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The Advantages of Single-Sex vs.Coeducational Environments for High School Girls

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THE ADVANTAGES OF SINGLE-SEX VERSUS COEDUCATIONAL SCHOOL
ENVIRONMENTS FOR HIGH SCHOOL GIRLS

A project based upon an independent investigation, submitted in partial fulfillment of the requirements for the degree of Bachelor of Arts in Social Work.

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ABSTRACT

100 female college students attending a small Catholic college in the Northeast were surveyed in order to find the relationship between attending single-sex high school and the females' level of self esteem, motivation in the academic and career life, and gender role beliefs. Of the 100 female college students surveyed sixty attended coeducational high schools and forty attended single-sex schools. The survey questions were organized in a way which would ultimately help decide whether attending single-sex high school was more beneficial for high school girls than attending coeducational schools. The findings revealed that girls who attended single-sex high school have less traditional views about gender roles, a more positive self-concept, and put a greater emphasis on academic/career success than girls who attended coeducational high schools. These findings were not extremely significant and can only be applied to the sample population. Future research regarding the topic is necessary.

OUTLINE

Part I: Introduction

- A. Problem Formulation: An issue which must be further researched is whether coeducational or single-sex school environments are more beneficial for high school females. Beneficial in this context meaning which educational setting allows girls to succeed greater academically, have a more positive self-concept, and possess less traditional sex-role attitudes.
- B. Problem Justification:
 - a. This problem is important to social work practice because it is an issue concerning gender equality and the right for everyone to receive the best education possible. Social workers wish to ensure the well being of their clients and want advocate in their best interest. The educational setting which safeguards against stereotyping and discrimination would most likely be the setting in which social workers would advocate for.
 - i. Discuss the amount of school social workers in the U.S.
 - b. This problem is important to social work research because it will allow professionals to better guide female clients when making decisions about high schools. This research will be extremely beneficial for school social workers; it will allow them to better understand the educational experience for girls in both coed and single-sex schools.
 - c. This problem will increase the knowledge about single-sex education and justify the government's decision to allow single-sex education in public school districts. This will allow for further legislation promoting single-sex education, hopefully resulting in more of these settings becoming available.

Part II: Main Points

- A. Refer to the lack of information regarding this problem (specifically at the postsecondary level), and the need to research the topic more thoroughly in order to decide which environment will benefit girls most
 - a. Mention to amount of single-sex educational facilities available and the difficulty involved in this research because of the lack of single-sex public schools available for study
- B. Discuss the evolution of single-sex education and the lack of it in public sectors
- C. Address the current legislation regarding single-sex education in public school
 - a. Title IX
 - i. The changes that have been made to Title IX over the years
 - b. No child left behind
- D. Single-sex schools allow high school girls to succeed more academically
 - a. No boys gives girls a greater chance of participating because boys are known to steal the attention of teachers
 - b. Girls will have greater opportunities to succeed in academic areas like math and science which are commonly male dominated subjects
- E. Single-sex high schools promote greater self-concept for girls
 - a. Define self-concept
 - b. Single-sex schools promote more positive body image
 - i. Less weight management issues and lower prevalence of eating disorders

- c. Girls at single-sex schools have greater confidence, and more self-assured attitudes
- d. Girls at single-sex high schools tend to be more motivated and confident regarding their academic life
- e. Address the lack of information/research regarding eating disorder students in single-sex versus coed schools
- F. Single-sex high schools make girls more open minded about gender roles and less likely to except the stereotypical/traditional ones
 - a. More girls who graduate from single-sex high schools choose male dominated majors in college than their female counterparts who attended coed high school
 - b. Girls who attend single-sex high school are often more career oriented and more motivated when it comes to their professional and educational goals
 - i. Girls have greater opportunities to take on leadership roles in single-sex high schools giving them a deeper sense of responsibility and more desire to be in charge
 - ii. Single-sex high school is said to empower high school girls

Part III: Opposing points

- A. Single-sex education is believed to be a step down from equal education (worry that it won't be separate but equal)
 - a. Worries about whether separate schools will offer the same programs, and opportunities
 - b. Position of The American Association of University Women and The National Coalition for Women & Girls in Education
 - i. Their concerns about single-sex education
 - 1. not having proper safeguards to prevent increased stereotypes and discrimination
- B. Single-sex education does not help females learn about mixed gender relationships, and causes girls to be less socialized upon graduation
 - a. Not as prepared for the real world, not rightfully informed about the degree of competition
 - b. Have issues working with men because they are not used to this coed environment
 - c. The lack of competