specifically income, had a more net positive self-concept in both groups (Traditional Family Beta= .14***; Non-traditional Beta=.15***). Additionally, male respondents were more likely to have a positive self-concept than females were, particularly if the men had grown up in a non-traditional family setting (Beta=.13***) than in traditional families (Beta=.07***).

CONCLUDING REMARKS

Empirical Implications

Through survey analyses and qualitative interviews, this study revealed several interesting findings about relationships and self-concept. For one, irrespective of whether one was raised in a traditional or non-traditional family, both romantic relationships and early child relations shaped self-concept as an adult. But, secondly, romantic relationships proved to hold more weight for adult self-concept than early child relations. That is, those with quality romantic relationships were more likely to be emotionally healthy than those with quality early childhood relationships. However, more interesting, early family relations and romantic relationships were more influential on the self-concept of those raised in traditional families, compared to participants raised in non-traditional families. Additionally, regardless of family structure, higher household income or males reported better emotional well-being than lower income households and females, respectively. In contrast, for those raised in conventional families and who used drugs had a weaker self-concept.

Theoretical Implications

At a theoretical level, this finding supported the Chicago School of symbolic interactionism. Adult self-concept was shaped more by romantic connections made later in life than familial bonds in early childhood. Stated differently, adults who maintain high quality romantic relationships were more likely to be positive in their self-concept than adults who had high quality childhood family relations.

But, the findings also offered the opportunity to specify some of the boundary conditions, or limits, for the effects of early family and romantic relationships. While positive childhood family and romantic relations were relevant for healthy adult self-concept, regardless of family structure, the effects were slightly stronger if they were raised in traditional families than in non-traditional family settings. It is worth noting that several interviewees opined that the quality of family relationships was more important than the type of family structure. For instance, a marriage and family therapist commented that the type of “family is less relevant than the consistency and love the

parent(s) provide” (interviewee #8). Perhaps, these professional opinions might explain why the family structure differences were not stronger than they were. In the final analyses, by separating the quality of relationships during childhood from those formed in one’s adulthood, layered across childhood family structures, a richer model of relational impacts on the adult self-concept was developed.

Future Directions

Like most social science research, this study was not without limitations. As evidenced by the adjusted R^2 of .36 for respondents raised in traditional families and .31 for those who grew up in non-traditional families, less than 40 percent of the variability in adult self-concept was explained by early childhood relations, current child-parent relationships, and adult romantic relationships. For one, this research examined just two of the many different types of relationships people develop and cultivate throughout their lifetime. As noted by the psychiatrist, every relationship or interaction can have an impact on one’s emotional well-being or self-concept (Interviewee #4). Therefore, future research should consider additional relationships, such as friendships and work relationships that could add to the shaping of an adult’s self-concept. Further, while this research looked at adult and childhood relationships separately, six of the eight interviewees noted the cumulative effects of childhood experiences on all future relationships (Interviewees #1 and #3 to #7). Thus, longitudinal analysis of how adult relationships mediate the impacts of early childhood experiences as an adult molds his or her self-concept is warranted.

APPENDICES

Appendix A Table: Control Variables

Concepts	Dimensions	Variables (Questions)	Values/Responses	Statistics	
				Traditional Family Upbringing (n=1726)	Non-Traditional Family Upbringing (n=987)
Economic Resources	Household Income ¹	Q43. ²	1=Less than \$5,000	5.4%	11.9% ^{***}
			7=\$30,000 to \$39,999	10.4	9.2
			8=\$40,000 to \$49,999	11.2	8.2
			9=\$50,000 to \$74,999	18.5	14.6
			10=\$75,000 to \$99,999	10.8	8.7
	Homeownership	Q38. Is your house, apartment, or residence owned or being bought by you?	0=No 1=Yes	51.2% 48.8	61.1% ^{***} 38.9
Drug Use ³	Marijuana	Q82. Answer these questions using the answer scale below. E. Use marijuana?	1=Never	83.8%	74.9% ^{***}
			2=Once a month or less	6.6	8.1
		6=Every day or almost every day	2.9	7.4	
	Other Illegal Drugs	F. Use other illegal drugs (e.g., cocaine, heroin, crystal meth, mushrooms, etc.)?	1=Never	95.5%	92.9% ^{**}
	Cigarettes	G. Smoke cigarettes?	1=Never	75.4	63.6 ^{***}
			2=Once a month or less	5.0	5.7
			6=Every day or almost every day	12.9	21.3
		Index of Drug Use ⁴	Mean (SD) Min-Max	4.4(2.6) 3-18	5.3(3.3) ^{***} 3-18
Gender			0=Female	66.5%	70.1 ^{***}
			1=Male	33.5	29.8

*** p <=.001; ** p <=.01; * p <=.05

1. Q43. Thinking about your income and the income of everyone who lives in your household and contributes to the household budget, what was your total household income before taxes and deductions last year (that is, in 2010)? Include all sources of income, including child support payments, and untaxed sources, if applicable. Don't count roommates or anyone who does not contribute to your household income.
2. Responses that accounted for less than 10% of sample were not presented in Economic Resources;
3. Responses that accounted for less than 5% of the sample were not presented in Drug Use;
4. The indicators are significantly correlated at the .01 level (r^1 and $r^2=.429$; r^1 and $r^3=.214$; r^2 and $r^3=.321$), so they were combined into Index of Drug Use = Q82_E+Q82_F+Q82_G.

Appendix B
Letter of Consent and Interview Protocol

Letter of Consent

Dear _____:

I am a Sociology Senior working on my Research Capstone Paper under the direction of Professor Marilyn Fernandez in the Department of Sociology at Santa Clara University.

You were selected for this interview, because of your knowledge of and experience working in the area of family and romantic relationships.

I am requesting your participation, which will involve responding to questions about family and romantic relationships and their consequences (positive and negative) for an adult's self concept and will last about 20 minutes. Your participation in this study is voluntary. You have the right to choose to not participate or to withdraw from the interview at any time. The results of the research study may be presented at SCU's Annual Anthropology/Sociology Undergraduate Research Conference and published (in a Sociology department publication). Pseudonyms will be used in lieu of your name and the name of your organization in the written paper. You will also not be asked (nor recorded) questions about your specific characteristics, such as age, race, sex, religion.

If you have any questions concerning the research study, please call/email me at ____ or Dr. Fernandez at ____

Sincerely,

Danae Dickson

By signing below you are giving consent to participate in the above study.

Signature

Printed Name

Date

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, through Office of Research Compliance and Integrity at (408) 554-5591.

Interview Protocol

Interview Date and Time: _____

Respondent ID#: __ (1-8)

17. What is the TYPE Agency/Organization/Association/Institution where you learned about (and/or worked) with this issue: _____

18. What is your position in this organization? _____

19. How long have you been in this position and in this organization?

20. _____
Based on your expertise in family and romantic relationships, how do these relationships affect adult self-concept and/or emotional well-being?

21. In your opinion, which of the two have more of an effect (or are more relevant) on the adult self-concept, or emotional well-being? Early or later relationships?
 - a. Could you expand a bit more?
22. [If the respondent does not bring up your independent concepts as potential causes), PROBE:
 - a. How about early childhood family relationships?
 - b. How about adult romantic relationships?
 - c. How about current parent relationships?
23. Do you think the type of family structure a child grows up in affects his or her self-concept or emotional well-being?
24. Do you believe children's relationships with their mom or dad impact them differently? Does the gender of the parent matter?
25. Is there anything else about this issue/topic I should know more about?

Thank you very much for your time. If you wish to see a copy of my final paper, I would be glad to share it with you at the end of the winter quarter. If you have any further questions or comments for me, I can be contacted at _____. Or if you wish to speak to my faculty advisor, Dr. Marilyn Fernandez, she can be reached at _____.

Appendix C. Table

Descriptive Statistics for Childhood Family Relations: Parent 1 and 2;
New Family Structures Study, 2011- 2012

Variables (Questions)	Values/Response	Statistics ¹			
		Parent 1 (Maternal)		Parent 2 (Paternal)	
		Non-Traditional (n=854-1002)	Traditional (n=1619-1763)	Non-Traditional (n=854-1002)	Traditional (n=1619-1763)
Q26. ² My parent:	3=Sometimes			29.0	30.3***
A. Knew who my friends were.	4=Frequently	36.7	39.4	26.1	31.1
	5=Always	40.5	46.6		
B. Knew what I was doing after school.	3=Sometimes			23.5***	30.6***
	4= Frequently	34.1	39.4	28.9	27.8
	5=Always	34.2	42.0		
C. Knew how I spent my money.	3=Sometimes	25.1	22.4	23.6	31.4***
	4= Frequently	30.5	39.8		
	5=Always	27.2	28.8		
D. Talked with (parent) about my school work.	4= Frequently	23.5	30.4	26.4	31.5***
	5=Always	31.0	34.3	17.4	23.0
E. Asked me about my day at school.	3=Sometimes			24.6	29.4***
	4= Frequently	22.4	27.9	18.7	21.2
	5=Always	35.6	43.8		
F. Kept secrets from (parent) about what I did	2=Sometimes	36.9	36.9	29.9	38.2***
	3=Rarely	23.7	30.7	19.1	24.6
G. When I got home, I told me (parent) what I did with friends.	2=Rarely	20.0	14.6	22.9	11.5***
	3=Sometimes	33.1	35.1	23.8	24.9
	4= Frequently	25.9	32.3	28.8	36.1
H. talked with the parents of my friends.	1=Never			34.7	21.1***
	2=Rarely	22.5	20.8	24.3	30.1
	3=Sometimes	29.5	33.7	21.4	27.8
I. Talked with my friends when they came over	3=Sometimes	22.9	21.3	25.2	33.1***
	4= Frequently	26.5	30.0	20.9	23.7
	5=Always	35.4	38.8		
J. was warm and responsive; relationship was comfortable.	3=Sometimes	20.6	19.2	24.8	26.5***
	4= Frequently	25.2	28.3	21.2	28.1
	5=Always	35.3	42.1	23.4	27.0
<u>Index of Childhood Parent 1³ and Parent 2⁴</u>	Mean/ \bar{X} (SD) Min-Max	34.4(8.9) 9-49	36.9(7.5)*** 9-49	17.1(11.6) 9-49	26.2(11.9)*** 9-49

*** p <=.001; ** p <=.01; * p <=.05; test of differences between Parent 1 (or Parent 2) in traditional versus non-Traditional Families

1. Responses that accounted for less than 25% of the sample were omitted from the table;

2. Q26. Decide how often these things occurred in your home while growing up. Select the response that represents how often this happened in your home, using the scale spanning from "never" to "always".

3. The indicators are significantly correlated at the .01 ($r = .166 - .737$), so they were combined into Index of Childhood Family Relations Parent 1 = Q26_Parent1_A + Q26_Parent1_B + Q26_Parent1_C + Q26_Parent1_D + Q26_Parent1_E + Recoded_Q26_Parent1_F + Q26_Parent1_H + Q26_Parent1_I + Q26_Parent1_J

4. The indicators are significantly correlated at the .01 level ($r = .045 - .794$), so they were combined into Index of Childhood Family Relations Parent 2 = Q26_Parent2_A + Q26_Parent2_B + Q26_Parent2_C + Q26_Parent2_D + Q26_Parent2_E + Recoded_Q26_Parent2_F + Q26_Parent2_H + Q26_Parent2_I + Q26_Parent2_J

Appendix D

Correlation Matrix of Indices of Adult Self Concept, Child Family Relations, Current Child Parent Relationships, Adult Romantic Relationships, Economic Resources, Drug Use, and Gender:
New Family Structures Study, 2011- 2012

(Traditional below the 1 diagonal; Non-traditional above the 1 diagonal)

	Adult Self-Concept	Childhood Family	Current Child-Parent	Romantic Relationships	Income	Home-ownership	Drug Use	Gender
Adult Self-Concept	1.0	.31***	.03	.44***	.29***	.07*	-.23***	.11***
Childhood Family	.39***	1.0	.12***	.21***	.18***	.01	-.1***	.06
Current Child-Parent	.15***	.16***	1.0	.02	.04	.05	.05	-.11***
Romantic Relationships	.46***	.22***	.05	1.0	.16***	.08*	-.19***	.06
Household Income	.29***	.21***	.19***	.19***	1.0	.35***	-.3***	.12***
Home-ownership	.13***	.05*	.36***	.09**	.36***	1.0	-.14***	.09**
Drug Use	-.21***	-.17***	-.05	-.14***	-.20***	-.12***	1.0	.1**
Gender	.06*	.01	-.11***	.04	.06*	-.01	.07**	1.0

*** p <=.001; ** p <=.01; * p <=.05

¹ Index of Adult Self-Concept = Emotional State (11-48) (Positive = 48)

Index of Childhood Family Relations = Index of Childhood Family Relations (4-32) (High Quality = 32)

Index of Adult Child-Parent Relationships = Index of Current Child-Parent Relationships with Parent 1 + Index of Current Child-Parent Relationships with Parent 2 (14-70) (High Quality = 70)

Index of Adult Romantic Relationships = Quality of Adult Romantic Relationships (0-33) (High Quality = 33)

Household Income ranged from 1 (less than \$5,000) to 13 (more than \$200,000)

Index of Drug Use = Marijuana + Other Illegal Drugs + Cigarettes (3-18)

Gender: Male=1; Female=0

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Health Implications of Violent Crime Victimization and Resources

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(Honorable Mention in the 2015 Sociology Krassowski Award for Student Research)

Abstract: This study explored the health consequences of violent crime. Experiences from a subset of 1059 violence victims who responded to the 2010 National Crime Victimization Survey were examined to consider factors that may affect poorer health outcomes for some victims. Supported by Agnew's Strain Theory, regression analysis found that victims who required medical attention, had weapons used in the attacks, and had close relationship with the attacker experienced more mental and physical health problems. Findings about these "strains" contributed to the body of literature on the victimology of violent crimes. Ten professionals, who were interviewed for this study, emphasized that mental health problems persisted longer than the initial physical injuries from which the bodies can heal.

INTRODUCTION

This study examined the health of victims of violent crime to find factors that might contribute to continued problems for survivors after a violent experience. A better understanding of how to assess mental and physical health after effects of victimization can offer insight into the resources and treatment options needed by those individuals. Examining how, where and what kind of injuries were treated might inform health professionals when it is best to introduce options for further follow up services. Another contributing factor to poorer health of some crime victims may be limited household socioeconomic resources. Fewer resources may inhibit treatment options and lead to degradation of mental and physical health, if not medically addressed. Some victims find themselves in continued danger when their attackers are intimate partners or family members; relationships between the victim and offender may further interfere with the survivor's ability to recover from the attack.

We should be concerned about the health of victims of violent crime because current knowledge about victims suggests that offenders have often been victims themselves. Untreated mental instability resulting from victimization may pose a threat to other

¹⁴ I would like to acknowledge and thank Dr. Marilyn Fernandez for her guidance, encouragement, and unwavering support throughout my research process. Also, Dr. Sheila Yuter for her suggestions and help connecting me with some of the health professionals interviewed. Finally, I appreciate the interviewees who gave important qualitative contributions by offering their valuable time and insights.

members of the community. In order to prevent future victimizations, it is important to treat victims of crime before they might become offenders.

Of course, the majority of victims do not go on to become offenders, but medical treatment is just as important for them. Health problems lead to a diminished quality of life that may be ameliorated with appropriate services. Besides, mental health issues of victims appear to receive more attention, even though there are often lasting physical disabilities that result from a violent encounter. In order for healthcare providers to mold treatment plans to address the full scope of health effects, physical and mental health consequences need to be disaggregated.

DEFINING TERMS AND CONCEPTS

Because many of the terms and concepts used in this study can be interpreted broadly, a clear set of concept definitions are critical at the outset. The specific measurements used in this research were guided by the questions asked in the 2010 National Crime Victimization Survey (NCVS), the secondary survey data set used.

Health of Victims of Violent Crimes: Physical and Mental

For the purposes of this study, health was categorized into two subsections: mental health and physical health. The two are certainly related, but it is important to make distinctions between them. For one, symptoms that present themselves mentally or physically are treated by different specialists. Second, examining the effects of violent crime victimization and resource availability on specific types of health problems will help decipher the appropriate treatment plans and health services needed and that should be available to future victims.

Mental health problems of crime victims were measured by responses to questions regarding potential relationship problems with coworkers, peers, and family as a result of being a crime victim. Other mental health questions addressed distress emotions as a result of the crime incident like anger, worry, anxiety, sadness, and distrust. Physical health problems were indicated by experiences of physical ailments like headaches, body aches, upset stomach, and other pain; physical problems described here refer more to somatic responses than physical injuries during the attack. NCVS Respondents were asked to respond only if those effects lasted a month or more following victimization.

Violent Victimization

A primary focus of this study was the severity of victimization and assessing whether more violent attacks led to health detriment following the traumatic event. Violent crime

victimization was measured by three factors associated with the incident. They were: if the victim was actually hit or attacked during the crime; if the offender used a weapon; and if medical attention was needed for immediate injuries.

The nature of the physical assault was further detailed by questions about how the victim was hit or attacked, if it was a sexual assault, if the crime involved weapons, or if the perpetrator strictly utilized their own hands or body to inflict injury. Use of weapons also indicated a more violent attack. A victim might have more extensive health problems if a weapon was used to inflict harm; respondents indicated whether the offender had used a gun, knife, or other blunt or sharp object to injure or further threaten the victim during the crime. On balance, these crime characteristics were used to measure the severity of the crime perpetrated against the victim because violent crime victims will presumably experience more health problems than victims of less severe crimes.

Depending on the severity of their injuries, a victim may need to seek medical attention. Treatment of immediate physical injuries is essential for victims who have survived a violent attack in which they sustained more serious injuries. Respondents to the survey indicated whether they had to receive any medical care and the location of any medical attention, even if it was self-care delivered privately at home or a family member or friend's house. Medical attention in this research also indicated severity of crime; the more severe or sustained the injuries, the more likely that they required care, and negatively affected health outcomes.

Resources

A victim's ability to mitigate the after-effects of a violent attack may be contingent on the resources available to them. Therefore, the relationships between household socioeconomic resources and mental and physical health were examined to learn more about differences in health outcomes for people of various social standing. Questions regarding per capita household income¹⁵ and educational attainment were used to measure socioeconomic resources. There are substantial costs to accessing healthcare and those with fewer resources may not have the same opportunities for treatment. The financial burden of expenses associated with treatment may further exacerbate health problems for people from lower socioeconomic backgrounds.

Relationship to Offender

A fourth concept in this analysis was the victim's relationship to the offender. While random attacks can be very traumatic, they are less common. The way a victim perceives a violent incident can be further complicated by their relationship to their attacker(s) as well as by the circumstances and events leading up to the attack. This

¹⁵ Total household income was divided by number of household members older than age twelve to have a more accurate picture of per capita or personal income that may be available to the victim.

study characterized the victim's relationship to the attacker as primary or secondary. Following long-standing sociological tradition (Cooley 1909), intimate partners, friends, and family were considered primary relationships. Secondary relationships are those with coworkers, neighbors, employees, clients, et cetera.

LITERATURE REVIEW

A review of existing academic literature about crime victims gave an idea about what is already known about violent victimization and associated health problems. The major themes explored in the crime victimization literature pertained to mental and physical health, healthcare access, medical attention needed and received, and differences that have been documented in juveniles, by gender, victim-offender relationships and socioeconomic resources.

Gender-Specific Studies of Crime Victims

Much of the literature on violent victimization has focused on intimate partner violence because of its prevalence in society. It is considered one of the most common types of violence and comes with its own unique patterns; so researchers have specifically focused on domestic or intimate partner violence. Since women are more likely to be victims in these types of violence, many studies on health effects choose to narrow their subjects to females. There are however few studies that acknowledged this hyper-focus on women and examined men more closely.

A study of mental and physical health of 7,700 female violent crime victims (Demaris & Kaukinen 2005) from a nationwide survey examined some of the same factors the current study focused on, including the severity of the crime and the victim-offender relationship. They concluded that the most important determinant for poorer health outcomes was the severity of the physical assault. When there was an elevated level of violence during the attack, victims reported poorer health. The relationship between the victim and offender was also important and when the offenders were people known to victims, depressive symptomology was present. Victims had previously assumed known individuals to be safe and suffered mental health consequences when those notions were shattered. Limiting the sample to women allowed for a better understanding of the gendered repercussions of intimate partner violence.

Prisoners, particularly female prisoners, have been the focus of other researchers. One study of female prisoners indicated that "female offenders with victimization histories reported experiencing more stress than female offenders without victimization histories" (Anumba, Dematteo & Heilbrun 2012:1213). The authors explored histories of victimization of three hundred female offenders in New Jersey and found that those who had histories of sexual victimization exhibited more signs of mental health challenges. Additionally, social resources like education and noncriminal friends served as a buffer

to mental distress. Using strictly females, and offenders, definitely limited the scope of the findings. However, females are more likely than males to be sexually assaulted; and sexual violence may result in more severe mental health effects than other types of physical violence.

Studies of male victims and/or offenders are important; otherwise health symptomology that are specific to men may be overlooked. Tewksbury's (2007) study on effects of sexual assault on men found that attacks on men are likely to be more violent than women and thus, result in more physical injuries. Sexual victimization was associated with psychological disturbances later in their lives. Tewksbury found that men who were sexually assaulted experienced mental and physical effects, and more specifically some struggled with identity and future sexuality-related emotional distress.

Youth Crime Victims

In a search to identify when the violent crime cycle might start in the life of an individual, childhood exposure to violence has been linked to future risk of victimization. Adolescents who were studied in a nationwide longitudinal survey (Amstadter, Elwood, Begle, Gudmundsdottir, Smith, Resnick, Hanson, Saunders, Kilpatrick 2011) were examined in two waves to determine previous victimization in the first wave and the likelihood that those who were victimized when they were younger would also later report future violent experiences in the second wave that was conducted in adolescence at the average age of 14. Children that exhibited signs of Post-Traumatic Stress Disorder following an earlier victimization were most likely to be revictimized before the the second wave. Not only do they discuss the links to poorer mental health in children that have experienced violence, but they concluded that the degraded mental health was a risk factor for future violence as well.

Juvenile delinquency has also been linked to violent victimization in childhood. Many studies of youth have tried to identify causes of juvenile delinquency and later involvement with the criminal justice system. For example, Hay and Evans (2007) used a strain theory model and data from the National Survey of Children to confirm that victimization was a source of strain that increased delinquency. They also found that effects of victimization were greater for children who had weak emotional attachment to parents and personality qualities that suggested low self-control.

Singular Focus on Mental Health

As already noted, there has been much focus on mental health problems in victimology research. Some have examined the psychological trauma resulting from crime victimization. An article by Jennings, Gover, and Piquero (2011) focused on integrating mental health systems available to crime victims into the criminal justice system. Their goal was to provide information about the mental health detriments of victimization in a way that could help victims find the courage to speak up about their abuse to judicial

authorities. Because reliving painful scenarios can be a trigger for adverse mental effects, victims can sometimes feel re-victimized in a sense, when required to be witnesses in criminal proceedings. The suggested remedy was to integrate mental health support services for victims involved to make the criminal prosecution process more bearable.

Healthcare Costs Associated with Crime Victimization

Socioeconomic resources are posited to affect health of crime victims; healthcare costs could prevent individuals with lower incomes from receiving medical treatment for health related ailments resulting from victimization. Work on health disparities in the United States suggested that both being poor and a race/ethnic minority were related to health disparities; it was institutional bias that contributed to poorer healthcare for some ethnicities (Barr 2008).

Healthcare costs of victimization are not limited to the U.S. In a study of women in Denmark, costs of health care were higher if they were victims of violence (Kruse, Sorensen, Bronnum-Hansen, Helweg-Larsen 2011). If treatment costs rise with the severity of the violence of the victimization, presumably some individuals with the least socioeconomic resources will not be able to afford the additional costs, leaving their health problems to persist untreated.

Another angle on the resource-victimization challenge was offered by research that concluded that violent crime victims have lower incomes (Kunst, Bogaerts, Wilthagen, Finkle 2010). Some financial difficulties faced by crime victims arose from disruptions in employment following victimization. After the traumatic event, the victim either took time off, had to reduce hours, or otherwise struggled to perform up to previous function in their workplace, which resulted in income reductions.

Victim-Offender Overlap

A commonly explored aspect of victimization has been the likelihood that a victim has been an offender at some point also. Violent offenders exposed themselves to riskier situations and were more likely to become victims themselves than the average, non-violent individual (Skubak Tillyer & Wright 2014). In trying to understand why offenders commit violent acts and sometimes repeatedly, violence is conceptualized as a cycle; the focus is on the offenders' previous negative violent experiences. Offenders often have a history of violent victimization themselves and end up repeating the violent pattern.

Gang members, a subgroup of offenders, are exposed to elevated levels of violence. They often experience victimization and also perpetrate violence themselves. In the context of gangs, "violence begets violence" (Pyrooz, Moule, Decker 2014: 336) and attacks are generally not isolated incidents, nor static. Ongoing conflicts are connected

to each other and dynamics between groups are constantly changing. Therefore, gang members experience both forms of violence, offending and victimization.

Summary

It is not surprising that there is plenty of research about mental health of crime victims in the U.S. But, most studies reviewed above used samples that did not adequately represent the general American adult population. The samples tended to represent singularly particular groups (such as women, men, youth, prisoners, or violent offenders) that experienced violence in their own ways. While these studies are no doubt important, they limit the universality or generalizability of their findings. Besides, different forms of violence may have different health consequences. For example, victims may respond differently to gang violence, or sexual assault, domestic violence, war, or other forms of violence. Also, it appears as though some physical effects are overlooked, making them seem less important. The research presented in this paper aimed to fill some of these gaps by examining a wide range of violent crimes experienced by a representative sample of the entire U.S. population over age twelve.

This study intentionally distinguished two separate categories of health, physical and mental health, so that more can be learnt about the long lasting symptoms that victims experience. It is clear that literature reviewed either ignored, or even minimized, the fact that some victims of violent crime experience serious physical health effects, including somatic ones or are permanently disabled from their injuries.

RESEARCH QUESTION

The following set of questions was explored: What are the health implications of violent crime for victims? How did contributing factors differ for mental and physical after-effects? More specifically, how did the special circumstances during the crime, that elevated the level of violence, make a difference for the health problems of crime victims? Further, to what extent did the victim's relationship to the offender and limited socioeconomic resources exacerbate health problems following victimization? Age and race of victim will be controlled for in the multivariate analysis.

THEORIES AND ASSOCIATED HYPOTHESES

Much of the theoretical ideas supporting the hypothesized outcomes identified a variety of strains that contributed to negative outcomes in the aftermath of victimization. As per Robert Agnew's adaptation of Strain Theory (2012), certain conditions can place additional strain on an individual and lead to cumulative disadvantages. General strain theory purported that different types of "strains", including victimization or other stressful experiences, play a central role in negative emotional and behavioral challenges.

“Painful events and conditions generate negative emotions and sometimes prompt criminal coping...” (Agnew 2012: 35). While Agnew’s theory focused on explanations for criminal behavior, it also speaks to the negative physical and emotional consequences of victimization, the primary focus of this study. Within this framework, it is appropriate to explore the consequences of different types of strains on the emotional and physical challenges associated with violent victimization. Three different categories of strain considered in this study were: crime severity, relationship to the offender, and socioeconomic resources. As per the general strain theory, these strains can aggravate the feelings of anger, resentment, and physical problems that victims experience as they cope with trauma from the crime.

This theoretical argument was the basis for **Hypothesis #1**: Victims of more violent crime will suffer higher rates of mental and physical distress as a result of the incident than those who did not experience as severe a degree of violence during the crime, after controlling for socioeconomic resources, relationship to offender, age, and race. Specifically, severity of violence was measured by the use of physical attack, use of weapon, and medical attention. An attack that used more physical force or involved weapons typically causes more physical injury to the victim. Those with the most serious injuries will need to seek medical attention. If the victim was injured to the extent that they required medical care at the time of the incident, it was predicted that they will also report more mental and physical health effects in the future. In sum, this hypothesis was derived from Agnew’s adaptation of strain theory.

In addition to the severity of the crime, other personal circumstances and details of the crime can serve as additional “strains” that can further aggravate the health consequences for the survivor. A police officer (Interviewee #2) who specializes in domestic violence, pointed to a special personal circumstance when he noted that the most important factor in health of crime victims is their relationship to the attacker. Not only do they suffer mental anguish trying to reconcile being hurt by someone they love, but they can be particularly at risk for future attacks because violent offenders rarely have an isolated incident; it is understood that most offenders follow a pattern of abusive behaviors that leads to violence. Therefore, a second hypothesis, **Hypothesis #2**, was posed: the proximity of the relationship between a victim of violence and their attacker was predicted to negatively impact the victim’s health, net of crime severity, socioeconomic resources, race, and age of victim. Primary relationships, where the attacker is a friend, family member, or spouse were expected to put additional strains on the health of the survivor.

A third possible strain in health outcomes of crime victims considered were socioeconomic resources. Financial difficulties can be an additional barrier preventing a victim from seeking medical attention, leaving their symptoms untreated. Scholars have widely recognized that having access to socioeconomic resources, say education and income, afford individuals not only more economic capital but social capital as well. In the context of crime victimization, these resources can either hinder or facilitate access to much needed assistance. To borrow from Coleman’s (1988) conceptualization, social capital, allow individuals the ability to influence conditions that make it easier or more

difficult to take action that can either benefit them or work to their detriment. Following this line of reasoning, **Hypothesis #3** read as follows: Crime victims with fewer household socioeconomic resources will have poorer mental and physical health than those with higher socioeconomic standing, after controlling for crime severity, victim-offender relationship, age and race. All things considered, more socioeconomic resources will lead to better health outcomes.

METHODS

Mixed methods, analyses of survey data and interviews with professionals who work with victims of violent crimes, were used to test the validity of the hypotheses. First, secondary survey data were analyzed to expose links between health and crime victimization, severity of violence, relationships, and socioeconomic resources. In order to supplement the quantitative results, interviews were conducted with ten professionals who work with victims of violent crime. These professionals' opinions were valuable; real life experiences of crime victims they observed bolstered the validity and relevance of the survey findings.

Secondary Survey Data Set

I used the 2010 National Crime Victimization Survey (NCVS) conducted by the U.S. Census Bureau on behalf of the United States Department of Justice, Office of Justice Programs, Bureau of Justice Statistics. A sample of 50,000 housing units were surveyed to identify the target population of individuals over the age of twelve living in the United States who were victims of crime in the past year(2010).

However, only a subset of 1059 respondents who answered questions applicable to this particular study were used in this analysis. The subset of victims represented many age ranges, but teenagers were least common (2.8%). Adults in their twenties (20.8%), thirties (22.5%), forties (23%), and fifties (18%) made up about a fifth each of the sample. In terms of race, Whites made up about three quarters (76.9%) of the victims examined (Appendix A). Both age and race were controlled in the multivariate analyses in order to further isolate the unique effects of crime severity, victim-offender relationships, and socioeconomic resources on physical and mental health.

Primary Qualitative Interviews

Professionals who regularly interact with victims of violent crime were sought out for interviews to gather their opinions and to compare their real life experiences with what the national survey data suggested. Ten interviews with professionals who work with victims of violence were completed. Most interviewees were selected by searching the internet for local victim services, resulting in phone conversations that followed the

interview guide. A few were referred as professional contacts of a professor that has worked with many healthcare providers. A consent form and interview guide (Appendix B) were prepared with questions to probe for specific examples from experiences in their work. Interviewees were also asked to differentiate between physical and mental health consequences of violence.

DATA ANALYSES

The secondary survey data from the NCVS was statistically analyzed on three levels. Univariate analysis described the frequency of responses to individual questions examined. Bivariate analysis gave preliminary ideas about connections that were later tested on the multivariate level. Interview comments were used to illustrate the statistical findings and point to needed future research.

Descriptive Analysis

Mental Health Consequences

Mental health of respondents was measured using responses to questions regarding relationships and feelings post the crime victimization (Table 1.A.). Overall, relationships with family, coworkers, and peers were sometimes adversely affected by the trauma of violent victimization and many had negative feelings and emotions like anger, sadness, anxiety, and distrust. Emotional distress that lasted a month or more were more common than changes in their relationships. Specifically, more than a plurality (40%) experienced emotional distress and had negative feelings that included being worried, feeling sad, anxious, depressed, vulnerable, violated, or unsafe. In comparison, a fifth (20%) reported that their relationships with bosses, coworkers, peers, or family changed following victimization; these change included arguing, feelings of distrust, or not feeling as close. A smaller group (16.6%) reported they had problems with school, work, or peers following victimization. The average cumulative index of mental health problems =4.9 on a range of 0-12 indicated low-mid levels.

**Table 1.A. Mental Health consequences of Violent Victimization
National Crime Victimization Survey, 2010 (n=1059)**

Concept	Variables(Questions)	Responses	Statistics	
Mental Health	Stem question: Being a victim of crime affects people in different ways. Next I would like to ask you some questions about how being a crime victim may have affected you. Did being a victim of this crime:	lead you to have significant <i>problems with your job or schoolwork, or trouble with your boss, coworkers, or peers?</i> V4140B1	1=Yes ¹	16.6%
		lead you to have significant <i>problems with family members or friends, including getting into more arguments or fights than you did before, not feeling you could trust them as much, or not feeling as close to them as you did before?</i> V4140B2	1=Yes ¹	19.9%
		V4140B3 How <i>distressing</i> was being a victim of this crime to you? Was it not at all distressing, mildly distressing, moderately distressing, or severely distressing?	0=Not at all 1=Mildly 2=Moderately 3=Severely	18.4% 25.5 25.0 31.1
	Still thinking about your distress associated with being a victim of this crime did you feel any of the following ways FOR A MONTH OR MORE?:	V4140B4 Did you feel <i>worried or anxious?</i>	1=Yes ¹	42.4%
		V4140B5 Did you feel <i>angry?</i>	1=Yes ¹	43.5%
		V4140B6 Did you feel <i>sad or depressed?</i>	1=Yes ¹	31.6%
		V4140B7 Did you feel <i>vulnerable?</i>	1=Yes ¹	37.7%
		V4140B8 Did you feel <i>violated?</i>	1=Yes ¹	37.6%
		V4140B9 Did you feel like you <i>couldn't trust people?</i>	1=Yes ¹	34.6%
		V4140B10 Did you feel <i>unsafe?</i>	1=Yes ¹	38.8%
Index of Mental Health ²		Mean(SD) Min-Max	4.9(2.6) 0-12	

¹ Recoded from original; 0=No

² Index of Mental Health=V4140B1+ V4140B2 + V4140B3+ V4140B4 + V4140B5+ V4140B6+ V4140B7+ V4140B8+ V4140B9+ V4140B10.

Physical Health Consequences

Physical after-effects of violent crime victimization were measured by responses to questions about physical problems that lasted for over a month following the crime. Questions addressed ailments such as headaches, sleep disruptions, stomach pain, fatigue, and high blood pressure (Table 1.B.). About a fifth of respondents experienced physical health effects after being victimized. The most common physical health problem was trouble sleeping (27%). Very few people experienced changes in blood pressure (8%). Overall physical problems tended to present themselves slightly less often than mental ones, but the gap was not wide; about one fifth of crime victims experienced physical effects for more than a month after the attack, while mental effects were reported by over a third of respondents.

**Table 1.B. Physical Health Consequences of Violent Crime
National Crime Victimization Survey, 2010 (n=1059)**

Concept	Variables(Questions)	Responses	Statistics
Physical Health	Did you experience any of the following physical problems associated with being a victim of this crime for A MONTH OR MORE?:	V4140B20 Did you experience headaches?	1=Yes ¹ 17%
		V4140B21 Did you experience trouble sleeping?	1=Yes ¹ 27.3%
		V4140B22 Did you experiences changes in your eating or drinking habits?	1=Yes ¹ 12.7%
		V4140B23 Did you experience upset stomach?	1=Yes ¹ 17.8%
		V4140B24 Did you experience fatigue?	1=Yes ¹ 18.5%
		V4140B25 Did you experience high blood pressure?	1=Yes ¹ 7.8%
		V4140B26 Did you experience muscle tension or back pain?	1=Yes ¹ 17.7%
		V4140B27 Did you experience some other physical problem?	1=Yes ¹ 4.9%
Index of Physical Health ²		Mean(SD) Min-Max	1.2(2.0) 0-8

¹Recoded from original; 0=No;

²Index of Physical Health= V4140B20+ V4140B21+ V4140B22+ V4140B23+ V4140B24+ V4140B25+ V4140B26+ V4140B27.

Violence and Crime Severity

One major component of this research was to assess the consequences of the severity of crime, the first strain, for the health of survivors. Some victims of crimes may not be physically assaulted or harmed and can still experience negative health effects as a result. Those who experienced a more severe level of violence or bodily injury during the crime may also have different health outcomes.

About half the respondents were physically assaulted (47.6%) and reported being hit, knocked down, or attacked during the crime (Table 1.C.). Over a fifth (21.1%) of offenders used a weapon during the commission of the crime. A smaller group (13.9%) indicated that they were injured to the extent that they required medical care; they represented the portion of the sample who experienced the most brutality. These figures indicated a significant number of crimes were particularly violent.

Table 1.C. Violent Crime Victimization, National Crime Victimization Survey

Concept	Dimensions	Variables(Questions)	Values/Responses	Statistics
Violent Crime Victimization	Physical Assault (Index) ²	V4059 Did the offender hit you, knock you down, or actually attack you in any way?	1=Yes ¹	(n=1059) 47.6%
		V4093 How were you attacked? Any other way?	1=Yes	47.4%
<u>If attacked, were you:</u>				(n=502)
		V4094 Raped	1=Yes	2.8%
		V4095 Tried to rape	1=Yes	1.2%
		V4096 Sexual assault other than rape or attempted rape	1=Yes	3.6%
		V4097 Shot	1=Yes	0.4%
		V4098 Shot at (but missed)	1=Yes	0.2%
		V4099 Hit with gun held in hand	1=Yes	1.8%
		V4100 Stabbed/cut with knife/sharp weapon	1=Yes	1.0%
		V4101 Attempted attack with knife/sharp weapon	1=Yes	1.2%
		V4102 Hit by object (other than gun) held in hand	1=Yes	7.0%
		V4103 Hit by thrown object	1=Yes	4.4%
		V4104 Attempted attack with weapon other than gun/knife/sharp weapon	1=Yes	1.2%
		V4105 Hit, slapped, knocked down	1=Yes	62.4%
		V4106 Grabbed, held, tripped, jumped, pushed, etc.	1=Yes	38.6%
		V4107 Other type of attack	1=Yes	4.8%
	Weapon Index ³			(n=1059)
		V4049 Did the offender have a <u>weapon</u> such as a gun or knife, or something to use as a weapon, such as a bottle or wrench?	1=Yes	21.1%

	V4050 What was the weapon?	1=Yes	21.1%
	<u>If weapon used:</u>		(n=223)
	V4051 Handgun present (pistol, revolver, etc.)	1=yes	36.8%
	V4052 Other gun (rifle, shotgun)	1=yes	3.1%
	V4053 Knife	1=yes	20.6%
	V4054 Other sharp object (scissors, ice pick, axe, etc.)	1=yes	4.9%
	V4055 Blunt object (rock, club, blackjack, etc.)	1=yes	19.7%
	V4056 Other	1=yes	13.9%
	V4057 Gun type – unknown	1=yes	0.4%
Medical Attention Index ⁴			(n=1059)
	V4127 Were you injured to the extent that you received any medical care, including self treatment?	1=yes	13.9%
	V4128 Where did you receive this care? Anywhere else?	1=Yes ¹	13.9%
	<u>If received medical care:</u>		(n=147)
	V4129 At the scene	1=yes	10.9%
	V4130 At home/neighbor's/friend's	1=yes	29.9%
	V4131 Health unit at work/school, first aid station at a stadium/park, etc.	1=yes	1.4%
	V4132 Doctor's office/health clinic	1=yes	15%
	V4133 Emergency room at hospital/emergency clinic	1=yes	44.2%
	V4134 Hospital (other than emergency room)	1=yes	8.8%
	V4135 Other care	1=yes	2%

¹Recoded from original; 0=No;

²Index of Physical Assault=V4059Recode + V4093Recode + V4094 + V4095 + V4096 + V4097 + V4098 + V4099 + V4100 + V4101 + V4102 + V4103 + V4104 + V4105 + V4106 + V4107. Possible Range=0-16;

³Index of Weapon Used=V4049Recode + V4050Recode + V4051 + V4052 + V4053 + V4054 + V4055 + V4056 + V4057; Possible range=0-9;

⁴Index Medical Attention=V4127 + V4128 + V4129 + V4130 + V4131 + V4132 + V4133 + V4134 + V4135 + V4137; Possible range =0-10.

Socioeconomic Resources

Availability of socioeconomic resources to the victim, a second strain, were measured using per capita household income and education completed (Table 1.D). Household incomes indicated that most respondents came from homes with sufficient incomes. Forty percent of the sample in the subset examined earned over \$50,000. But, most respondents tended to be not as well educated. Over half (51.2%) had not received any education beyond high school and about half of those (24.3%) did not even receive their

high school diplomas. So, while a significant portion has not had as much formal education, they tended to earn enough income to be financially stable. Restated in social capital terminology, the respondents had some access to resources that might assist in their physical and emotional healing.

Table 1.D. Socioeconomic Resources of Crime Victims, National Crime Victimization Survey (n=1059)

Concepts	Dimensions	Variables(Questions)	Values/Responses	Statistics
Household Socioeconomic Resources	Household Income	V2026 Household Income ¹	0=Less than \$5,000	5%
			1= \$5,000 to \$7,499	2.2
			2= \$7,500 to \$9,999	3
			3= \$10,000 to \$12,499	4
			4= \$12,500 to \$14,999	3.7
			5= \$15,000 to \$17,499	3.2
			6= \$17,500 to \$19,999	3.5
			7= \$20,000 to \$24,499	7.3
			8= \$25,500 to \$29,999	6.6
			9= \$30,000 to \$34,499	6.1
			10= \$35,500 to \$39,999	5.6
			11=\$40,000 to \$49,999	9.8
			12=\$50,000 to \$74,999	15.5
		13=\$75,000 and over	24.5	
	Education	V3020 Educational Attainment ¹	0= < High school diploma	24.3%
			1= High school graduate	26.9
			2= Some college, no degree	16.2
			3= Associate's Degree	5.4
			4= Professional school degree	1.2
			5= Bachelor's degree	16.3
			6= Master's degree	4.8
			7= Doctorate degree	0.9
	Index of SES ²		Mean(SD)	8.9(12.7)
			Min-Max	0-91

¹Recoded from original;

²Index of SES= V2026 *V3020; Possible Range: 0-91.

Victim-Offender Relationship

The NCVS categorized crimes committed by either single or multiple offenders. In crimes perpetrated by a single offender, the most common relationship to the victim was an “other nonrelative” (23.3%) or a current or former boy/girlfriend (16.7%). When multiple offenders were involved in the crime, the most common relationship to the victim was by far a friend or ex-friend (48.5%), or “other nonrelatives” (19.7%). Overall, “other nonrelatives” as well as “friends” or “ex-friends” described many of the perpetrators. Of the crimes that were not committed by strangers, it was more common for the offender to have a secondary relationship to the victim; they were either an acquaintance or friend, but not necessarily the closest of relationships.

Table 1.E. Victim Relationship to Offender, National Crime Victimization Survey (n=1059)

Concepts	Dimensions	Variables(Questions)	Responses	Statistics
Victim's Relationship to Offender	Strangers	V4512 What (was/were) the offender(s) relationship(s) to you? For example, friend, spouse, schoolmate, etc.	1=At least one good entry in one or more of the category codes 1-10	2.8%
	Primary ¹	V4513 ² Spouse at time of incident V4265 ³ V4514 Ex-spouse at time of incident V4266 V4515 Parent or step-parent V4267 V4516 Other relative V4270 V4522F Own child or step-child V4268 V4522G Brother/sister V4269 V4522H Boyfriend or girlfriend, ex-boyfriend or ex-girlfriend V4271 V4517 Friend or ex-friend V4272	1=yes 1=yes 1=yes 1=yes 1=yes 1=yes 1=yes 1=yes	6.1% 3.0% 0 3.0% 0 0 9.1% 7.6% 3.3% 0 9.1% 1.5% 16.7% 9.1% 3.3% 48.5%
	Secondary ⁴	V4518 Neighbor(single) V4275 Neighbor(multiple) V4519 Schoolmate V4274 V4520 Roommate, boarder V4273 V4522 Other nonrelative V4277 V4522A Customer/client V4276 V4522B Patient V24277A V4522C Supervisor (current or former) V4277B V4522D Employee (current or former) V4277C V4522E Co-worker (current or former) V4277D V4522I Teacher/school staff V4277E	1=yes 1=yes 1=yes 1=yes 1=yes 1=yes 1=yes 1=yes 1=yes 1=yes 1=yes	3.3% 6.1% 6.7% 7.6% 3.3% 1.5% 23.3% 19.7% 9.1% 1.5% 13.3% 0 0 0 0 3.3% 0 0 0

¹ Index primary offenders= V4513 + V4514 + V4515 + V4516 + V4522F + V4522G + V4522H + V4517 + V4265 + V4266 + V4267 + V4270 + V4268 + V4269 + V4271 + V4272. Possible range=0-16;

² Single Offender;

³ Multiple Offenders (indented);

⁴ Index secondary offenders=V4518 + V4519 + V4520 + V4522 + V4522A + V4522B + V4522C + V4522D + V4522E + V4522I + V4275 + V4274 + V4273 + V4277 + V4276 + V4277A + V4277B + V4277C + V4277D + V4277E.

Possible Range=0-20.

Summary

Descriptive analyses revealed the following patterns in the NCVS. In terms of health effects experienced by victims, it appeared that more mental problems presented themselves than physical ones. When the severity of the violence was examined, about half had been physically assaulted, a fifth had a weapon used in the crime, and fourteen percent needed medical care. While many in this subset sample did not have educational backgrounds beyond high school, their incomes indicated that most of these victims lived in households with sufficient incomes for basic life necessities. Of the victims who knew their attackers, most were secondary relationships, like other nonrelatives and ex-friends.

Bivariate Analysis

Bivariate analysis, the second analytical strategy, painted a preliminary picture of the relationships between the above described concepts (Appendix C). Violent victimization had similar positive relationships with both mental and physical health problems; these problems co-occurred at similar levels. This makes sense considering many of the physical health effects examined here are often somatic manifestations of mental distress. Specifically, physical assaults ($r=0.17^{**m}$, $r=0.15^{**p}$), use of weapons ($r=0.11^{**m}$, $r=0.10^{**p}$), and requiring medical care ($r=0.25^{**mp}$), were all tied to health problems, be they physical or emotional. Victim-offender relationships seemed to only correspond with negative health effects when the offender was a primary relative ($r=0.11^{**mp}$). But, secondary relationships did not have any significant associations with health problems. How close a person is to the attacker appears to play a role in health consequences; trust is more likely to be broken in situations where a more interconnected relationships existed prior to the incident (Interviewees 2, 5, & 7). However, socioeconomic resources did not have any significant associations with health degradation following victimization.

Linear Multiple Regression

Finally, multiple linear regression analysis was used to tease out the unique (net of age and race) effects of the three strains, violence, relationships, and resources, on negative health consequences. The regression analysis indicated the following unique patterns in the relationships of health effects with violent crime victimization, victim-offender relationships, and socioeconomic resources (Table 2 and Figure 1).

Severity of crime was the strongest strain for victims of crime. Among the indicators of crime severity, requiring medical attention, weapons use, and physical attacks, in that order, were most consequential for the health of victims. For example, victims who required medical attention because of the crime later showed higher rates of both mental (0.20^{***}) and physical (0.21^{***}) health effects. That is, the more serious the injuries

were at the time of the incident, the more a victim was to later experience both mental and physical distress. In fact, seeking immediate medical attention was the most predictive of the future health problems for victims of violence.

Table 2. Regression Analysis of Mental and Physical Health on Violent Crime Victimization and Socioeconomic Resources with Age and Race as controls¹: National Crime Victimization Survey, 2010

	Mental Health Beta (β)	Physical Health Beta (β)
Violent Crime Victimization		
Physical Assault	0.08*	NS
Weapon Used	0.10***	0.08**
Medical Attention	0.20***	0.21***
Relationship to Offender		
Primary Relationship	0.11***	0.11***
Secondary Relationship	NS	NS
Socioeconomic Resources	NS	NS
Age	NS	0.09**
Race	NS	NS
Constant	1.87	0.43
Adjusted R ²	0.09	0.09
DF 1 and 2	8&1050	8&1050

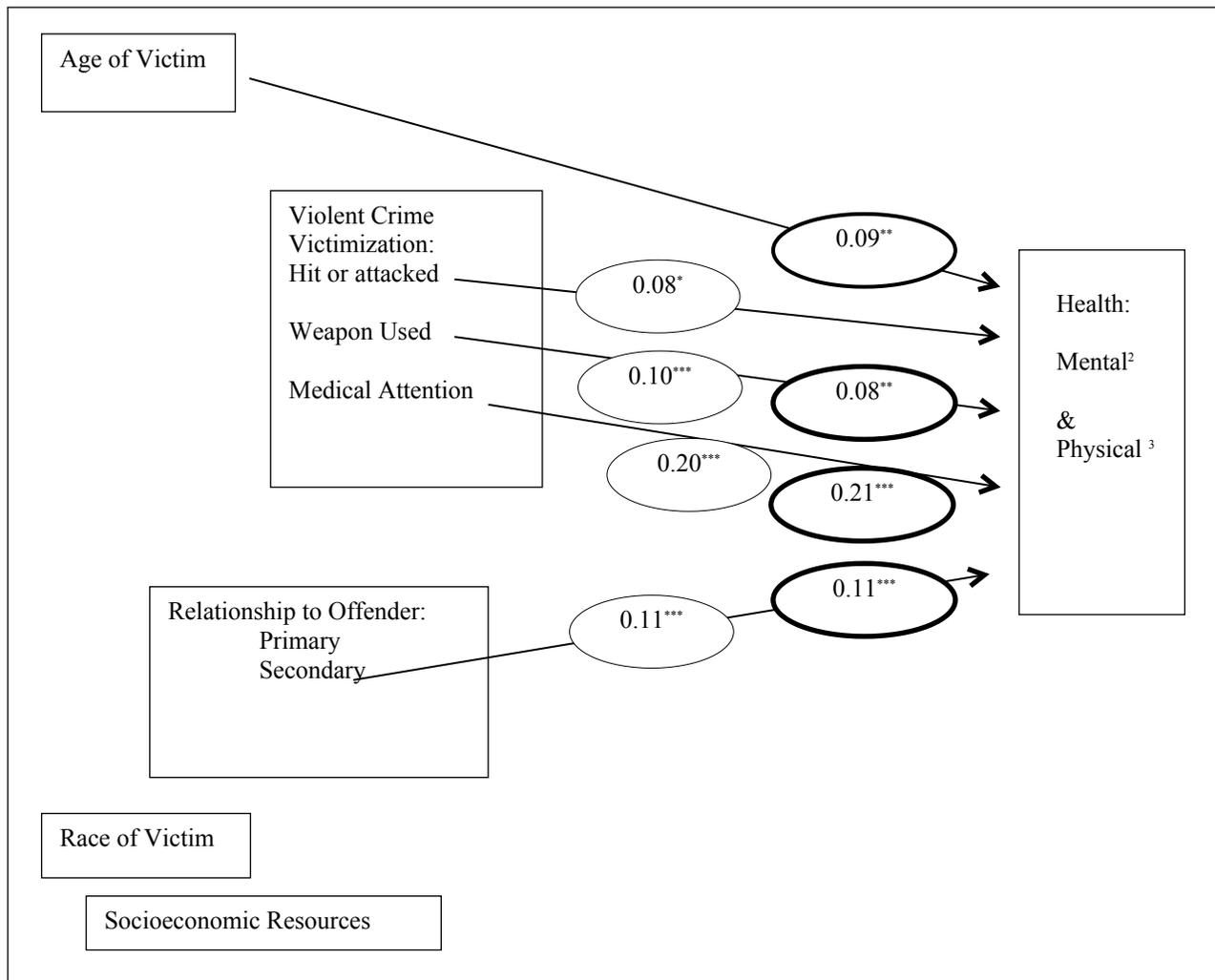
*** p <= .001; ** p <= .01; * p <= .05

¹ Index of Mental Health=V4140B1+ V4140B2 + V4140B3+ V4140B4 + V4140B5+ V4140B6+ V4140B7+ V4140B8+ V4140B9+ V4140B10. Possible Range=0-12;
Index of Physical Health= V4140B20+ V4140B21+ V4140B22+ V4140B23+ V4140B24+ V4140B25+ V4140B26+ V4140B27; Possible Range=0-8;
Index of Physical Assault=V4059Recode + V4093Recode + V4094 + V4095 + V4096 + V4097 + V4098 + V4099 + V4100 + V4101 + V4102 + V4103 + V4104 + V4105 + V4106 + V4107. Possible Range=0-16;
Index of Weapon Used=V4049Recode + V4050Recode + V4051 + V4052 + V4053 + V4054 + V4055 + V4056 + V4057; Possible range=0-9;
Index Medical Attention=V4127 + V4128 + V4129 + V4130 + V4131 + V4132 + V4133 + V4134 + V4135 +V4137; Possible range =0-10;
Index of SES= V2026 *V3020 Possible Range:0-91;
Index primary offenders= V4513 + V4514 + V4515 + V4516 + V4522F + V4522G + V4522H + V4517 + V4265 + V4266 + V4267 + V4270 + V4268 + V4269 + V4271 + V4272. Possible range=0-16;
Index secondary offenders=V4518 + V4519 + V4520 + V4522 + V4522A + V4522B + V4522C + V4522D + V4522E + V4522I + V4275 + V4274 + V4273 + V4277 + V4276 + V4277A + V4277B + V4277C + V4277D +V4277E. Possible Range=0-20;
Age: 1 (12-19 years old to 8 (80-89 years);
Race: 0= Non-White, 1= White.

Use of weapons (another indicator of crime severity) during an assault was also related

to, but to a lesser extent, higher rates of mental (***) and physical health (**) effects. The use of a weapon in a violent crime escalates the level of violence and victims who were attacked or threatened with weapons appeared to report higher rates of both mental and physical health effects that lasted a month or longer. Physical assault, like hitting, knocking down or slapping, were minimally (=0.08*) linked to mental health effects; however there was no evidence of connection to physical ailments. Considering the timeframe of one month or longer for effects to present themselves, it can be inferred that many physical effects might subside in a shorter period of time since mental trauma can present itself or subside throughout a victim's lifetime.

**Empirical Model:
Net Effects of Violent Crime Victimization and Socioeconomic Resources, Age and Race on
Mental and Physical Health¹**



1. Refer to Table 2 for index and variable coding;
2. Thin circles indicate mental health effects;
3. Bold circles indicate physical health effects.

Crimes in which the victim-offender relationship was primary- a closer relative, friend or spouse, resulted in more mental and physical health effects than if they were secondary relationships. Secondary relationships, where the attacker and the victim did not know each other as well, like an acquaintance, colleague, or neighbor did not appear to have any influence on later health problems for victims. This confirmed that the closer the attacker is, the more likely that the victim suffered both mental (0.11^{***}) and physical (0.11^{***}) health effects. Health effects might also be amplified by continued emotional and physical abuse since the attacker is in frequent contact with the victim. This may indicate that primary relationship violence is recurrent and not limited to isolated incidents, which was discussed by multiple qualitative interviewees.

However, health effects did not vary for people from differing socioeconomic backgrounds, a third strain, or race. Violence affects people of all statuses and skin colors and there does not appear to be differences in future reports of mental or physical ailments. Some qualitative interviewees strongly supported this notion; they had worked with clients from all walks of life and they supported that violence affects a diverse set (class or race) of our population. Victims with more resources seek treatment from providers that they are able to afford services from, but the fact that trauma occurred and resulted in negative health symptoms does not change based on their socioeconomic resources.

Summary

The most prominent finding, that receiving medical attention immediately following victimization meant a higher likelihood for later reports of mental and physical health problems, strongly indicated that an elevated level of violence during the attacks can result in elevated levels of future health problems. Secondary relationships did not appear to have a relationship with health of survivors, but primary relationships did. The majority of primary offenders were friends or ex-friends of the victim; it appears that this type of relationship between victim and offenders did influence future health of survivors. A series of events leads up to a physical assault and varying circumstances and situations in the relationship might influence the attacker to be more violent, as well as influence the context from which the victim perceives the situation. An example given by a professional with experience working with gang violence (Interviewee #5) explained this connection. Friendships and sense of camaraderie within a group are shattered for the victim when sometimes a gang member is “turned on” by their gang and attacked. The violent attack becomes symbolic of a message of exclusion from a group within which the victim perceived they had strong ties.

THEORETICAL IMPLICATIONS

The impacts of crime related strains on the health of victim identified in this analysis

were supported by Strain theory. The particular strained circumstances of the crime can exacerbate health problems for victims. Elevated levels of violence during the attack and close relationships with violent perpetrators served as strains for an individual. And compounding multiple strains produced more negative outcomes for violence survivors in their struggle to physically heal from more severe forms of injury and disability as well as mentally cope with the broken bonds of trust in close relationships.

Socioeconomic resources or social capital available to crime victims did not distinguish the severity of health effects. It is possible that these forms of social capital may still be beneficial for some violence victims. Though not evident in this particular data, there has been a long established relationship between health and wealth, including social capital as well as money and assets available to a person (Phelan, Link, and Tehranifar 2010). An interviewee (#4) indicated that those with lesser education may not be aware of services available; and if they do not have much income, they may not be able to access unaffordable healthcare. Conversations with healthcare providers confirmed that people with less social capital like education and income have fewer opportunities to seek treatment that could alleviate negative health symptoms that violence can influence. On the other hand, given the legal implications of violent crime, health resources might be more uniformly available irrespective of resources. Emergency rooms do not exclude those who will not be able to take financial responsibility for the services rendered. Additionally, many local agencies provide pro bono services to victims of violence and victim witness assistance programs offered by local counties usually help with counseling services, court assistance, and victim compensation.

FURTHER QUALITATIVE INTERVIEW INSIGHTS

The diversity in types of violence each professional interviewee dealt with contributed to a more comprehensive understanding of all health effects that have been observed in victims. Since secondary survey data limited the ability to examine the full range of effects, qualitative interviews addressed as many health effects as professionals have seen. In terms of mental health effects, there were disorders as well as negative feelings. Disorders included: depression, anxiety disorders, PTSD, General Anxiety Disorder, Rape Trauma Syndrome, Major Depressive Disorder, Borderline Personality Disorder, self-harm (cutting, drinking bleach, swallowing batteries), suicide, substance abuse, eating disorders, aggravation of Schizophrenia, and complex trauma (with no specific diagnosis). Negative feelings that survivors of violence experience include: mood swings, anxiety, attention-seeking, anger, guilt, unsafety, violation, self-blame, paranoia, phobias/fears, grief, loss, shame, isolation, inability to vent, vigilance, vulnerability, betrayal, stress, distrust, and nervousness. When it came to physical health effects, there were more immediate physical injuries from the violence as well as prolonged health problems that persisted for long periods of time or were permanent disabilities. Immediate injuries included: broken bones, bruising, cuts, scrapes, shank or stab wounds, gunshot wounds, genital injuries, stroke resulting from immediate injuries, and in most extreme cases, death. Prolonged or permanent physical effects included:

substance abuse, STDs like Hepatitis and HIV (either from rape or intravenous drug use) permanent scarring or physical condition, stroke resulting from prolonged stress, long term permanent damage, chronic illness, chronic pain, Fibromyalgia, stomach aches, headaches, head injury, trouble sleeping, flu-like symptoms, hospitalization, heart attack (stress related), and living in chronic violent conditions.

In support of the data on use of weapons during physical assaults, interviewees provided examples of victims they worked with who suffered significant trauma as a result of a particularly violent attack with a weapon. A psychiatrist (Interviewee #6) described a patient that experienced flashbacks and nightmares following service in the Vietnam War. Many of the recurring dreams went back to visuals of being held and threatened at gunpoint. The weapon, a gun in this instance, remained an important factor that contributed to mental health effects. Another psychiatrist (Interviewee #9) explained that when a weapon is used during the commission of a crime, more damage can be inflicted on the victim. Weapon use is more likely to result in permanent scarring or a long term, permanent physical condition. For example, one victim who was beaten with a hammer suffered a stroke during the attack due to the brutality of the event being carried out with the additional use of a weapon. Weapons appear to elevate levels of both mental and physical health implications.

Some interviewees agreed with the statistical suggestion that race and socioeconomic resources did not have much of an association with health outcome. However, in other conversations with professionals, “culture” was sometimes a factor in how victims responded. For example, victims without documentation of citizenship tend to avoid law enforcement or other authorities and may not reach out for any professional services to address physical injuries or ongoing emotional distress because their immigration status may be discovered. Lack of legal status may be a source of additional strain or anxiety that negatively affects health.

Other interviewees strongly felt that race is not a factor in health outcomes; in their experience, their clients come from diverse backgrounds and violence affects people of all races. Yet, some interviewees reflected on cultural differences (rather than race) as they inhibited a victim’s willingness to seek medical treatment. In certain cultural communities, children are socialized to keep quiet about personal problems and “suck it up” (Interview #5). Cultural communities in the United States are tight knit; for example, African Americans, Latinos, and Asian all have very interconnected subcultures. These heavily bonded communities are often beneficial in providing support and a place to feel included. However, there is an expectation that any negativity will be kept within the community as well. Historical marginalization of colored people has produced a social environment where speaking about violence or abuse brings shame to an entire community; consequently, victims are less inclined to do anything about it. Besides, in countries where patriarchy is more pervasive, mental illness is stigmatized and women are vulnerable to abuse, but also culture influences how they respond to and perceive their circumstances. Being treated inferior is accepted as a fact of life for some and they may be better equipped emotionally to handle violent victimization as they have been conditioned to see this as normal. Some Asian and Pacific Islander communities, like Laos and Hmong do not believe in the use of medications (Interviewee #8), which can

also hamper recovery when treatment efforts are rejected because western medicine is not accepted. A college professor (Interviewee #10) with expertise in Asian American communities added that immigrants from countries with oppressive regimes are less likely to contact police because of distrust of authorities that originates from political violence in their native countries. Additionally, Asian American communities are known to have some of the highest rates of domestic violence and intimate partner homicide in locales with more Asian immigrants, like Silicon Valley in California. Immigrants, from most countries, might also be affected by language barriers and isolation within their American communities. They may simply not be aware of laws that exist to protect violence survivors. An attorney who represented immigrant victims of violence (Interviewee #4) said that a lot of clients did not know about legal protections or about agencies that provide services to victims; and navigating a foreign legal system is an additional challenge.

LIMITATIONS AND FUTURE DIRECTIONS

The three sets of strains analyzed in this study accounted for 9% of variability of overall mental and physical health effects of violence survivors. Of course, the limits of secondary data were a primary reason. Future research should address additional reasons (strains) why some victims suffer more or less severe health consequences after a violent attack. Professional interviewees who work with victims of violence offered suggestions for other factors that can influence the health of survivors.

A mental health professional (Interviewee #7) described seeing patients who responded well to treatment have a commonality- they have a heightened sense of hope. Those who can “see the light at the end of the tunnel” have a different attitude and may be less prone to spiraling in to depression and chronic negative mental health effects. Mental stability prior to the victimization was important to health after experiencing a violent incident for many professionals who work with victims. For example, childhood experiences shape the way a victim will later cope with victimization in adulthood. Children become desensitized to or resilient from being emotionally affected by negative events, particularly if they are brought up in environments where violence is commonplace. On the other hand, some professionals (Interviewees #2, #7 & #8) hypothesized that alternatively, childhood trauma might be a precondition that will worsen health outcomes for victims because they are already at risk for and possibly experienced mental health challenges from prior victimization. Sexual abuse of children appears to be particularly burdensome; but neglect and physical abuse also later produce adults less equipped to handle re-victimization. When childhood abuse is by a parent or close family member, there are even more mental health problems because those bonds of trust are more important to children than strangers. It would be interesting to follow victims of child abuse in to their adulthood to see how and to what extent those early experiences affect their health later.

Substance abuse, an additional strain, was another recurring theme prevalent among victims who received services according to several interviewees (Interviewees #5, #8, & #9). In their professional judgements, addiction is fueled by negative emotional

responses to victimization. Substance abusers seek respite from negative feelings and compound those negative health effects with additional bodily repercussions of drug use. Health professionals, they opined, should pay attention to substance abuse of victims they are treating as they are particularly at risk for spiraling into addiction that can quickly deteriorate their health. Intravenous drug users additionally risk transmission of diseases like Hepatitis and HIV (Interviewee #9).

On balance, future research should explore the roles that childhood abuse, drug use, and cultural values play in mediating the negative health consequences of crime victimization. In addition to considering some preconditions that may be related to poorer health outcomes, hopefully chronicling all the health effects that victims of violent crime experience can help shape treatment options to best suit individuals recovering from trauma. At a minimum, bringing about awareness to health effects of violence may help some victims feel validated in their health struggles.

APPENDICES

Appendix A. Table

Age and Race Distribution of Crime Victims, National Crime Victimization Survey (n=1059)

Concepts	Dimensions	Variables(Questions)	Values/Responses	Statistics
Controls	Age	V2042 Age ¹	1=12-19 years old	2.8%
			2= 20-29	20.8%
			3= 30-39	22.5%
			4= 40-49	23.0%
			5= 50-59	18.0%
			6= 60-69	9.9%
			7= 70-79	2.2%
			8=80-89	0.8%
			Mean(SD) ²	3.75
			Race	V2049 Race ¹
1= White	76.9%			
Mean(SD) ²	0.77			

¹Recoded from original;

²Age Range=1-8; Race Range=0-1.

Appendix B Consent Form and Interview Protocol

Letter of Consent

Dear _____:

I am a Sociology Senior working on my Research Capstone Paper under the direction of Professor Marilyn Fernandez in the Department of Sociology at Santa Clara University. I am conducting my research on the health (both physical and mental) of victims of violent crime.

You were selected for this interview, because of your knowledge of and experience working in the area of victim's services.

I am requesting your participation, which will involve responding to questions about your knowledge of experiences of victims of violence and will last about 20 minutes. Your participation in this study is voluntary. You have the right to choose to not participate or to withdraw from the interview at any time. The results of the research study may be presented at SCU's Annual Anthropology/Sociology Undergraduate Research Conference and published (in a Sociology department publication). Pseudonyms will be used in lieu of your name and the name of your organization in the written paper. You will also not be asked (nor recorded) questions about your specific characteristics, such as age, race, sex, religion.

If you have any questions concerning the research study, please call/email me at _____ or Dr. Fernandez at _____

Sincerely,

Emily Szabelski

By signing below you are giving consent to participate in the above study. (If the interviewee was contacted by email or phone, request an electronic message denoting consent).

Signature

Printed Name

Date

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, through Office of Research Compliance and Integrity at (408) 554-5591.

Interview Schedule

Research Topic: Health of victims of violent crime.

Interview Date and Time: _____

Respondent ID#: __ (1-10)

1. What is the TYPE of Agency/Organization/Association/Institution(NO NAME) where you learned about (and/or worked) with survivors of violent crimes:

2. What is your position in this organization? _____
3. How long have you been in this position and in this organization?

4. Based on what you know about victims of crime, what are some of the most common health consequences of victimization? Have you seen differences in mental and physical health of victims? (Probe for examples)
5. In your opinion, what are some reasons that some crime victims suffer more severe health problems than others? (PROBE for differences in mental and physical health and for examples)
6. [If the respondent does not bring up violence of crimes and socioeconomic resources) as potential causes of negative health effects of crime victimization], probe:
 - a. How about victims of more violent crimes like an attack where a weapon was used? How does that violent experience affect their health? (Probe for differences in physical and mental health consequences and ask for examples.)
 - b. How about socioeconomic resources of the victim? Do less educated people or people with lesser incomes experience different types of health consequences of victimization than those with more? Do they seek treatment differently or respond in other ways that distinguish people of differing social backgrounds? Why do you think so? (Probe for examples.)
 - c. Do you think victims often seek medical treatment for their injuries? Where do they go to receive medical care? If medical care results in hefty bills, do you think the financial strain might affect a victim's health

- d. Do you think the victim's relationship to the offender has any influence on future health outcomes? Depending on how close a person is to their attacker, do you think they suffer from more mental or physical health problems? Why do you think so? (Probe for examples.)
 - e. How about age? Are younger people more likely to be victimized and do they have different health consequences than older victims? Why do you think so? (Probe for examples.)
 - d. How about race? Have you noticed any patterns of health effects of victimization that affect some races more than others? Why do you think so? (Probe for examples).
7. In your experience, what other issues do you think impact the health of crime victims? (Probe for examples).

Thank you very much for your time. If you wish to see a copy of my final paper, I would be glad to share it with you at the end of the spring quarter. If you have any further questions or comments for me, I can be contacted at _____. Or if you wish to speak to my faculty advisor, Dr. Marilyn Fernandez, she can be reached at _____.

Appendix C: Table

Correlation Matrix: Indices of Mental Health, Physical Health, Violent Crime Victimization, Victim-Offender Relationship, Socioeconomic Resources, Age and Race¹ (n=1059)

	Index of Mental Health	Index of Physical Health	Index of Physical Assault	Index of Weapons Used	Index of Medical Attention	Index of Primary Relationship	Index of Secondary Relationship	Index of SES	Age	Race
Index of Mental Health	1	0.70***	0.17**	0.11**	0.25**	0.11**	-0.06*	NS	0.07*	NS
Index of Physical Health	0.70***	1	0.15**	0.10**	0.11**	NS	NS	0.25**	0.10**	NS
Index of Physical Assault	0.17**	0.15**	1	NS	NS	-0.08*	NS	0.44**	NS	NS
Index of Weapons Used	0.11**	0.10**	NS	1	NS	NS	NS	0.07*	0.08*	0.10**
Index of Medical Attention	0.25**	0.25**	0.44**	0.07*	1	NS	NS	NS	NS	NS
Index of Primary Relations	0.11**	0.11**	NS	NS	NS	1	NS	NS	NS	NS
Index of Secondary Relations	-0.06*	NS	-0.08*	NS	NS	NS	1	NS	NS	NS
Index of SES	NS	NS	NS	NS	NS	NS	NS	1	NS	NS
Age	0.07*	0.10**	NS	0.08*	NS	NS	NS	NS	1	NS
Race	NS	NS	NS	-0.10**	NS	NS	NS	NS	NS	1

*** p <=.001; ** p <=.01; * p <=.05

¹ **Index of Mental Health**=V4140B1+ V4140B2 + V4140B3+ V4140B4 + V4140B5+ V4140B6+ V4140B7+ V4140B8+ V4140B9+ V4140B10. Possible Range=0-12;

Index of Physical Health= V4140B20+ V4140B21+ V4140B22+ V4140B23+ V4140B24+ V4140B25+ V4140B26+ V4140B27; Possible Range=0-8;

Index of Physical Assault=V4059Recode + V4093Recode + V4094 + V4095 + V4096 + V4097 + V4098 + V4099 + V4100 + V4101 + V4102 + V4103 + V4104 + V4105 + V4106 + V4107. Possible Range=0-16;

Index of Weapon Used=V4049Recode + V4050Recode + V4051 + V4052 + V4053 + V4054 + V4055 + V4056 + V4057; Possible range=0-9;

Index Medical Attention=V4127 + V4128 + V4129 + V4130 + V4131 + V4132 + V4133 + V4134 + V4135 + V4137; Possible range =0-10;

Index of SES= V2026 *V3020 Possible Range: 0-91;

Index primary offenders= V4513 + V4514 + V4515 + V4516 + V4522F + V4522G + V4522H + V4517 + V4265 + V4266 + V4267 + V4270 + V4268 + V4269 + V4271 + V4272. Possible range=0-16;
Index secondary offenders=V4518 + V4519 + V4520 + V4522 + V4522A + V4522B + V4522C + V4522D + V4522E + V4522I + V4275 + V4274 + V4273 + V4277 + V4276 + V4277A + V4277B + V4277C + V4277D + V4277E. Possible Range=0-20;
Age: 1 (12-19 years old to 8 (80-89 years));
Race: 0= Non-White, 1= White.

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- Interview #3. 2/9/15. Intensive Supervision Specialist for district attorney.
- Interview #4. 2/26/15. Attorney specializing in domestic violence in immigrant communities, sexual assault, and human trafficking.
- Interview #5. 2/27/15. Founder of gang violence prevention program.
- Interview #6. 3/2/15. Psychiatrist for Veteran's Administration.

Interview #7. 3/3/15. Marriage and Family Therapist.

Interview #8. 3/6/15. Clinician for rehabilitation program for offenders on probation or parole.

Interview #9. 3/23/15. Psychiatrist for rehabilitation program for offenders on probation or parole.

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Minority Status, Cumulative Disadvantage, and Health Consequences

Leslie E. Sapon¹⁶

ABSTRACT. Health disparities between minorities and non-minorities in the United States were explored using secondary data from the 2012 National Survey on Drug Use and Health (n=37,869) and supplemented by interviews with eight knowledgeable professionals. Effects of cumulative disadvantage (resources and social stability) on health status were different for minorities and non-minorities. The findings were supported by Berger's expectation states theory and Cockerham's Health Lifestyle, grounded in Durkheim and Merton's theories of integration and added to the body of literature on minority health inequalities.

INTRODUCTION

Racial and ethnic disparities in the healthy lifestyles and accessibility to quality health care are long standing social issues within the United States. However, in recent years the U.S. has focused on modifying the health care system in an attempt to close this gap. In this context, this paper will examine some of the critical factors that contribute to these racially related health disparities. Pinpointing the sources of these inequalities is essential if meaningful reforms in health care are to be achieved.

LITERATURE REVIEW

A review of some of the past research on health and ethnicity presented below identified a variety of factors that have contributed to racial differences in health and health care. Some factors included in the research reviewed for this analysis were: disadvantages related to socioeconomic status, ethnicity and gender as well as drug usage and religiosity.

¹⁶ **Acknowledgements:** I would like to thank Dr. Fernandez for her constant guidance as well as my peers and classmates who have provided support during this research.

Hierarchies of Social Disadvantage and Health

Most studies of adult health have come to similar conclusions about the “links between hierarchies of social advantage and health” (Braveman, Cubbin, Egerter, Williams, and Pamuk 2010:186). For example, Braveman et al. used national data on child and adult health status to explore socioeconomic and racial and ethnic (Black, White, Hispanic) disparities in conjunction with several physical and mental health issues (life expectancy, chronic disease, coronary heart disease, diabetes, and obesity). Respondents who had low to average levels of educational attainment and income were less healthy than their most educated and wealthiest counterparts. Those who had the lowest educational attainment and the highest rates of poverty were Blacks and Hispanics.

Other researchers have expanded on the health-socioeconomic advantage linkage by identifying intervening health practices of individuals. A 2015 study by Williams and Bradboy Jackson (2005) used national health statistics and found that health practices, stress, and limited access to medical care negatively impacted, net of income and education, the health of minorities in the U.S. Poor dietary practices, limited physical activity, and abuse of alcohol and tobacco increased African Americans’ risk for heart disease and cancer. Additionally, the psychosocial distress associated with persistent discrimination and segregation not only caused health problems, but also restricted African Americans from equal access to medical care.

Taking a different approach, Bamshad (2015) sought to add a genetic racial component to the analyses of poor health. However, this study, like that of Williams and his colleague (2005), found that risk factors that often lead to disease and health complications came not only from ancestry, but also geographical location. In fact, rather than biological variances being the root cause of the race-health discrepancies, environmental settings and contexts proved to be significant players.

If environmental settings are critical for health, it is critical to understand the nature of these environments. Residential segregation and related disadvantages, an example of the environmental context, have been relevant in discussions of health. According to Williams and Collins (2001), who used national data on racial disparities in causes of suicide and death, geographical segregation was a strong determinant of poor health of African Americans. Living in distressed areas that did not have active community facilities, lacked quality food enterprises and medical care, but had an abundance of social stressors ensuing from financial difficulties, violence, and family separation, contributed to poor health of its residents.

Another line of research on the racial and ethnic health disparities explored policies and programmatic avenues for reducing health inequalities and improving overall health. For example, Thomas, Fine, and Ibrahim (2004) recognized the necessity of alleviating social disadvantages. Based on a national forum that measured the annual progress of

eliminating health disparities, their study identified key issues, such as poverty, access to quality health care, and residential hazards, that need to be resolved in order to improve racial health disparities. Similarly, to Brach and Fraserrirector (2000) the most effective route to improving minority health status was to specifically target cultural disadvantages. Based on their review of United States Census data, cultural, competency techniques such as cultural training, adopting traditional healers, offering interpreter services, and hiring minority staff, have the potential to reduce the gap in health conditions between minority and non-minority groups.

An added layer to the health related social disadvantage problem is gender. Leach, Christensen, Mackinnon, Windsor, and Butterworth's (2008) documented higher levels of mental health issues among females than males in a representative community sample. Elaborating on the connections between gender, socio-economic disadvantage, and physical and psychological health, Leach and her colleagues found the following differences between males and females: females participated in fewer physical activities, had higher rates of neuroticism and interpersonal problems, as well as lower levels of education; males were the exact opposite. It was the relative absence of positive physical and psychological mediators that posed greater risks of depression and anxiety for females.

Social stability, another critical component of social disadvantage, has also been associated with health disparities. German and Latkins (2011) measured social stability using data on housing and residential conditions, employment, income, criminal history, and partner relationships. In their interviews with African American women of lower socioeconomic status, German and Latkin found social stability to be strongly associated with good mental health; women who had more socially stable backgrounds were less likely to be at risk of chronic mental illnesses, such as depression.

Social Disadvantage, a Gateway to Drug Use and Poor Health

Social disadvantages associated with racial and gender inequalities have been identified as a gateway into drug use and dependence, and ultimately poor health. For example, Patrick, Wightman, Schoeni, and Schulenberg (2012) compared drug use of young adults aged over 18 years old (from a national sample of families across the United States) who grew up in homes of wealth to those from less advantaged families. Wealthier 18 year olds were more likely, than those from households with fewer economic resources, to use alcohol and marijuana; cigarette use was more common among young adults who grew up in households with few resources. However, non-white young adults and women were less likely to smoke cigarettes; alcohol and marijuana use was more common among white young males (Patrick et al. 2012: 780).

Moreover, drug abuse, particularly of illicit drugs (amphetamines, cannabis, cocaine, and opioids) has also been connected to disease. Degenhardt and Hall (2012), who reviewed national studies of illicit drug use, identified several associated mental and physical health problems. More specifically, cannabis use was linked to mental

disorders such as psychosis. Frequent opioid use was found to not only cause diseases such as HIV and hepatitis C and B, but also to frequently lead to overdoses that end in death. Those with higher socioeconomic status were more likely to use illicit drugs (cannabis, cocaine, and amphetamine) and suffered from associated mental disorders, such as psychosis, and crime.

Religion and Health

In contrast to the environmental risks for poor health, researchers have noted positive associations between health, religion and spirituality. Seybold and Hill (2001) reviewed 139 studies from around the world that had gathered quantified measures of religious commitment (documented by relative relationships to God, participation in religious ceremonies, church attendance, and prayer). They found that religiosity was beneficial to both physical and psychological health. The more religious individuals tended to have fewer encounters with a variety of physical illnesses (cirrhosis and heart disease). Negative associations were also found between religiosity and suicide, crime, drug use, delinquency and health status. One intervening explanation offered for the religiosity-good health connections was healthy lifestyles: those who were more religiously active often adopted healthier habits that ultimately lead to longevity (Seybold and Hill 2001: 22). Besides, social networks accessed through religious involvement created a space for integration, participation and camaraderie that eased health stressors. In short, participating in religious activities allowed the development of an optimistic lifestyle that promoted positivity and hope as a coping mechanism.

Summary and Moving Forward

The researchers reviewed above, while providing valuable insights into the complicated connections between among social, race/ethnic disadvantage and health, acknowledged their narrow research foci. For example, Leach et al. (2008) advised expanding coverage of different types of mental health issues (such as depression, anxiety, and neuroticism) in the exploration of connections between health and socio-economic disadvantages. Braveman et al. (2010) suggested using a sample that was a more realistic reflection of the range of social classes in the U.S. And Williams et al. (2001) recommended widening the scope of the race/ethnic disparities to include not only African Americans, but other minority groups. In doing so, the goal would be to identify more universal sources and patterns of racial and ethnic health disparities. It is in the spirit of these methodological suggestions that this research was conducted.

RESEARCH QUESTION

This paper will build upon current knowledge on the health differences between minority and non-minority groups by re-focusing on the connections between health, risk factors

(such as drug use and criminal history) and stable social environments (socioeconomic status and religiosity). Stated formally, the research question asked: what are the racial disparities in the health consequences of criminal behavior, socioeconomic resources, and stable social environment? Gender, age, and available health care options (Medicare) will be controlled for.

THEORETICAL FRAMEWORK

A set of theoretical concepts, expectation states theory (Berger) and Cockerham's Health Lifestyle, grounded in Durkheim and Merton's theories of integration, set the theoretical stage for this analysis. Integration into society and participation in social institutions are essential for a healthy lifestyle. For example, Emile Durkheim, in his theory of integration, posited that societies establish systems and organizations through which they channel individual's access to social institutions (Durkheim 1951:208-16). The more integrated, the more socially stable one's life is. On the other hand, when individuals are not socially integrated, there is a weakening of social bonds and detachment from larger society. One consequence of social detachment is a deviant and less stable lifestyle (Merton 1975:76).

Social stability as defined by German and Latkin (2011: 21), is "a state of life structure and constancy that functions in a protective way against further hazards and helps to maintain one's connection with societal expectations." Fulfilling social roles, a set of established standards of societal expectations, are critical markers of social stability. For example, being employed, married, having a stable residence, and no criminal history, represents a socially stable life. The sense of instability, uncertainty, and constant change that result from not fulfilling these social roles are expected to impede attempts to gain upward social mobility.

An intervening factor in this social roles-stability model is the power and prestige hierarchy used to anticipate the quality of contribution one might have in society. In Berger's expectation states theory (Correll 2003), society creates hierarchies of status that are used to guide patterns of interaction. These hierarches are developed using a system of evaluation referred to as the "power and prestige structure." The socially constructed identifies certain statuses or characteristics, such as race, age, gender, physical attractiveness, occupation, and patterns of behavior in order to predict one's quality and aptitude to contribute to society. Anticipation of one's ability to fulfill expectations based on statuses is used to determine social relationships and influence, and access to institutional participation (Correll 2003: 30).

Race in American society has been a potent status that has been used to predict performance expectations. For example, widely shared cultural views on race and ethnicity indicate that Americans often presume that the institutional contributions of whites will be of higher quality than that of minority and non-white groups (Kerbo 2012: 328). These unequal expectations have the unfortunate consequences (in a Mertonian

Self-fulfilling prophecy way) of resulting in minorities being limited in their access to resources necessary for fuller participation and stable lifestyles.

One realm in which unequal expectations and access is played out cumulatively is the health-related choices that people make. As articulated in Cockerham's Health Lifestyle model (influenced by Weber and Bourdieu), structural conditions, defined by class circumstances, age/gender/race/ethnicity, collectives or norms and values, and living conditions, play important roles in health. These structural conditions and associated socialization processes cumulatively influence health-related life choices and actions. For example, minorities living in resource poor communities have limited options to lead healthy lifestyles. It is considered normative for the poor to opt for less expensive food even if that means jeopardizing health. As per the expectation states model, the lack of resources would not impact whites as severely as minorities.

In this theoretical context that linked cumulative disadvantages to health, the following hypotheses was posed: Criminal behavior, socio-economic disadvantages, and social instability will be more detrimental to the health of minorities than non-minorities, net of lifecycle status (Medicare access, age, and gender).

METHODS AND DATA SOURCES

This research utilized a mixed methods approach. Survey data from a national study of drugs and health represented the quantitative dimension of the methods. Observations from interviews with eight professionals were used to elaborate on statistical analyses of the survey data.

Quantitative Secondary Survey Data

The hypothesis and associated theories about the health consequences of cumulative disadvantage were tested using secondary data from the 2012 National Survey of Drug Use and Health (NSDUH); the NSDUH was conducted by the United States Department of Health and Human Services (National Survey on Drug Use and Health 2012). In addition to documenting the frequency and amount of drug use within the United States, the survey also had information on the general health of the country's population. Using online questionnaires, a sample of 68,309 randomly selected Americans, from across the United States, completed the survey; the response rate was 86.07% (National Survey on Drug Use and Health 2012).

For the purposes of this study, only a sub-sample of 37,869 adults, 18 to 56 years of age who had complete information on health and other relevant predictors were selected. Minorities in the sample averaged 30 years of age ($sd=12.4$); non-minorities were older at an average age of 34 ($sd= 27.5$). There were slightly more females (53.1%) than males (46.9%) in the sample and slightly more female minorities (53.7%)

than female non-minorities (52.7%)¹⁷. These demographics were controlled for in the multivariate analyses to isolate the unique effects of crime, stability, and socioeconomic resources on health.

Primary Qualitative Methodology

To shed professional experiential light on the quantitative findings, eight qualitative interviews were conducted with professionals who had backgrounds in the fields of health and delinquency. These professionals were: An intensive supervision specialist (Interviewee #1), a clinical services administrator at a behavioral and mental health center (Interviewee #2); two physician/medical directors (Interviewees #3 and #7); a Lieutenant in a Sheriff's Office (Interviewee #4); a director of case management at a health plan (Interviewee #5); a police officer (Interviewee #6); and a college sociology professor (Interviewee #8). Interviews were conducted in person or over email using the interview protocol presented in Appendix B.

QUANTITATIVE DATA ANALYSIS AND INSIGHTS FROM QUALITATIVE INTERVIEWS

Three levels of statistical analyses were conducted for this paper: descriptive univariate, bivariate, and multivariate. In keeping with the racial differences in the research design, the analyses were disaggregated for minorities and non-minorities. The goal was to identify potential racial divergences in health because of drug usage, crime, socioeconomic status, and social environment.

Operationalization and Univariate Analyses

Descriptive portraits of the sample using indicators of health and associated predictors were presented below in Tables 1.A-E.

Health Status

The dependent concept, Health Status, was measured through self-reports of the count of the number and types of illnesses, as well as use of mental health treatment during 2012 (the year of the NSDUH survey).

As seen in Table 1.A., the sample was relatively healthy; the mean of the index of illnesses was only 0.42 (sd= 0.8 on a range from 0-10). However, when the respondents did suffer illnesses, the most common were depression (8.1%), anxiety (6.8%), and asthma (6.8%). Racial differences in illness showed that whites had slightly more (=

¹⁷ For more demographic information about the sample, please refer to Appendix A. Table.

0.48) illnesses than non-white (=0.33). Similarly, more whites (17.8%) sought mental health treatment than minorities (8.9%).

**TABLE 1.A. Descriptive Statistics for Health Status
The National Survey for Drug Use and Health, 2012**

Concept	Dimensions	Variables	Values	Minority (n=14,393)	Non-Minority (n=23,476)
Health Status in 2012	Illnesses	Anxiety	1= Yes	3.8%	8.6% ^{***}
		Asthma	1= Yes	7.4%	6.4% ^{***}
		Depression	1= Yes	5.2%	9.9% ^{***}
		Diabetes	1= Yes	4.2%	3.7% ^{***}
		High Blood Pressure	1= Yes	9.4%	11.4% ^{***}
		Index of Illnesses ²	Mean (SD) Min-Max	0.33 (.68) 0-10	0.48 ^{***} (.85) 0-10
	Mental Health Treatment	1=Yes	8.9%	17.8% ^{***}	

^{***} p ≤ .001; ^{**} p ≤ .01; ^{*} p ≤ .05.

¹ Additional illnesses included: Bronchitis, Cirrhosis, Heart Disease, Hepatitis, HIV/AIDS, Lung Cancer, Pancreatitis, Pneumonia, STD, Sinusitis, Sleep Apnea, Stroke, Tinnitus, Tuberculosis and Ulcer(s) (1.1%);

² The index of Illnesses (dependent concept) = Count of the number of the following illnesses they experienced: Anxiety, Asthma, Bronchitis, Cirrhosis, Depression, Diabetes, Heart Disease, Hepatitis, HIV, Lung Cancer, Pancreatitis, Pneumonia, STD, Sinusitis, Sleep Apnea, Stroke, Tinnitus, Tuberculosis. Ulcer.

Criminal Behavior

In this study, criminal behavior was defined by anti-social and illegal behavior including drug usage and criminal actions (two independent concepts).

Drug Use. Drug usage is known to contribute to poor health among adults. Drug use was measured through self-reports of specific drugs used during 2012 and were categorized into hard and soft drugs (Table 1.B). As seen in the drug index, on a scale from 0 to 13 drugs used, whites (= 0.33), reported using more drugs than non-whites (= 0.22).

Some details about the specific drugs involved. The most commonly used narcotics in order of frequency were marijuana/hashish (8.2%), pain relievers (4.3%), hallucinogens (2.5%), tranquilizers (2.2%), and cocaine (2.1%). Minority respondents (8.5%) reported using marijuana/hashish more than non-minority respondents (7.7%). On the other hand, non-minorities were more frequent users of pain relievers (4.7%), hallucinogens (2.7%), tranquilizers (2.6%), and cocaine (2.3%).

TABLE 1.B. Drug Use
The National Survey for Drug Use and Health, 2012

Concepts	Dimensions	Variables	Values	Minority (n=14,393)	Non-Minority (n=23,476)
Drug Use	Hard Drugs in 2012	Cocaine	1=Yes	1.7%	2.3%***
		Hallucinogens	1=Yes	2.0%	2.7%***
		Pain Reliever	1=Yes	3.6%	4.7%***
		Tranquilizers ¹	1=Yes	1.5%	2.6%***
	Soft Drugs in 2012	Marijuana	1=Yes	8.5%***	7.7%***
		Adderall	1=Yes	0.5%	1.1%***
		LSD ²	1=Yes	0.4%	0.9%***
		Index of Drug Use ³	Mean (sd) Min-Max	0.22(.65) 0-13	0.33(.85)*** 0-13

*** p ≤ .001; ** p ≤ .01; * p ≤ .05.

¹Additional hard drugs included: Chew, Crack, Ecstasy, Heroin, PCP, Inhalants, Oxycodone, Stimulants, Sedatives, Snuff, Methamphetamine, Ketamine;

²Additional soft drugs included: Ambien, DMT/AMT, and Salvia;

³The index of Drug Use= Count of how many of the following were used: Chew, cocaine, crack, ecstasy, hallucinogens, heroine, PCP, inhalants, pain relievers, oxycodone, tranquilizers, stimulants, sedatives, snuff, methamphetamine, ketamine, Adderall, ambien, DMT/AMT, LSD, marijuana/hashish, salvia.

Criminal History. Drug use has frequently been associated with criminal activity (the second independent concept used in this study). Criminal history was measured using two indicators: respondents' arrest record as well as the specific crimes that were committed in the year of 2012. Crimes were split into two categories, summary (less severe) and indictable offences (more severe), to assess the intensity of the violation.

As for specific offences, as seen in the index of offences presented in Table 1.C., ethnic minority respondents (=0.07, sd=.38 on a range from 0 to 12) were more likely, even if only slightly, to be arrested anywhere from 1 to 3 or more times than non-minority (=0.05, sd=.33). Among summary offences, driving under the influence was most the commonly reported infraction; Minority (.09%) and non-minority (.09%) reported equal instances of driving under the influence. The second frequently reported offense was the possession and/or the sale of drugs, which was slightly more common among minority (.09%) than non-minority (.07%) groups. Among indictable offences, assault and larceny were the commonly reported violations. A few more minorities (1.0%) reported committing assault than non-minorities (.06%); but about the same proportion of minorities (.05%) and non-minorities (.06%) were convicted of larceny.

On balance, the summative index of criminal history (on a range from 1 to 44) demonstrated that minority respondents (=1.3, sd= 1.4 and non-minority respondents (=1.2, sd=1.1) had similar levels of involvement in crime.

TABLE 1.C. Criminal History
The National Survey for Drug Use and Health, 2012

Concept	Dimensions	Variables	Values	Minority (n=14,393)	Non-Minority (n=23,476)
Criminal History	Arrest Record	# times arrested & booked past 12 months	0= Never	94.5%	96.1% ^{***}
			1= Once	3.9	3.1
			2= Twice	1.0	0.6
			3= 3+ times	0.6	0.3
	Summary Offences past 12 months	DUI Drunkenness Possession/Sale of Drugs Other	1= Yes	0.9%	0.9%
			1= Yes	0.8%	0.7%
			1= Yes	0.9%	0.7% ^{***}
			1= Yes	1.6%	1.1% ^{***}
	Indictable Offences past 12 months	Assault Serious Violent Offense	1= Yes	1.0%	0.6% ^{***}
			1= Yes	0.4%	0.2% ^{***}
		Index of Offences ³	Mean (sd) Min-Max	.07(.38) 0-12	.05(.33) ^{***} 0-11
		Index of Criminal History ⁴	Mean (SD) Min-Max	1.3(1.4) 1-44	1.2(1.1) 1-48

*** p ≤ .001; ** p ≤ .01; * p ≤ .05.

¹ Additional Summary Offenses Included: Drunkenness;

² Additional Indictable Offenses Included: Burglary, Larceny, Fraud, Motor Vehicle Theft, Sex Offense and Robbery;

³ The Index of Offences= Count of number of the following offences: (DUI, Drunkenness, Possession/Sale of Drugs, Other Assault, Burglary, Fraud, Larceny, MV Theft, Probation, Parole, Robbery, Sex Offense, Violent Offense);

⁴ The index of Criminal History= NOBOOKY2 * Index of Offences (Summary + Indictable).

Resources

Resources, in this analysis, were defined as social and economic resources that are used to provide life's necessities and support.

Socioeconomic Status. Socioeconomic status has been found to negatively impact an individual's health condition, along with criminal behavior (Braveman et al. 2010). A racial divide between minority and non-minority socioeconomic standing in this sample was revealed when examining their educational attainment and total family income (Table 1.D). Minorities had relatively lower (=18.4; sd=11.3) socioeconomic standing (on a range of 1 to 44) than non-minorities (=23.4; sd=12.3).

Medicaid was chosen as an additional indicator of socioeconomic status. Minimum eligibility to become a beneficiary of Medicaid is a household income that is 133% (or less) of the federal poverty level (Medicaid.gov). Those who reported having access to Medicaid, 20.9% of minorities and 10.0% of non-minorities, can be inferred to be lower socioeconomic standing. But, here too minorities had fewer socio-economic resources

than non-minorities.

TABLE 1.D. Resources
The National Survey for Drug Use and Health, 2012

Concept	Dimensions	Variables	Values	Minority (n=14,393)	Non-Minority (n=23,476)
SES	Education	Level of education	Mean (SD) Min-Max	8.4(2.1) 1-11	9.0(1.7) 1-11
	Income	Total Family Income	1= Less than \$20 K 2= \$20,000-\$49,999 3= \$50,000-\$74,999 4= \$75,000 or more	32.7% 38.5 12.5 16.3	22.0% ^{***} 32.2 ^{***} 16.8 ^{***} 29.0 ^{***}
		Index of SES ¹	Mean (SD) Min-Max	18.4 (11.3) 1-44	23.4 ^{***} (12.3) 1-44
	Medicaid Access		1= Yes	20.9%	10.0%

^{***} p ≤ .001; ^{**} p ≤ .01; ^{*} p ≤ .05.

¹ Index of SES = IREDUC2 Education * INCOME Total Family Income (positive correlation between two variables was statistically significant).

Social Stability

A fourth dynamic in health status is the stability of one's social environment. Social environment for this study was measured both through self-reports of the number of times respondents moved during the past five years, as well as how important religion was to them. Frequent moves can prohibit the development of a stable life structure. In this sample (see Table 1.E), more minorities were significantly more mobile (1-2 times in five years) than non-minorities. For example, a plurality (42.2%) of minorities reported moving at least twice; the corresponding percentage for non-minorities was 33.2%. More frequent movers (3 or more times) were equally represented in both groups. The mean on the Index of Social Stability (a scale from 0-6) showed that overall minorities (=1.4; sd= 1.5) and non-minorities (= 1.4; sd= 1.7) had similar rates of moving households.

Religion is another important source of stability (Seybold and Hill 2001). Measured through personal religious beliefs and practices and the religiosity of associated peers, the index of religiosity (a scale from 4 to 18) showed: minorities (=10.9; sd=3.7) were slightly more involved in religious practices and activities than whites (=10.1; sd= 0.4).

**TABLE 1.E. Stable Social Environment
The National Survey for Drug Use and Health, 2012**

Concepts	Dimension	Variables	Values	Minority (n=14,393)	Non-Minority (n=23,476)
Social Environment	Moves	# times moved past 5 years	1= Once	25.0%	19.9% ^{***}
			2= Twice	17.2	13.3
			3= Three	11.3	10.2
			4= Four	4.9	5.5
			5= Five	2.3	3.4
			6= Six+	3.1	4.0
		# times moved	Mean (SD) Min-Max	1.4(1.5) 0-6	1.4 (1.7) 0-6
	Religiosity	My religious beliefs are very important	Strongly Disagree	13.1%	17.7% ^{***}
Disagree			10.7	17.1	
		My religious beliefs influence my decisions	Agree	37.2	35.7
			Strongly Agree	39.0	29.5
	Religiosity	Friends same religious beliefs	Strongly Disagree	13.4%	18.7% ^{***}
			Disagree	16.2	20.1
			Agree	38.3	35.8
			Strongly Agree	32.0	25.4
	Religiosity	How many religious services past 12 months	0 times	26.5%	35.0% ^{***}
			Disagree	38.0	40.8
			Agree	24.0	18.5
			Strongly Agree	11.5	5.7
			0 times	38.7%	43.6% ^{***}
			1-2 times	13.0	11.4
		3-5 times	11.1	9.3	
		6-24 times	14.6	12.5	
		25-52 times	9.9	12.6	
		52+	12.6	10.6	
	Index of Religiosity ¹		Mean (SD)	10.9(3.7)	10.1(0.4) ^{***}
				Min-Max	4-18

^{***} p ≤ .001; ^{**} p ≤ .01; ^{*} p ≤ .05.

¹ Index of Religiosity= My religious beliefs are very important + My religious beliefs influence my decisions + Friends same religious beliefs + How many religious services past 12 months (positive correlations among index variables were statistically significant).

In summary, among the respondents in this study, non-minorities had more illnesses; more frequently received more mental health treatment and had higher drug usage than minority respondents. Non-minorities were also of lower socioeconomic status than minorities. However, both groups were comparable in terms of social stability (number of times moved and religiosity).

Bivariate Associations

A preliminary assessment of the correlational relationships between health status and well relevant predictors (criminal behavior, resources and social stability) and controls (Medicare access, age and gender) are presented in Appendix C. To outline the racial differences, the analysis was disaggregated by minorities and non-minorities.

Initial correlations revealed several equivalent health effects criminal behavior in minority and non-minority groups: both minorities and non-minorities who used drugs ($r = .07^{***}$), and minorities and non-minorities with criminal histories ($r = .06^{***}$) most commonly used mental health treatment.

However, when variations between racial groups were observed, the strongest correlations were found for non-minorities implying a more privileged status. Some examples: non-minorities ($r = .41^{***}$) with illnesses were substantially more likely to have received mental health treatment than minorities ($r = .33^{***}$) with illnesses. Similarly Non-minorities with access to Medicaid ($r = .12^{***}$) retrieved mental health treatment slightly more often than minorities with access to Medicaid ($r = .08^{***}$).

On the hand, minorities who frequently changed residences in the past five years ($r = .07^{***}$) were more likely to have received mental health treatment than non-minorities who relocated at similar rates. Males, be they non-minorities or minorities, accessed mental health treatment more frequently than females in their race group. But, non-minority males ($r = .13^{***}$) were the most privileged in mental health care access, followed by minority males ($r = .08^{***}$).

In terms of illnesses, both ethnic groups had similar associations with criminal behavior (drug use and criminal history), socioeconomic resources, and social stability. One example: Both non-minorities ($r = -.04^{***}$) and minorities ($r = -.03^{***}$) with lower socioeconomic status had more illnesses than those of higher socioeconomic status. Moreover, non-minorities and minorities with access to Medicaid ($r = .09^{***}$) or Medicare access ($r = .23^{***}$) experienced more illnesses than those without access to Medicaid.

Linear Regression Analysis and Interviewee Insights

In the final analytical step, a two-step linear regression analysis was used to test the hypothesized impacts of criminal behavior, resources, and social stability first illnesses and second on mental health treatment, net of lifecycle status (Medicare, age and sex). Model 1 assessed the impact of the three main predictors on the number of illnesses experienced by respondents. In Model 2, usage of mental health treatment was regressed on illnesses, criminal behavior, resources, and social stability, net of lifecycle status. The results in Table 2 and modelled in Figure 1 were disaggregated by minority and non-minority groups.

Table 2 Regression Analysis of Health Status on Criminal Behavior, Social Stability and Resources
The National Survey on Drug Use and Health 2012 (US DHHS; Beta (β) Coefficients

	Model 1		Model 2	
	Illnesses		Mental Health Treatment	
	Minority	Non-Minority	Minority	Non-Minority
Illnesses ¹	---	---	.33***	.41***
<u>Criminal Behavior</u> ²	.06***	.06***	.06***	.07***
<u>Resources</u>				
Socioeconomic Status ³	NS	-.03***	.03***	.04***
Medicaid Access ⁴	.08***	.08***	.04***	.06***
<u>Social Stability</u>				
# Times Moved ⁵	.07***	.03***	.06***	.02***
Religiosity ⁶	NS	NS	-.03***	NS
<u>Lifecycle Status</u>				
Medicare Access ⁷	.11***	.10***	.03***	NS
Age ⁸	.25***	.22***	-.05***	-.07***
Gender ⁹	.08***	.10***	.05***	.10***
Constant	.04***	.04***	.02***	.02***
Adjusted R ²	.12	.09	.13	.19
DF 1 & 2	8 & 13711	8 & 22806	9 & 13693	9 & 22769

*** p <=.001; ** p <=.01; * p <=.05

¹ Index of Illnesses= Count of Anxiety, Asthma, Bronchitis, Cirrhosis, Depression, Diabetes, Heart Disease, Hepatitis, HIV, Lung Cancer, Pancreatitis, Pneumonia, STD, Sinusitis, Sleep Apnea, Stroke, Tinnitus, Tuberculosis, Ulcer;

² Index of Criminal Behavior= Index of Criminal History + Index of Drug Use;

³ Index of SES (IREduc2 Education * INCOME Total Family Income);

⁴ Medicaid (1= Yes; 0=No);

⁵ # Times Moved (On a scale from 1-6);

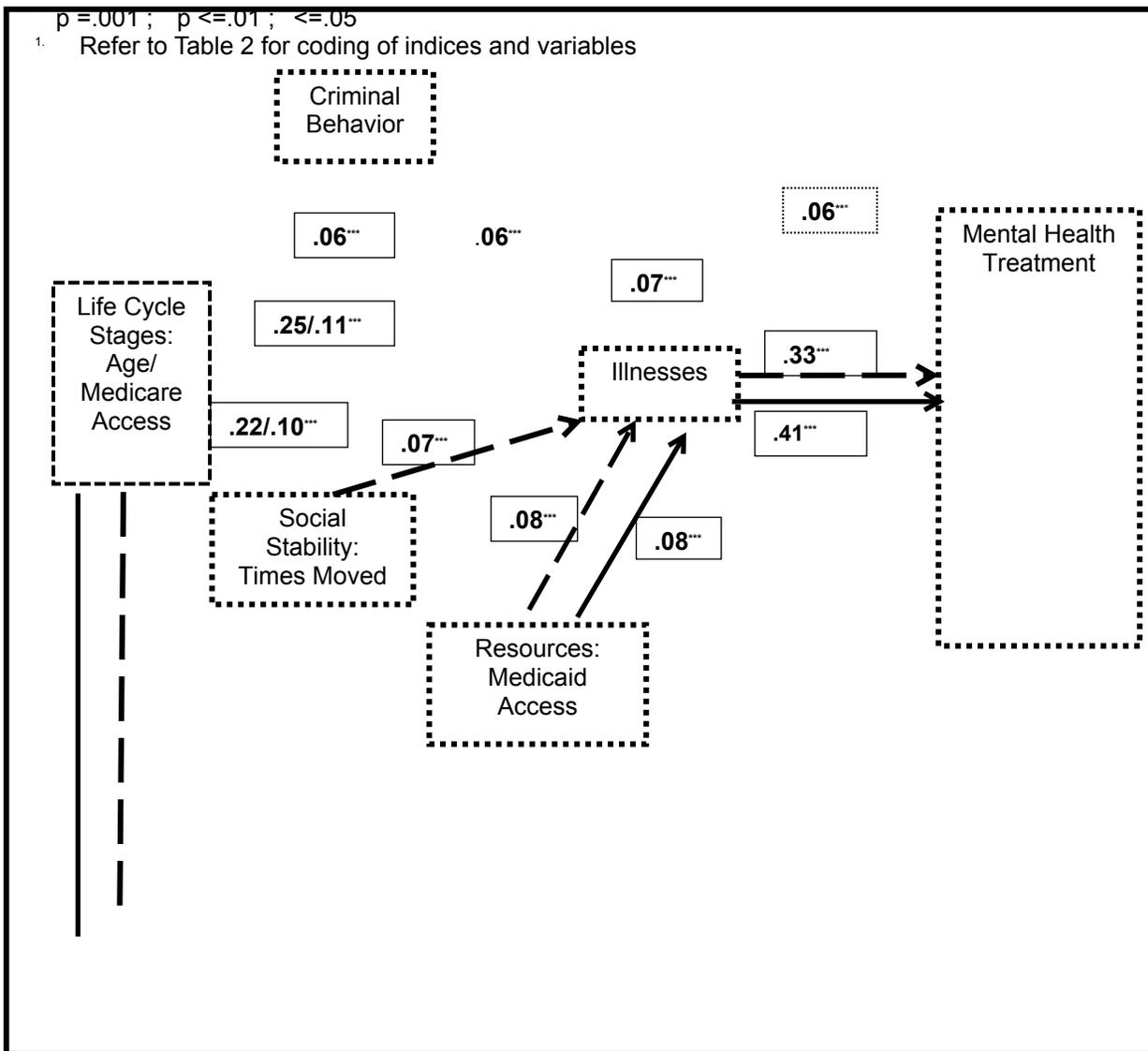
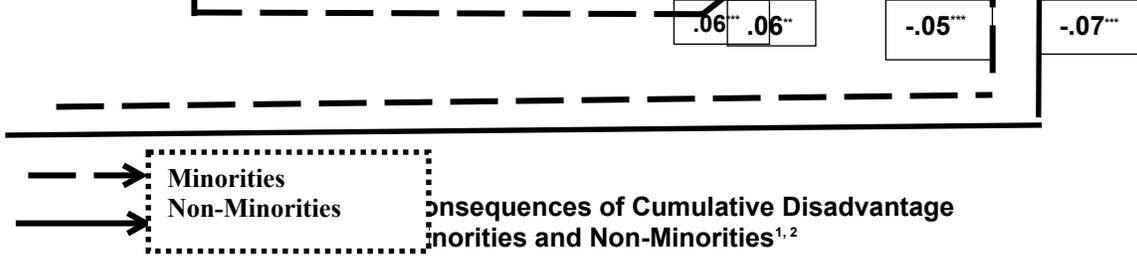
⁶ Index of Religiosity (My religious beliefs are very important; My religious beliefs influence my decisions; Friends same religious beliefs; How many religious services past 12 months);

⁷ Medicare (1= Yes; 0=No);

⁸ Age (Range 18-65);

⁹ Gender (1= Female, 0= Male).

There were some differences, but more similarities, between Whites and non-whites in the predictors that affected illness. Whites with lower socioeconomic status ($\beta = -.03^{***}$) had slightly more illnesses than comparable minorities (not significant). On the other hand, frequent relocation was a somewhat better predictor of illness for minorities ($\beta = .07^{***}$) than for non-minorities ($\beta = .03^{***}$). On the remaining predictors, including criminal history, the illness connections were small and did not vary by majority-minority status.



2. For brevity and clarity, only Beta effects larger than a fifth of the strongest Beta effect are shown. For example, the strongest Beta effect in the illness model was .25***; hence only Beta effects greater than .05 are modelled in Figure 1. For full details on Beta effects, please refer to Table 2.

Insights from the clinical services administrator (Interviewee #2) of a behavioral and mental health center confirmed the importance of both financial and social stability for health. Based on her experience, poverty directly decreased one's ability for health self-care. Because those of lower socioeconomic status are not often able to live healthfully, such as eating nutrient rich foods or attending regular doctor's visits, they tend to be less healthy than those with stronger financial stability. In this study, minorities (=18.4;

sd=11.3) were of lower socioeconomic status than non-minorities (=23.4; sd=12.3). In other words, minority respondents in this sample were less likely living a healthy lifestyle.

Interviewee #2 also shed light on the importance of social connectedness on health status for both minority and non-minority groups: "Those who are more concerned about their overall contribution to the community are less likely to engage in unhealthy activities." Crowder and South (2003) spoke about the importance of community cohesion for health. In exploring the effects of residential segregation, community cohesion was found to vary substantially by race and ethnicity. Racial minority groups were more likely to have closer-knit neighborhoods as a result of common experience with isolation. Therefore, minority social networks are likely to be stronger than those of non-minorities, which might heighten the traumatic experience of being separated from close relationships. This might account for why frequent relocation has a stronger negative impact on health of minority groups.

Explanations for criminal behavior equally jeopardizing the health of minorities and non-minorities were offered by other interviewees. Interviewee #7, a former ER Doctor/Current Medical Director noted that criminal behavior should have the same consequences no matter an individual's ethnicity. If someone of minority status commits a crime or uses a certain drug and someone of non-minority status commits the same crime or uses the same drug, they should both experience the same health consequences from these actions. Furthermore, the police officer (Interviewee #6) added that no single group based on race or ethnicity exhibits more or less criminal behavior. The effect of criminal behavior on the health of minorities versus non-minorities would stem from being a habitual or one time offender. However, in this case, the health implications from the severity of criminal behavior would be independent from the offender's racial status.

Similarly, lifecycle status played a similar role for both minorities and non-minorities in the amount of illnesses experienced by each group. Minorities ($\beta=.11^{***}$) and non-minorities ($\beta=.10^{***}$) with Medicare access generally had more illnesses; Older minorities ($\beta=.25^{***}$) and non-minorities ($\beta=.22^{***}$) were ill more frequently than the younger cohorts. And male minorities ($\beta=.08^{***}$) and male non-minorities ($\beta=.10^{***}$) had more health issues than females.

However, regression effects in Model 2, where mental health treatment was regressed on illnesses and other predictors revealed two poignant ways in which racial disadvantages in health status might be manifested. One, the most powerful difference between minorities and non-minorities was found in the mediating inequalities in the access to health care if they were ill. At one level it is not surprising that the most important predictor of seeking treatment was illness. But, whites who were ill were much more likely to have received mental health treatment ($\beta=.41^{***}$) than non-whites ($\beta=.33^{***}$). The probability of receiving treatment depending on socio-economic resources criminal behavior, or stability did not differ whether minority or non-minority.

A second important racial difference was in the cumulative disadvantages in health care access that minorities faced. The following three examples of cumulative disadvantages in health of minorities are noteworthy. One, not only was social stability more detrimental to the health of non-minorities ($\beta=.07^{***}$) than non-whites ($\beta=.03^{***}$), once they got sick, minorities were more disadvantaged in getting treatment ($\beta=.33^{***}$) than whites ($\beta=.41^{***}$). Second, not only were older minorities more susceptible to illnesses ($\beta=.25^{***}$) than whites ($\beta=.22^{***}$), once they got sick the minorities ($\beta=.33^{***}$) had a harder time than whites ($\beta=.41^{***}$) getting treatment. Third, even when criminal behavior similarly led to more illnesses for both minorities and non-minorities alike ($\beta=.06^{***}$), once they got sick, minorities were less likely to get treatment.

Other professionals interviewed for this research elaborated on the cumulative disadvantages minorities face. They touched on the limitations that often deter individuals from accessing mental health treatment. For example, one of the physicians (Interviewee #3) claimed, “those with fewer social supports and economically disadvantaged, of which a high proportion are minorities, will struggle to access better treatment programs.” Lack of access to a quality care facility and the absence of funds to seek out valuable medical care were other illustrations of the cumulative health disadvantages.

CONCLUDING REMARKS

Empirical Reflections

This study has contributed to existing bodies of research on health status of minorities. Non-minorities had cumulative advantages in receiving health care when they got ill, irrespective of activities (their criminal behavior and social instability) that might have contributed to the illnesses. However, for minorities, the illness probability associated with criminal behavior and social instability were compounded by the difficulty of receiving health care. These cumulative disadvantages in health care access were poignant illustration of the overall racial disparities in health.

Theoretical Reflections

The findings about cumulative racial disadvantages in the health of minorities were grounded in Durkheim and Merton’s theories of integration, expectation states theory, and the health lifestyle model. It was initially proposed that criminal behavior, socio-economic disadvantages, and social instability (risk factors) would be more detrimental to the health of minorities than non-minorities, net of lifecycle status (Medicare access, age, and gender). But, not only are minorities disadvantaged in the illness consequences of risk factors, but their inability to access care compounded their health or lack thereof. Theoretically speaking, integration, expectation states and health life styles cumulatively constraint minorities from receiving health care access much more than whites.

Future Research

On balance, both quantitative and qualitative methods revealed distinct theoretical and empirical insights into the critical issue of cumulative racial health disparities. However, as evidenced by the low adjusted R^2 (between .09 to .19) for both groups, much more needs to be explored and expanded upon in order to provide deeper explanations.

Two main limitations were encountered in this study. One issue was the use of secondary survey data. The study was confined to measures that were not uniquely tailored to the research question. Future research should expand on the measurement of health care beyond mental health treatment and have fuller accounts of the illnesses. The term minority group should be disaggregated to get more detailed comparisons of different minority groups (African American, Latinos, Asians) and immigrants can estimate differential cumulative disadvantages within minority communities. Finally, many interviewees used for this study were hesitant to speak about racial lines; understanding such resistance might also be worthwhile if the health care needs of minorities are to be fully addressed.

APPENDICES

Appendix A. Table

Lifecycle Status
The National Survey for Drug Use and Health, 2012

Concepts	Variables	Values	Minority (n=14,393)	Non-Minority (n=23,476)
Lifecycle Status	Medicare Access	1= Yes	94.4%	89.7%***
	Age	Mean (SD) Min-Max	30.0 (12.4) 18-65	33.6 (27.5)*** 18-65
	Gender	0= Male 1=Female	46.3% 53.7	47.3%*** 52.7

Appendix B Consent Form and Qualitative Interview Protocol

Letter of Consent

Dear ____:

I am a Sociology Senior working on my Research Capstone Paper under the direction of Professor Marilyn Fernandez in the Department of Sociology at Santa Clara University. I am conducting my research on minority status and the health consequences of criminal behavior, social stability and resources.

You were selected for this interview, because of your knowledge of and experience working in the area of health and/or crime.

I am requesting your participation, which will involve responding to questions about factors that influence health status of people who are (or not) involved in crime and drug use. The interview will last about 20 minutes. Your participation in this study is voluntary. You have the right to choose to not participate or to withdraw from the interview at any time. The results of the research study may be presented at SCU's Annual Anthropology/Sociology Undergraduate Research Conference and published (in a Sociology department publication). Pseudonyms will be used in lieu of your name and the name of your organization in the written paper. You will also not be asked (nor recorded) questions about your specific characteristics, such as age, race, sex, religion.

If you have any questions concerning the research study, please call/email me at ____ or Dr. Fernandez at ____

Sincerely,
Leslie Sapon

By signing below you are giving consent to participate in the above study. (If the interviewee was contacted by email or phone, request an electronic message denoting consent).

Signature

Printed Name

Date

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, through Office of Research Compliance and Integrity at (408) 554-5591.

Interview Protocol

26. What is the Name of the Agency/Organization/Association/Institution where you learned about (and/or worked) with this issue?
27. What is your position in this organization?
28. How long have you been in this position and in this organization?
29. How common is it for adults including young adults (18+):
 - a. To be dependent on drugs?
 - b. How about crime and criminal histories?
 - c. Have you observed differences between people of different race/ethnic groups?
 - d. How about men and women? Could you expand a bit more?
30. In your opinion, what are some reasons that lead people to:
 - a. Drug use, for the first time and become dependent on drugs?
 - b. How about crime and criminal histories?
 - c. Have you seen racial/ethnic differences?
 - d. How about differences between males and females?
31. Based on what you know of the health of those involved in drugs and crime:
 - a. How would you describe the health consequences of drug use and criminal histories? Can you give me some examples?
 - b. Does race/ethnicity matter and if so, how? Can you give some examples?
 - c. Do resources (how much education or income) make a difference in the roles that drug/crime play in health issues? That is, have you seen differences in the health effects of drug use and criminal history among those who have resources and those who don't? Can you give some examples?
 - d. How about religion (and health, drugs, and crime)? Can you give some examples?
 - e. What about age?
32. Is there anything else about the issue of the health consequences of drug use that I should know more about?

Thank you very much for your time. If you wish to see a copy of my final paper, I would be glad to share it with you at the end of the winter quarter. If you have any further questions or comments for me, I can be contacted at _____. Or if you wish to speak to my faculty advisor, Dr. Marilyn Fernandez, she can be reached at _____.

Appendix C

Correlation Matrix Indices of Health Status, Drug Use, Criminal History, SES and Social Environment:
The National Survey on Drug Use and Health 2012, The US Department of Health and Human Services
[Top half above the diagonal of 1 are minorities (n=14,393); bottom half non-minorities/whites (n=23,476)]

	Mental Health Treatment	Illnesses	Drug Use	Criminal History	SES	Medicaid Access	# Times Moved	Religiosity	Medicare Access	Age	Gender
Health Status											
Mental Health Treatment ¹	1	.33***	.07***	.06***	NS	.08***	.07***	-.02***	.07***	.03***	.08***
Illnesses ²	.41***	1	.03***	NS	-.03***	.09***	NS	.06***	.23***	.18***	.10***
Criminal Behavior											
Drug Use ³	.07***	NS	1	.15***	-.01***	NS	.12***	-.14***	-.06***	-.15***	-.07***
Criminal History ⁴	.06***	.03***	.22***	1	-.08***	.05***	.08***	-.04***	NS	-.07***	-.09***
Resources											
SES ⁵	NS	-.04***	-.09***	-.09***	1	-.26***	-.14***	NS	-.08***	.08***	-.04***
Medicaid Access ⁶	.12***	.09***	.02***	.07***	-.26***	1	.06***	NS	.10***	-.07***	.14***
Social Stability											
# Times Moved ⁷	.05***	-.03***	.15***	.09***	-.21***	.12***	1	-.08***	-.09***	-.23***	NS
Religiosity ⁸	NS	.04***	-.19***	-.06***	-.08***	-.06***	-.12***	1	.07***	.16***	.12***
Lifecycle Status											
Medicare ⁹	.03***	.23***	-.11***	-.03***	-.10***	.05***	-.18***	.13***	1	.14***	NS
Age ¹⁰	NS	.24***	-.23***	-.09***	.14***	-.09***	-.36***	.17***	.61***	1	.04***
Gender ¹¹	.13***	.11***	-.10***	-.07***	NS	.10***	.04***	.11***	NS	.02***	1

*** p <=.001; ** p <=.01; * p <=.05

¹ Mental Health Treatment= (Past 12 months; 1=Yes);

² Index of Illnesses= (Anxiety; Asthma; Bronchitis; Cirrhosis; Depression; Diabetes; Heart Disease; Hepatitis; HIV; Lung Cancer; Pancreatitis; Pneumonia; STD; Sinusitis; Sleep Apnea; Stroke; Tinnitus; Tuberculosis; Ulcer);

³ Index of Drug Use= (Chew; cocaine; crack; ecstasy; hallucinogens; heroine; PCP; inhalants; pain relievers; oxycodone; tranquilizers; stimulants; sedatives; snuff; methamphetamine; ketamine; adderall; ambien; DMT/AMT; LSD; marijuana/hashish; salvia);

⁴ Index of Criminal History= (NOBOOKY2 * Index of Offences (Summary + Indictable));

⁵ Index of SES= (IREduc2 Education * INCOME Total Family Income);

⁶ Medicaid Access= (1=Yes; 0=No);

⁷ Index of # Times Moved= (On a scale from 1-6);

⁸ Index of Religiosity= (My religious beliefs are very important; My religious beliefs influence my decisions; Friends same religious beliefs; How many religious services past 12 months);

⁹ Medicare Access= (1= Yes; 0=No)

¹⁰ Age= Range 18-65;

¹¹ Gender (1= Female, 0= Male).

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Gendered Collegiate Sports: Athlete-Student or Student-Athlete?

Derek Bradley Eng

ABSTRACT. This study examined the effects of gendered sports programs on the academic success of college athletics using data from the 2003-2012 National Collegiate Athletic Association (NCAA) survey and interviews with six athletic professionals. Data for the 2003-12 periods were disaggregated into two groups, 2003-2010 and 2011-2012, to capture the potential relevance of the Academic Progress Rates revisions made by NCAA in 2011. Programs that reported higher academic success rates received public recognition and fewer penalties. However, only larger male sports programs had lower academic success rates. Private, rather than public, institutions received more public approbation and had better academic success. These findings, not only illustrated the Structural Conflict and the manifest-latent dysfunctional (Merton) nature of collegiate athletics, but also added to literature in the sociology of collegiate sports.

INTRODUCTION

American society, throughout its history, has placed a huge emphasis on sports in academic institutions (Shulman and Bowen 2011). The National Collegiate Athlete Association (NCAA) was created in 1906 to provide college students with a unified athletic conference within which to compete. The NCAA, a non-profit organization, oversees student-athletes from over 1,200 institutions in the U.S. and their 450,000 students. Participating schools are organized into conferences based on geographical location and school size. Sports programs are categorized as Division I, II, or III. Larger sports programs generally belong to a Division I conference while smaller programs tend to compete in Division II or III. Under the NCAA's rules, only Division I and Division II schools (not Division III) can offer NCAA athletic scholarships to their athletes. Another dimension of college sports programs is whether they belong to "powerhouse sports conferences"; these conferences, which include the Pac-12, Southeastern Conference (SEC), and Big 12, all compete in Division I athletics. As a member of a powerhouse conference, institutions receive more media coverage and recognition by the public. They are also often prestigious and have strong athletic programs. No doubt, colleges from smaller conferences, on the contrary, do not place as strong of an emphasis on athletics as the bigger programs.

Yet another important dimension of college athletics is gendered programs. For example, men's sports, such as men's basketball and football, often have large groups

of fans and generate profits for the school. Women's sports, on the other hand, have not received the same public or academic attention. In an effort to bring gender equality in collegiate athletics, in 1972, the United States Congress passed and enacted Title IX. As a direct result of Title IX, institutions of higher education are required to have the same number of varsity teams for both men and women. For some colleges, this meant getting rid of some male sports teams (Thomas 2011). No doubt, since the introduction of Title IX, women's collegiate athletics have benefitted, but they still linger in the shadows of their male counterparts, particularly when it comes to revenue. It is well known that female sports typically draw little to no fans and commensurate media blackout. But, how do female athletes do academically, the other, but important, function of college athletics? Gender equality in college sports is a work in progress. In this context, it is important to scrutinize and address the gender inequalities in academics that might be present in college athletics.

The dynamic tension between academics and athletics is relevant not only to institutions of higher education, but also to college athletes. This tension is one that persists throughout their academic career and perhaps beyond. Over the years, both the NCAA and collegiate athletes have been criticized for pressuring (and succeeding) in getting colleges and universities to dilute the academic requirements for admitting and graduating athletes, undermining the academic side of being a student-athlete. For example, dominant football and basketball programs within powerhouse conferences, such as the Pac-12 Conference, are often under media and social scrutiny for this problem. One common critique is that the NCAA's athletes would not be academically eligible for general admittance to colleges and yet are expected to succeed in college. Many skeptics posit that the only reason star athletes have been accepted is for the benefit of the athletic program. As noted earlier, sports can be a major source of revenue for universities and help place their name on the map for prospective students. The criticisms also extend to the NCAA for their less than stellar standards for academic progress rates (APR) of sports programs and the public approbation (both public recognition and/or penalties) programs receive. In response, the NCAA has begun raising the threshold for what it defines as academic success for student athletes and their sports programs.

It is against this background that this study examined the academic progress rates (APR) of college athletic programs and public approbations they received over a 10-year period from 2003 to 2013. APRs are derived using athlete eligibility rates, retention rates, and squad sizes in the various athletic conferences within the NCAA (NCAA 2014.a). These progress rates measure the academic success of collegiate athletic programs. Athletes and athletic programs are also subject to penalties or public recognition based upon their academic progress rates.

DEFINING TERMS

Academic Progress Rate (APR)¹⁸ is an annual quantitative measurement used by the NCAA to measure a school or university's athletic program's efforts to track student-athletes advancement towards on-time graduation. As noted above, in any given year, a program's APR includes athlete eligibility rates, retention rates, and squad size. Eligibility rate is the number of student-athletes academically eligible to compete for a specific sport within an institution. Similarly, retention rate is the number of athletes that were retained at the end of a given academic year. A student athlete earns one retention point for remaining at the institution and another for being academically eligible. The squad size is the total number of student-athletes who contributed their individual retention and eligibility rate to the institution's APR. The total number of points that a team received is divided by the total number of possible points, then multiplied by one thousand in order to put the score on a scale ranging from 0-1000. A score of 1000 points is a perfect score; 925 is roughly the equivalent to a 50% graduation rate of athletes. Athletic programs falling beneath this threshold may be penalized in a number of ways, including loss of scholarships, loss of practice time, and post-season ineligibility or even being stripped of a conference title.

LITERATURE REVIEW

The issues covered in the extant literature are broken down into APR, public approbation, and the issue of gendered differences in student athletes. Males are seen as athlete-students while females are students first and athletes second.

Academic Progress Rates

Academic Progress Rate (APR), NCAA's metric for calculating student athlete academic success, coincide with the Federal Graduation Rate (FGR) and Graduation Success Rate (GSR) as metrics to quantify academic progress (LaForge and Hodge 2011). Up until 2012, schools were required to have a score of 925, or a 50% graduation rate to meet the NCAA and institution's academic requirements. Widespread critique of the NCAA's standards by the media and public for athlete academic success resulted in the minimum APR score being raised to 930 in 2012.

¹⁸ Academic progress rates are calculated in a multi-step formula. The first step involves multiplying the number of, student-athletes that are academically eligible and retained, by a factor of two because of the two variables used. This product is then added to the number of students who are academically ineligible but retained and multiplied by a factor of one half. Next, the sum of these values is added to the number of athletes that leave the school while academically eligible, multiplied by a factor of one half. The newly added total is combined with the number of student-athletes that leave the school while academically ineligible, multiplied by a factor of zero. Together this sum represents the numerator in the calculation of the APR, which is then divided by the total number of student-athletes to put the metric into percentage form and multiplied by 1000 to put the value on a scale of 0-1000.

Despite the restructuring APR scores, there continue to be critiques of the effectiveness of this tool to measure athlete's academic achievement. For one, "a student athlete who leaves the university prematurely for a professional sports career is considered in the same manner as a student athlete who leaves the university for academic reasons" (LaForge and Hodge 2011:224). For example, many star athletes that plan on going professional choose to enter a draft before their graduation. These actions negatively affect the APR of a program because a point for retention is lost even though it does not necessarily mean the athlete was failing to meet academic standards. In short, since APR is calculated using eligibility and retention rates, the validity of APR measurement could potentially be jeopardized as a way of measuring academic success by the lack of attention to loopholes in the equation.

Another flaw in the APR calculations is that APR only considers students who are receiving athletic financial aid from their Division I schools. This means that student athletes who do not receive athletic scholarships and walk-ons do not count towards a program's APR (Hale 2014:32). The end result is that many student-athletes compete within non-Division I athletic programs but their academic success, or lack thereof, is not taken into account in the team's APR rate. Even if these athletes struggle academically, since their results do not affect the APR, omitting their academic success can help a program hyper-inflate their APRs. Thinking bigger picture, this could potentially be a loophole for institutions, helping them maintain legitimacy with the NCAA, remain eligible for post-season play without being penalized, and derive profits through media, advertisements, and sales of sports paraphernalia. Future research should broaden the scope of the issue, considering the academic progress of all athletes within an athletic program to get more complete results rather than focusing only on those receiving athletic scholarships.

Public Approbation

Academic success of a sports program is also indicated by the public approbation the program receives in the media, from the college and from the NCAA. For one, the NCAA holds institutions accountable for their student-athletes' success through the penalties and public recognition they afford programs (Weston 2011). These approbations, based on their APRs from the previous academic school years, can either help the program receive public recognition for academic success or strip it of its achievements or opportunities for athletic achievements. For example, if an athletic program does not meet the threshold of an APR score of 925 for four consecutive academic years or have two back-to-back school years with an APR score of 940 it will be penalized with post-season ineligibility during the following season (LaForge and Hodge 2011). With some sports such as men's basketball and football being so vital for an institution's financial profitability, meeting these expectations is in the school's best financial interest. For example, in 2014, the University of Connecticut won both the men's and women's basketball national championship. However, during the previous year, the men's team was ineligible for post-season play because of their disturbingly low APR scores of 826 and 844 between 2008 and 2010. Since then the program has

improved their scores to 978 in 2010-2011, 947 in 2011-2012, and 1,000 in the past two seasons (Amore 2015).

On the other hand, some universities have sometimes placed their financial interests over the academic success of their athletes. Two recent cases in point: It was discovered in late October 2014 that the University of North Carolina had been boosting student-athlete grade point averages by having them take paper classes for over 18 years. This scandal, termed the biggest student-athlete scandal in history, included two football coaches, at least five advisors, and over 3,100 students (Ganim and Sayers 2014). The University of Southern California (USC) is another school that has been publically criticized for its academic violations. "Finding USC a "repeat violator" with respect to its football program, the NCAA imposed stringent sanctions, including a two-year ban on postseason football competition and bowls, for seasons 2010 and 2011" (McLaughlin 2011:263). These penalties take away from the institution's profitability because the lack of post-season competition reduces sales of team merchandise. Penalties also harm the reputation of the school because student athletes may not want to be associated with an institution that is ridiculed in the media, often times deterring recruitment of talented athletes and pushing students to other universities. Unfortunately, there may be other schools in similar situations that have yet to be unveiled.

While theoretically it is possible for female programs to have the same problems or recognition as their male counterparts, they typically do not receive much recognition or penalties. This gendered phenomenon is partly because female sports are not as favored in the media as male sports. However, during the 2010-2011 academic school year, of the five national champions that received public recognition for their academic excellence four were women's teams; only one was a male team. These teams included Notre Dame women's soccer, UCLA women's golf, Brown women's rowing, Arizona State softball, and Ohio State men's volleyball. This overrepresentation of women's teams being publicly recognized for high achievement continued in 2011; 560 women's teams were recognized in contrast to only 394 men's or mixed squads (NCAA 2012).

The Student-Athlete or Athlete-Student?

With the amount of emphasis placed on male collegiate athletics, male student athletes often place athletics before academics. Females, on the other hand, experience the opposite.

The Male College Athlete-Student

It is obvious that male collegiate sports, such as basketball and football, are a highly publicized and profitable industry. With so much at stake for these two sports, many schools recruit very heavily. While it is the NCAA and the university institutions' responsibility to ensure that all student-athletes are held to the same standards as the

general student body, the recruiting process sometimes jeopardizes the academic admission standards for male athletes. Unfortunately, this double standard continues throughout the career of student-athletes as they progress through their college career. For example, in order to maintain the media publicity and profitability that their sports teams bring, universities sometimes turn a blind eye to a star who is not meeting academic standards. Issues like these have been prevalent since the inception of the NCAA, placing more emphasis on athletics than on the students' academic abilities, ultimately compromising the integrity of what it means to be a student-athlete.

The recorded mismatches between APR scores and approbation are good examples of the Male Athlete-Student. Between the year 2004-2012, men's football and basketball held the lowest APR scores, 949 and 952 respectively (Ramsey 2014). Yet, most of the male athletes and programs received much attention. Popular male collegiate sports, such as basketball and football, amass huge crowds and fans and generate large amounts of media attention and revenue for the university. As a result, the incentives for schools to keep recruiting talented athletes have increased even as the standards for being academically qualified for entrance into the institution have become more flexible. No doubt athletic programs are expensive for their institution; but the expenses are overshadowed by revenue generated from team merchandise sales of successful sports teams. Consequently, recruiting athletic talent becomes one of the priorities, even if it means sacrificing the educational credentials. Besides, there are incentives for the university and athletic program to allow star athletes who are struggling academically to continue playing and maintaining the school's reputation so that it is not tarnished for other athletes and regular students alike. Even the athletes feel these tensions. As Harrison reported in his study of African American college students, "Forty-four percent of the African American participants felt that the recruiting process is skewed towards athletic glamorization versus academic building" (2009:46).

Northwestern University was another example of how financial interests can change the academic-athletic priorities of one institution (Bowen and Levin 2011:27). For a long time, the university had issues prioritizing what it wanted to focus its efforts on, the student or the athlete. Although the college competes in one of the powerhouse conferences, The Big Ten, they had never been a consistent major contender in the conference. "With an undergraduate population of only 7,400 students, the Wildcats bore the scars of trying to maintain a team able to compete within the Big Ten and still meet Northwestern's academic standards" (Bowen and Levin 2011:27). There was a short-lived stint in which their football team was successful, and had aspirations of reaching the Rose Bowl. During these three years, the school created a new football stadium, had dramatic surges in revenue, and saw an increase in the student applicant pool. The university football team's success brought major media attention to the school and put the school in the spotlight for both public recognition and scrutiny. Unfortunately, for the first time in the school's history, the admission standards were lowered for athletes. Fortunately, this stint was short lived.

Female College Student-Athlete

Female sports programs rarely undergo the same scrutiny and criticism that their male counterparts, in say basketball and football, encounter. Why is this so? For one, if male athletes and their sports programs are not doing well academically, the same cannot be said of female athletes or their programs. An added explanation is the limited media attention and corresponding profitability of female collegiate sports. This differential media attention is partly a direct result of the favored status of spectating male sports. But, in the process, female sports tend to avoid the conflict of interest between money and athletics that male programs face. Another reason for the limited scrutiny of female sports is that female athletic programs do well academically. NCAA's APR score comparisons between 2004 and 2012 showed that female programs had higher scores in each of the following sports: baseball/softball, basketball, cross country, golf, indoor track, outdoor track, soccer, swimming and diving, and tennis (Ramsey 2014).

It is then not surprising that the case of female college athletes seems to be the opposite of their male counterparts. The female college athlete is more often a student-athlete than an athlete-student. A study by McLaughlin (2011:1) of female collegiate athletics found that "When controlling for all other variables, female teams were positively associated with APRs while male teams from high profile sports and teams with larger squad sizes were negatively associated with APRs". Gendered APR differences disaggregated by specific sports (Ramsey 2014) portrayed a similar picture. Female sports APR scores during 2004-2012 were overall consistently higher than male scores. Such APR disparities were also evident in specific sports. Softball teams had an average score of 978 compared to 965 of baseball; women's basketball APR score 972 was higher than the 952 APR of men's basketball; and women's cross country teams scored a 983 APR while the APR was only 965 for their male counterparts. Additionally, the female sport programs with the highest average scores in the 2004-2012 periods were gymnastics at 989, golf at 986, and swimming and diving at 986. In fact, over the span of eight years, the lowest average score for female sports was women's basketball at 972. Male sports, on the other hand, had a low score of 949 for football. Unfortunately, these gendered differences have continued in the NCAA's 2014 list of APR rates by gender and sport (NCAA 2014.b). Female sports programs averaged 971-990 while male sports programs averaged 947-984.

Why is there such a universal discrepancy in the academic achievements of male and female sports programs? For one, the gendered inequalities in professional sports reduce the likelihood of female athletes making a career out of their sport. There is significantly less financial incentive for females to play professional sports. The average female basketball player in the WNBA makes \$51,000 a year, with rookies earning an average of \$35,000 a year (WNBA Salaries 2015). In contrast, out of 425 listed NBA salaries, the low was \$29,500 with the high over \$23,000,000. And out of the 425 NBA listed salaries, 419 were over \$100,000 a year (ESPN 2015).

Another reason for the gendered academic discrepancy is the unintended academic consequences of the financial dimension of college athletics. No doubt, collegiate

athletes are not supposed to receive payment for their participation, but the financial dimension of college sports is common knowledge. That is, despite their higher APR scores, female sports programs generally have received little to no public recognition, penalties or media attention, or profits. Universities do not have the same financial stakes in female programs that they have in male sports programs. But, female athletes, being members of non-revenue generating sports teams, often benefit from the unintended consequence of the college athlete selection processes. If colleges do not have to heavily recruit star female athletes, they might not be willing to be as flexible with admission standards for recruiting. And if female college athletes are academically stronger than male athletes when they enter college, it stands to reason that they do better academically once they are in college.

The women's lacrosse team competition between Williams College and Amherst College in 1996 offers a good illustration of the female student-athlete. "On May 18, 1996, while Members of the Amherst College women's lacrosse team were in Alabama playing in the NCAA Division III championship tournament, the players from the Williams team were in Williamstown taking their spring term final exams" (Bowen and Levin 2011:24). While eligible for a national title, Williams College deemed it more important that their women's lacrosse team take their final examinations, denying them the right to compete in the national tournament despite their perfect 12-0 record. As a medium-sized club sport in a small athletic conference, the women's lacrosse team receives virtually no public approbation. In fact, Williams College values the academics so much more than the competitiveness of their athletics that the team was forced to miss the national tournament in order to complete their final exams at the school.

Williams' value of academics in sports was, in fact, rooted in the New England Small College Athletic Conference founding principles, which read as follows: "intercollegiate athletics are to be kept in harmony with the educational purposes of the institution, athletes represent the student body; and each school is in control of the intercollegiate athletic policy" (Bowen and Levin 2011:31). Besides, no athletic scholarships are given out in Division III schools. And many of these institutions place a higher emphasis on academics and education, making athletics to be simply an extra-curricular activity.

Summary and Future Research Directions

Studies reviewed above have documented the "Athlete-Student" model in male sports programs and their respective universities. The male sports programs in larger powerhouse conferences are more likely to receive public approbations and reap the associated financial benefits than smaller male or female sports programs. The financial interests of colleges in their revenue generating male sports programs has led many to create flexible (even diluted) admissions standards for athletes in certain highly profitable sports. The University of North Carolina and the University of Southern California were classic examples of the male athlete-student model, until they were caught for violating admission regulations. In contrast, since female sports do not draw the same number of fans and revenues as male programs, female sports programs can

adhere to the ideal Student-Athlete model. They can uphold stricter admission policies for female athletes, yielding higher APR than male sports teams. It is ironic that despite all the attention to male sports programs, roughly two thirds of the teams publically recognized for academic achievement in the 2010-2011 academic year were female. However, despite the recent overrepresentation of female teams in public recognition, they continue to be ignored by the institutions and NCAA.

Writers have noted other contradictions in the academic dimension of college athletics. On the one hand, to NCAA's credit, they have introduced revisions to tighten the academic standards for athletic programs; the APR structure was revised in 2012 to raise the academic standards of college athletic programs. These changes could potentially reduce the amount of public approbation a team receives in the form of public recognition and/or increase the penalties they receive for falling beneath the academic standards. But, another recent change, revamping of the college football bowl games in 2014 to become a playoff system in which the top four seeded teams compete (Dinich 2012), might continue to compromise the academic component of college athletics. The shift to a play-off system brought more revenue; more games were played, teams got more media time, and team gear sales shot up. But, the winner of the 2015 collegiate football national championships, Ohio State University, had previously been banned from the post-season two years ago for academic violations. A similar instance is that of the University of Connecticut, the winner of the 2014 NCAA men's basketball championship, who had been disqualified the year before. Despite their academic struggles, the NCAA allowed the team to compete in the 2013-2014 season so long as their APR rates were above the NCAA's threshold.

With postseason play and play-off systems becoming increasingly profitable, continued scrutiny of college athletes' academic success is paramount. Previous studies have examined the relationship between male and female sports programs through APR, but have not done so after the APR revisions in the 2012 academic school year. This research will compare team academic success in the pre-APR revision years with the one year after the revisions were introduced.

RESEARCH QUESTION

A set of related questions will be explored in this paper linking academic success and collegiate athletic programs over a span of nine years, 2003-2012. First, how much more academically successful are larger sports programs in comparison to smaller ones? Second, how do male sports programs differ in their academic success from their female counterparts? Academic success will be measured using their APR and approbations (recognitions and penalties). Because of changes in APR over the years, separate analyses will be run for two time periods: the first is from 2003-2010 prior to the APR revision and the second in 2011-2012, the year that the APR revision was implemented. School type (whether public or private) will be controlled.

THEORETICAL FRAMEWORK AND HYPOTHESIS

This research about gendered inequalities in college athletics was premised in two conflicting set of theories. They were: Structured Gender Conflicts contrasted with Gender Role Theory.

Theories of Structured Gender Conflicts and Associated Hypothesis

Men's sports, compared to women's sports, were predicted to received more public approbation, and have higher APRs, after controlling for the type of institution. Structured gender inequalities have existed for thousands of years. Patriarchal values within society have trickled down throughout the generations. A case in point: male college students have always received a disproportionate amount of attention, especially when it comes to sports. Because women's sports were underrepresented and undervalued, there was the social need for correcting the imbalance. Title IX, which was introduced in June 23, 1972, was the public policy solution to this imbalance; Title IX was supposed to promote gender equality in collegiate athletics by having an equal number of male and female sports teams. As a result, many schools had to cut male sports teams in order to balance out the number of teams per sex.

Despite such progress in policy, female sports still receive fewer scholarships, draw smaller crowds, and receive less media attention. The persistent inequality between male and female sports is a by-product of structural conflicts in higher education. Structural conflict theory (Taylor) captures the tension that occurs when various structured groups compete for the same scarce resources. When applied to collegiate sports, after the introduction of Title IX, male and female sports teams had to share scarce resources. Unfortunately, despite the structural policy changes, pre-Title IX gendered and financial values have remained intact, continuing the resource inequalities that women athletes face, even if in more indirect ways. For one, since female sports do not draw the same crowds and media interests, they do not receive the same resources, recognition and penalties that male teams do. In contrast, the financial resources that can be derived from profitable sports such as men's basketball and football, have led academic institutions and the NCAA to continue to permit (academically) failing sports teams to "falsify" academic success reports. If this pattern holds true, larger male sports teams will report higher APR rates and public approbation than female programs, net of school type and academic year.

Conversely, women's sports, compared to men's sports, were predicted to have higher APRs and approbations, after controlling for the type of institution and the academic school year. Females have tended to do better academically than males (Heyder 2013), irrespective of whether they were athletes or not. In addition to the lack of financial incentives in college, professional sports are far less profitable for women than for men.

As a result, female athletes are more likely to place a larger emphasis on academics than athletics.

METHODS AND DATA SOURCES

While the bulk of this study was done using secondary data, primary data, in the form of interviews conducted, were used to supplement the findings of the secondary data. The goal was to gain insight into the relationship between public approbation, academic progress rates, and gendered sports programs.

Secondary Data

The secondary data came from the National Collegiate Athletic Association's "NCAA Division I Academic Progress Rate" study; this is a public access database that documented student-athlete academic progress rates (APR), eligibility rates, retention rates, penalty and award information between 2003 and 2012 (Paskus 2013). To limit the potential complications that might arise from the restructuring penalty definitions and assessments after 2011, the analyses were separated by two time periods: 2003-2010 and the 2011-2012 academic years. This disaggregation also helped evaluate the potential positive effects of the APR revisions.

The NCAA survey sampled at least one school from each of the Division I conferences in order to capture a wide range of athletic programs. There were 6,446 universities who participated in the survey with a 100% response rate. Roughly two thirds of colleges surveyed were public (65.2%), while about a third were private (34.8%; Appendix A. Table). Because athletes and non-athletes are typically better prepared academically in private schools than public schools, school type will be controlled in the multivariate analyses.

Primary Qualitative Interviews

To gain more insights into the survey findings about the academic success of college athletic programs, six interviews were conducted with professionals who work in the realm of collegiate athletics. In order to gain a well-rounded sample, people were interviewed from various positions within different athletic programs. The NCAA survey sampled Division I schools; in order to fit within these parameters, professionals chosen for interviews work in this division. Interviewees included an assistant athletic director, professional soccer player, women's soccer head coach, softball player, a basketball coach, and a football coach. Each of these interviews, which lasted around 20 to 30 minutes, was conducted over the phone in order to accommodate their schedules. See Appendix B for the consent form and interview protocol.

DATA ANALYSES

Operationalization and Descriptive Analyses

Athlete academic-success was measured using academic progress rates and public approbation. Academic progress rates (team size, eligibility rates, and retention rates) measured the likelihood of an athletic program's student athletes to graduate on time. Approbation consisted of the number of public recognition and/or penalties athletic programs received based upon their academic success.

Public Approbation

The indicators presented in Table 1.A. captured the public approbation, or official approval or sanction the teams received. In keeping with the research design, survey results were broken down into two time periods: 2003-2010 and 2011-2012 to represent the NCAA's restructuring revisions to APR standards that took place in August of 2011.

Between 2003-2010, most sports teams did not receive a penalty (92.3%). Interestingly, almost none of athletic programs received a penalty in 2011-2012 (99.5%), the year after the minimum APR threshold for meeting the NCAA standards was later raised.

Another important factor to public approbation is the severity of penalties over time. Penalty severity was measured only in the 2003-2010 time period. Almost all sports programs did not receive a penalty during 2003-2010 (92.3%). But a few did receive Level 1 Penalties (3%), a combination of Level 1 and 2 Penalties (1.5%), and a combination of Level 1, 2, and 3 Penalties (3.3%). The severity of penalties directly affected the punishment associated with the penalty levels. Level 1 Penalties resulted in a reduction of practice time from 20 hours a week over five days to 16; the reduced hours must be replaced with academic activities. A Level 2 Penalty reduced the number of competitions in which a team can participate. Finally, the Level 3 Penalties; these include coaching suspensions, financial aid reductions, restricted NCAA membership, and even post-season ineligibility (NCAA 2014).

In 2011, NCAA announced that teams falling underneath the APR threshold of 930 would be ineligible for the postseason. However, virtually all of teams were eligible for postseason competition in 2011-12. In addition to penalties, schools also receive public recognition. Most teams reported that they did not receive any public recognition awards (95.1% in 2003-2010 and 85.2% in 2011-2012).

The mean () on the Index of Public Approbation was low for both time periods, sitting at 0.34-0.86 on a scale of 0-5 and 0-4. These low means indicated that the average team in each year grouping, received either no penalty or at the minimum a Level 1 Penalty, were eligible for the postseason, and did not receive any public recognition awards.

TABLE 1.A. Descriptive Statistics for Public Approbation

NCAA Division I Academic Progress Rate, 2013 (n=6442)

Concept	Dimensions	Variables	Responses	Statistics	
				2003-2010	2011-2012
Public Approbation	Penalties	Penalty Level earned	0 = None	92.3%	99.5%
			1 = Level 1	4.5	0.4
		2 = Level 2	0.8	0.1	
		3 = Level 3	2.5	0.1	
		Sustained penalty severity 2003-2010	0 = None	92.3%	N/A
		1 = Level 1	3.0		
		2 = Level 1 and 2	1.5		
		3-13 = Level 1, 2, and 3	3.3		
		Mean (SD)	0.16 (0.60)	N/A	
	Postseason ineligibility		0 = Eligible for the 2013-2014 postseason	NA	99.8%
			1 = Ineligible for the 2013-2014 postseason		0.2
	Public Recogn- ition	Did the institution receive any public recognition awards? ¹	0 = Team did not receive award	95.1%	85.2%
			1 = Team received award	4.9	14.8
		Index of Approbation ²	Mean (SD)	0.86 (0.39)	0.34 (0.69)
			Min-Max	0-5	0-4

¹ Reversed the responses;

² Index of Public Approbation = Penalty + Post-Season Ineligibility + Public Recognition; Range 0 (no approbation) to 5 (high approbation).

Academic Progress

As noted earlier, one predictor of a university's public approbation record is its athletic academic progress. In Table 1.B., the indicators represent the academic progress rates (APR) of an institution's athletic programs. To recap, an institution's APR is derived from eligibility rate from the previous academic year, school's retention rate of student-athletes, and the squad size of each sport. Academic progress and its derivatives were measured in two groups, years 2003-2010 and 2011-2012 to represent the revision to the NCAA's threshold for minimum APR in August of 2011.

As seen in Table 1.B., virtually all student-athletes were academically eligible to participate in their respective sport (97% and 98%). Additionally, retention rates were almost perfect (96% and 97%). This meant that aside from students who graduated, most student athletes were academically eligible to compete and returned to the school the following year. High eligibility and retention rates meant that athletes at colleges and

universities were on track to graduate, directly supporting the reasoning for why APR is used as a metric for student-athlete success.

An average APR for the collegiate athletes in the study sits at 966.2 from 2003-2010 and 976.2 in 2011-2012. The average APR score jumped 10 points after the NCAA's revision to APR in 2011. These averages translate to roughly a 75% graduation rate. While this may seem very high, it is important to remember that a score of 925 is roughly the equivalent of a 50% graduation rate. Only athletic programs which fall beneath that threshold are penalized, and that too depending on the severity and duration of the failure.

**TABLE 1.B. Descriptive Statistics for Student-Athlete Academic Progress
NCAA Division I Academic Progress Rate, 2013 (n=6375)**

Concept	Dimension	Variables (Questions)	Values/ Responses	Statistics	
				2003-2010	2011-2012
Academic Progress	APR ¹	What is the school's eligibility rate?	Mean (SD) Min-Max	0.97 (0.03) 0-1	0.98 (0.04) 0-1
		What is the school's retention rate?	Mean (SD) Min-Max	0.96 (0.03) 0-1	0.97 (0.04) 0-1
		What is the squad-size?	Mean (SD) Min-Max	19.2 (15.5) 3-452	19.5 (15.8) 3-447
		Index of Academic Progress Rates ²	Mean (SD) Min-Max	966.2 (24.7) 808-1000	976.2 (32.1) 500-1000

1 APR's Numeric formula: $1000((\# \text{ of student-athletes academically eligible and retained} \times 2) + (\# \text{ of student-athletes retained, but academically ineligible} \times 0.5) + (\# \text{ of student-athletes that leave the school while academically eligible} \times 0.5) + (\# \text{ of student-athletes that leave the school while academically ineligible} \times 0.0)) / \text{total} \# \text{ of student-athletes}$;

2 Index of APR = taken straight from survey for sophisticated calculation reasons; Range 500 (low APR) to 1000 (high APR).

Men's Sports

Gendered sports programs, broken down into male and female athletics, can be influencing factors in a university's public approbation and APR. In Table 1.C. male athletic programs were broken down into types three subcategories of sport by size: small, medium, and large. The distinctions between sport sizes were made by how much income they generated and media attention they received. Small sports include club sports such as sailing and bowling. These accounted for less than 0.09% of the athletic programs. Medium sports were the traditional sports, but not the ones that receive the most media attention. They included swimming, tennis, and golf. Together, these made up roughly two thirds of the sports (61.7%). Last, were the large sports: these are mainstream sports that receive large amounts of media attention and are also

the most heavily recruited. Large sports include baseball, basketball, football, and soccer (37.3%).

Among male sports, this study also took note of the school's primary and football conference, if applicable. Primary athletic conferences were pretty evenly spread amongst medium and powerhouse conferences, with more weight on the small conferences (47.6%) over the medium (24.2%) and powerhouse conferences (28.2%). There were fewer schools in the football conferences, especially at the small and mid-major conference level; some schools chose not to have a football team for financial reasons. Schools with football teams tended to jumped up in conference size for football compared to their normal conference division.

Overall, the distribution of schools in football conferences was pretty even: 27% did not have a football team; 33.4% belonged to a small conference; 17.4% were in a mid-major conference; and 22.2% belonged to a powerhouse conference. The mean of the Index of Men's Sports was 3.5 on a scale that ranges from 0-9.

**TABLE 1C. Descriptive Statistics for Men's Sports
NCAA Division I Academic Progress Rate, 2013 (n=2952)**

Concepts	Dimensions	Variables (questions)	Values/ Responses	Statistics
Men's Sports Program	Sport	What type of men's sport?	1 = Small sport	0.0%
			2 = Medium sport	61.7
			3 = Large sport	37.3
	Conference	Type of primary conference	1 = Small conference	47.6%
2 = Mid-major conference 3 = Powerhouse conference			24.2 28.2	
	Conference	Type of football conference	0 = No football team	27.0%
			1 = Small conference	33.4
			2 = Mid-major conference	17.4
			3 = Powerhouse conference	22.2
		Index of Men's Sports Program ²	Mean (SD) Min-Max	3.5 (2.7) 0-9

¹ Index of Male Sports Programs = (Type of Men's Sport + Primary Conference Type + Type of Football Conference)/3; Range 0 (small sport and conference) to 3 (large sport and conference).

Women's Sports

A third factor considered in an institution's public recognition or penalization was women's athletics. In Table 1.D. female athletic programs were disaggregated into types three subcategories based on size, small, medium, and large. Identical to the male counterparts, small programs represented club sports, the medium were less mainstream sports such as swimming and golf, and the large sports consisted of basketball, soccer, and softball. Very few female sports fell under the small category (4.3%), most were in the category of medium (68.4%), and about a quarter in the large

category (27.3%). Majority of responses came from medium-sized female sports such as golf, swimming, gymnastics, etc. (68.4%).

Also included in women’s sports programs was the school’s primary conference. About half of the schools fell within the boundaries of a small conference (50.2%), roughly a quarter in a mid-major (23.7%), and approximately another fourth in a powerhouse conference (26.1%). The index mean on the women’s sports program was 3.5 on a scale of 1-6; the average university female sports program is a medium sport, within a small or mid-major conference.

**TABLE 1D. Descriptive Statistics for Women’s Sports
NCAA Division I Academic Progress Rate, 2013 (n=3522)**

Concepts	Dimensions	Variables (questions)	Values/ Responses	Statistics
Women’s Sports Program		What type of women’s sport?	1 = Small sport	4.3%
			2 = Medium sport	68.4
			3 = Large sport	27.3
		Type of primary conference	1 = Small conference	50.2%
			2 = Mid-major conference	23.7
			3 = Powerhouse conference	26.1
		Index of Women’s Sports Program ¹	Mean (SD) Min-Max	3.5 (1.3) 1-6

1 Index of Female Sports Programs = (Type of Female Sport + Primary Conference Type)/2; Range 0 (small sport and conference) to 3 (large sport and conference).

Summary

On balance, most schools did not earn penalties, or post-season ineligibilities, and also did not receive public recognition awards. Academic progress rates tended to yield high athlete eligibility and retention rates. The male sports programs tended to be medium sized sports, in a small, primary conference, and either did not have a football team or if they did were in a smaller conference. Lastly female athletic programs tended to consist of medium sized sports in small primary conferences.

Bivariate Analysis

The bivariate correlations presented in Appendix C showed early hints at the relationship between public approbation, APR, male sports programs, female sports programs, and institution type. During 2003-2010, the lower an athletic programs’ APRs, the more public approbation they received ($r=-0.08^{***}$). In the 2011-2012 school year (after the NCAA’s 2011 APR revision), the amount of public approbation was associated with even lower APRs ($r=-0.23^{***}$). After the APR revisions, teams from public

universities received more public approbation than teams from private schools ($r=0.27^{***}$).

Larger male sports programs belonging to powerhouse conferences reported lower APR rates both before and after the revision ($r=-0.33^{***}$ and -0.19^{***}). On the other hand, larger female sports programs competing in larger conferences tended to do better academically ($r=0.16^{***}$ and $r=0.09^{***}$). Private schools received higher APRs than public schools ($r=0.35^{***}$ and $r=0.17^{***}$).

Linear Multiple Regression

In the final step of the statistical analyses, a two-step multivariate analysis was conducted. A university's public approbation and academic progress rates were regressed, in sequence, on gendered athletic programs and school type, disaggregated by two separate time periods, 2003-2010 and 2011-2012. The results are presented in Table 2 and modeled in Figure 1.

Table 2: Regression Analyses of Gendered Collegiate Athlete Academic Success NCAA Division I Academic Progress Rate 2013, National Collegiate Athletic Association

	2003-2010		2011-2012	
	Model 1: APR ² Beta (β)	Model 2: Public Approbation ¹ Beta (β)	Model 1: APR ² Beta (β)	Model 2: Public Approbation ¹ Beta (β)
Academic Progress Rates²	---	-0.09 ^{***}	---	-0.17 ^{***}
Male Sports Programs³	-0.30 ^{***}	-0.07 ^{***}	-0.19 ^{***}	-0.08 ^{***}
Female Sports Programs⁴	NS	NS	NS	NS
Private Institution⁵	0.30 ^{***}	NS	0.14 ^{***}	-0.14 ^{***}
Constant	1.46 ^{***}	0.65 ^{***}	1.93 ^{***}	0.23 ^{***}
Adjusted R²	0.20 ^{***}	0.01 ^{***}	0.06 ^{***}	0.18 ^{***}
DF 1 & 2	3 & 5808	4 & 5808	3 & 6403	4 & 6395

*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$; NS indicates a non-significant value.

¹ Index of Public Approbation = Penalty + Post-Season Ineligibility + Public Recognition; Range 0 (no approbation) to 5 (high approbation);

² Index of APR = taken straight from survey for sophisticated calculation reasons including eligibility rate, retention rate, and squad size; Range 500 (low APR) to 1000 (high APR);

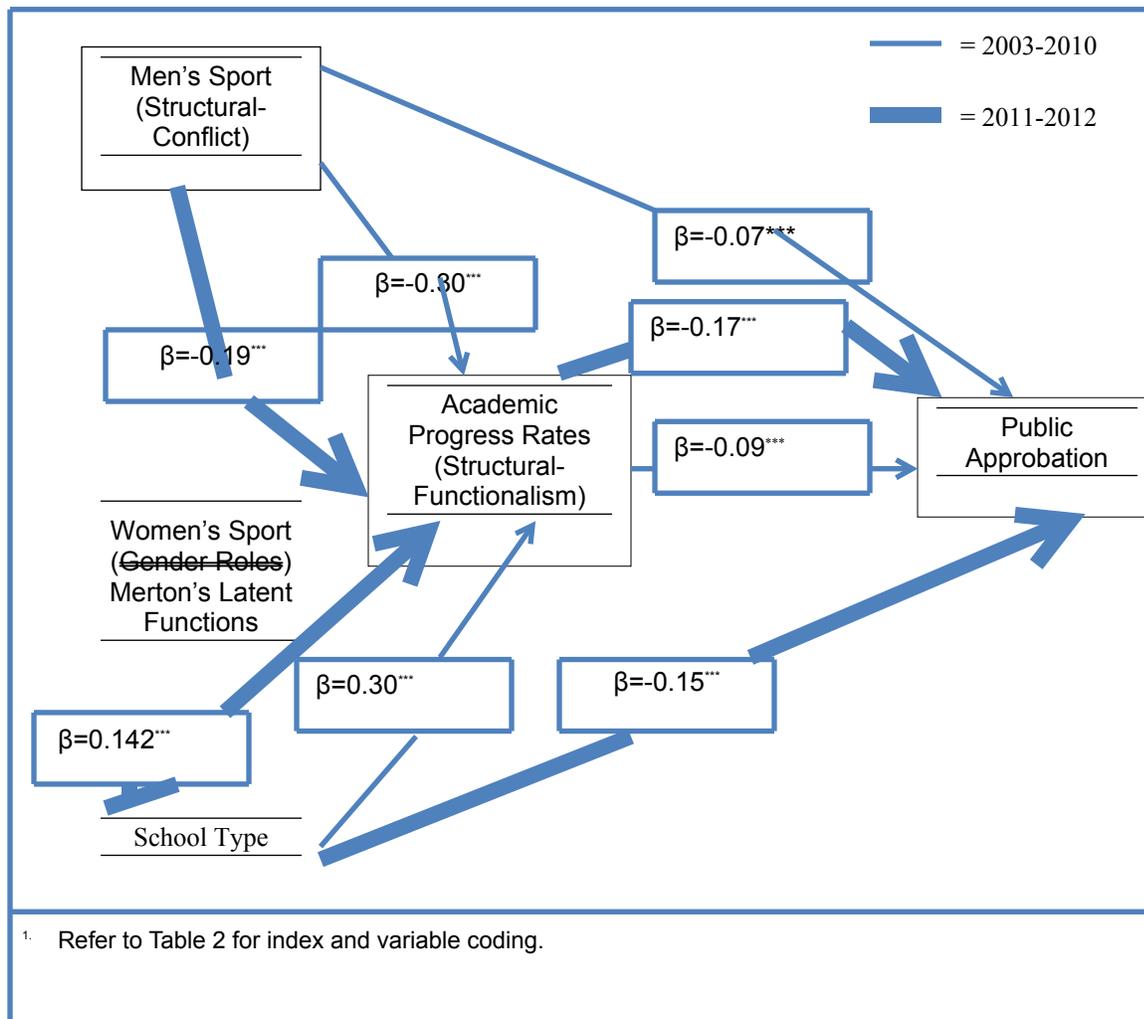
³ Index of Male Sports Programs = (Type of Men's Sport + Primary Conference Type + Type of Football Conference)/3; Range 0 (small sport and conference) to 3 (large sport and conference);

⁴ Index of Female Sports Programs = (Type of Female Sport + Primary Conference Type)/2; Range 0 (small sport and conference) to 3 (large sport and conference);

⁵ Private institution = 1 versus Public = 0.

As seen in Model 1 for both the 2003-2010 and 2011-2012 time periods, the larger the size of male sports and the conferences they competed in, the lower their APRs. This connection, however, was stronger ($\beta = -0.30^{***}$) in the pre-APR revision period than after ($\beta = -0.19^{***}$). Similarly, while private institutions reported higher APR rates than public institutions, the effect was much stronger in the pre-APR revision era (2003-10 $\beta = 0.30^{***}$) than after (2011-12 $\beta = 0.14^{***}$). These shifts between the two time periods were indicative of the expected (manifest function) positive academic consequences of NCAA's tightening the APR standards.

Figure 1. Empirical Model of the Effects of Gendered Sports and School Type on Academic Progress Rates and Public Approval



When public approbation was the focus (in Model 2), similar patterns emerged that highlighted the potential positive effects of tightening the APR scores. One, teams that earned higher APRs were the ones that received fewer public approbations, more so

after the APR revisions in 2011-2012 ($\beta = -0.17^{***}$) than before from 2003-2010 ($\beta = -0.09^{***}$). Second, the larger the male sports program and conference they competed within, the fewer approbation the teams received between 2003-2010 and 2011-2012 ($\beta = -0.07^{***}$ and $\beta = -0.08^{***}$). Third, in keeping with the tightening of APR standards theme, public institutions received more approbation than private institutions, but only after the APR revision ($\beta = -.15^{***}$).

The different pictures that have emerged between the pre and post APR revisions in male sports perhaps reflected a movement towards reversing the athlete-student model. In other words, while the male model is still one of Athlete-Student even post APR revisions, the emphasis might be shifting more toward the student in male sports programs. In contrast, the female sports programs were not more or less likely to receive approbations depending on their size, confirming the Student-Athlete model of female college athletes.

The professional interviews confirmed the Male Athlete-Student and Female Student-Athlete models. One interviewee, an assistant athletic director, noted that male athletes struggle in the classroom while female students succeed. He explained that most males go onto play collegiate athletics with the goal of playing pro; "The basketball players' major at the University of Kentucky's is basketball." The financial incentives for men to play professional athletics simply outweigh comparable incentives for women. He went on to add, "the majority of the WNBA athletes play overseas in the off-season because they don't make enough money to sustain themselves in the US." The WNBA places a salary cap of just over \$100,000 to its top stars, whereas the NBA's highest player makes over \$20 million. This imbalance causes female athletes to focus on the academics. Another interviewee, a female professional soccer player, also commented on the financial incentives that create a difference in priorities. She said that even though Title IX was passed in 1972 to promote gender equality within athletics, colleges were not always in compliance until the last 15 or 20 years. A third interviewee, the head coach of a women's soccer team, noted that most of the student-athletes he coaches do not go onto play professional sports, but would become professionals in fields other than their sport. He said playing competitive sports helps these athletes "bring their competitiveness to other aspects of their life."

CONCLUSIONS

Empirical Implications

The survey research and analysis presented in this paper, that analyzed how the size of the sports program and type of conference had gendered effects on the academic success of its athletes, contributed to the understanding of gendered athletics and academics in several ways. One, female sports programs of different sizes did not differ either in their academic progress rates or in approbations received. On the other hand, larger male sports programs reported lower academic progress rates than their smaller

sports counterparts, particularly after the 2011 APR revisions. That is, male athletes were more likely to struggle academically, jeopardizing their chances of graduating from their respective college. That this pattern might be weakening is in keeping with the expected or manifest purpose of the APR revisions in 2011.-

Second, private schools reported significantly higher academic progress rates than public schools. The higher academic success means that student-athletes at private schools are more likely to graduate than those at public universities. This is most likely a result of the social demographics of private schools. Since private schools primarily attract middle class to upper-middle class students they are already placed in a category that is more likely to succeed academically. In addition, private schools tend to have a smaller class sizes and more available resources for students to take advantage of. Student-athletes may have more resources to tap into to get the help and individual tutoring they require in order to keep up in the classroom and succeed. Another variable was school type. Private schools received less public approbation than public schools ($\beta=-0.145^{***}$). This was only the case for the 2011-2012 school year.

Third, athletic programs with higher academic progress rates generally receive less public approbation, but more so after the revision ($\beta=-0.094^{***}$ and $\beta=-0.166^{***}$). Public approbation includes both public recognition and penalties. It makes sense that sports programs receiving higher progress rates receive less public approbation. Athletic programs and teams are rarely recognized when they succeed in the classroom. On the other hand, the media largely criticizes athletic programs for their penalties and punishments to comply with academic standards. In this case, the NCAA will penalize an athletic program if they are not meeting the standards of academic progress rates because it taints their mission goals. However, when these programs meet or succeed in this goal they go unnoticed.

Fourth, it was also discovered that the larger the male sports program was the less approbation they received. As previously stated, approbation is primarily received in the form of penalties. Larger male sports programs such as basketball and football have a lot of financial incentives, which make it counterintuitive for the NCAA and the institutions to penalize them. The assistant athletic director, who was interviewed for this study, supported this idea when he said, "everything in the NCAA revolves around money."

Theoretical Implications

These findings have important theoretical implications. Following --- perspective, the original prediction was that larger male sports programs would report more academic success than smaller programs. After conducting the statistical analysis it is clear that this is not the case. Furthermore, male sports programs reported lower academic progress rates than female sports programs. This finding can be explained using Merton's manifest and latent functions paradigm. The NCAA set out to create gender equality in collegiate athletics by introducing Title IX. Their intentions and purpose were

good, but the results of the gendered academic progress stray away from the initial goals (Powers 2010:163). The difference in gendered sports programs academic progress can be explained by Merton's latent dysfunction. Essentially, male sports programs failing to achieve equally to their female counterparts academically was an unforeseen consequence from previous values widely held by society.

My other hypothesis was that female sports programs would find higher rates of academic success than male sports after controlling for the institution type and the academic school year. The data analysis conducted using the survey results showed there was no relationship between the two. However, previous research and the qualitative interviews point to females succeeding academically, especially when compared to males.

Limitations and Suggestions for Future Research

As with any study that used secondary data, this study too had some limits. The data set in which I used limited my ability to measure the full extent of the concepts. In the case of public approbation, I had to create variables from existing variables in order to learn more. Future research should sample a wider range (such as?) of questions to get a better understanding of the concepts and the relationship. This notion is supported by the adjusted R^2 values which answered between 1% and 20% of the relationships studied.

Another hindrance is that academic progress rates only monitor student-athletes that receive financial aid in Division I schools. I believe this is a loophole that is exploited to protect the interests of the athletic program by only highlighting a portion of the athletes. The assistant athletic director said, "if you look carefully, you'll start to see the loopholes exploited everywhere." Essentially, monitoring the academic progress only of athletes receiving financial aid hinders the ability of the NCAA and institutions to protect and enforce the mission of what it means to be a student-athlete. Future research should include a more holistic approach to this, taking into account the entirety of the student-athletic body. This would give a much better picture of how the athletic programs are faring in the classroom. The NCAA, athletic programs, and institutions should be held accountable for all student-athletes, not just those receiving financial aid.

APPENDICES

Appendix A. TABLE Descriptive Statistics for School Type and Year

NCAA Division I Academic Progress Rate, 2013 (n=6446')

Concepts	Dimensions	Variables (questions)	Values/ Responses	Statistics
Institution Demographics	School Type	Is the institution public or private?	0 = Public 1 = Private	65.2% 34.8

Appendix B Consent Forms and Interview Protocol

LETTER OF CONSENT

Dear _____:

My name is Derek Eng. I am a Sociology Senior working on my Research Capstone Paper under the direction of Professor Marilyn Fernandez in the Department of Sociology at Santa Clara University. I am conducting my research on understanding the potential differences in the academic success of men's and women's NCAA sports programs.

You were selected for this interview, because of your knowledge of and experience working in the area of collegiate athletics.

I am requesting your participating, which will involve responding to questions about collegiate athletics, gendered sports programs, and academic success. The interview will last about 20 minutes. Your participation in this study is voluntary. You have the right to choose to not participate or to withdraw from the interview at any time. The results of the research study may be presented at SCU's Annual Anthropology/Sociology Undergraduate Research Conference and published (in a Sociology department publication). Pseudonyms will be used in lieu of your name and the name of your organization in the written paper. You will also not be asked (nor recorded) questions about your specific characteristics, such as age, race, sex, and religion.

If you have any questions concerning the research study, please call/e-mail me at ___ or Dr. Fernandez at ___

Sincerely,

Derek Eng

By signing below you are giving consent to participate in the above study.

Signature

Printed Name

Date

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, through Office of Research Compliance and Integrity at (408) 554-5591.

Interview Protocol

Interview Date and Time: _____

Respondent ID#: __ (1-6)

33. What is the Name of the Agency/Organization/Association/Institution where you learned about (and/or worked) with this issue: _____
34. What is your position in this organization? _____
35. How long have you been in this position and in this organization?

36. Based on what you know of collegiate athletics, how many colleges have problems with their academic progress rates?
Probe: Could you give me some examples?
How often do college athletic programs have these problems? Could you provide me with some examples?
37. In your opinion, why do some colleges have problems with their APR and commendation/penalties? How do other colleges avoid similar problems?
Probe: Could you expand and give me some examples?
38. Do male sports programs contribute to the APR problems of colleges? How so?
Probe: Are male sports programs more likely to get commendations than female sports programs? If so, why do you think so? Could you provide some examples?
How about penalties? Are male sort programs more likely to get penalties than female sports programs? If so, what makes you say this? Could you give me some examples?
39. How about female sports programs?
Probe: Do female sports programs do better with their academic rates and commendations? If so, why do you think that? Can you provide some examples?
How about penalties? Are male sort programs more likely to get penalties than female sports programs? If so, why do you think that? Can you give me some examples?
40. Is there anything else about college athletics, APRs, and commendations and penalties I should know more about?

Thank you very much for your time. If you wish to see a copy of my final paper, I would be glad to share it with you at the end of the winter quarter. If you have any further questions or comments for me, I can be contacted at _____. Or if you wish to speak to my faculty advisor, Dr. Marilyn Fernandez, she can be reached at _____.

Appendix C. Correlation Matrix

NCAA Division I Academic Progress Rate, 2013, National Collegiate Athletic Association
(n=6410-6446)

	Index of Public Approbation 2003-2010 ¹	Index of Public Approbation 2011-2012 ¹	Index of APR 2003- 2010 ²	Index of APR 2011- 2012 ²	Index of Male Sports Programs ³	Index of Female Sports Programs ⁴	Public or Private Institution ⁵
Index of Public Approbation 2003- 2010	1.0						
Index of Public Approbation 2011- 2012	NS	1.0					
Index of APR 2003- 2010	-0.082***	-0.384***	1.0				
Index of APR 2011- 2012	-0.040***	-0.233***	0.379***	1.0			
Index of Male Sports Programs	NS	0.064***	-0.333***	-0.193***	1.0		
Index of Female Sports Programs	NS	NS	0.163***	0.091***	-0.625***	1.0	
Public or Private Institution	-0.042***	-0.265***	0.346***	0.168***	-0.135***	-0.033***	1.0

*** Correlation is significant at the 0.01 level (2-tailed).

¹ Index of Public Approbation = Penalty + Post-Season Ineligibility + Public Recognition; Range 0 (no approbation) to 5 (high approbation);

² Index of APR = taken straight from survey for sophisticated calculation reasons; Range 500 (low APR) to 1000 (high APR);

³ Index of Male Sports Programs = (Type of Men's Sport + Primary Conference Type + Type of Football Conference)/3; Range 0 (small sport and conference) to 3 (large sport and conference);

⁴ Index of Female Sports Programs = (Type of Female Sport + Primary Conference Type)/2; Range 0 (small sport and conference) to 3 (large sport and conference);

⁵ Private institution = 1 versus Public = 0.

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SCU SOCIOLOGY MAJOR REQUIREMENTS

(Cohort 2010 and forward)

Foundation: (2 lower division courses) **REQUIRED**

Sociology 1	Principles of Sociology
Anthropology 3	Introduction to Social and Cultural Anthropology

Lower division elective (recommended but not required):

Sociology 33	Social Problems in the United States
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Inquiry Sequence: (3 Theory/ Methods courses)

Sociology 119	Sociological Theory (winter quarter of junior year)
Sociology 120	Survey Research and Statistical Analysis (winter quarter Junior Yr)
Sociology 118	Qualitative Methods (spring quarter of Junior year)

Capstone Courses: (*Majors must take EITHER*)

Sociology 121	Research Capstone (fall quarter of senior year)
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OR

Sociology 122	Applied Capstone (in the senior year)
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FIVE Upper Division Sociology Electives: Including at least TWO each from 2 OF 4 CLUSTERS

Criminology/Criminal Justice Cluster

Sociology 158	Sociology of Deviance
Sociology 159	Sociology of Crime
Sociology 160	Sociology of Law
Sociology 161	Sociology of the Criminal Justice System
Sociology 162	Gender & Justice

Immigrant Communities Cluster

Sociology 137	Social Change
Sociology 138	Populations of India, China and the United States (was Demography)
Sociology 150	Immigrant Businesses in the United States (was Ethnic Enterprises)
Sociology 180	Immigrant Communities

Inequalities Cluster

Sociology 132	Social Stratification
Sociology 134	Globalization and Inequality
Sociology 135	Gender and Social Change in Latin America
Sociology 140	Urban Society and Social Conflict
Sociology 153	Race, Class, and Gender in the United States
Sociology 165	Human Services
Sociology 175	Race and Inequality

Organizations/Institutions Cluster

Sociology 127	Group Dynamics
Sociology 148	Stakeholder Diversity in Contemporary American Organizations
Sociology 149	Business, Technology, and Society
Sociology 152	Women and Men in the Workplace
Sociology 157	Sociology of Family
Sociology 163	Sociology of Work and Occupation
Sociology 164	Collective Behavior
Sociology 172	Management of Health Care Organizations

Other Recommended (but not required) Outward Bound Courses (after 118, 119, 120 & 121)

Sociology 125	Honors Thesis
Sociology 198	Internship (Preferably in the Senior year)
Sociology 199	Directed Reading/Directed Research

Up-dated 5/20/13. If you have any questions regarding the above listed requirements, please feel free to give us a call in the Sociology Department and we will be happy to answer your questions. The department phone number is 408/554/279.

Credits: Cover design credits go to Mr. Chris Zamarripa, class '13 and student of graphic design and art at Santa Clara University.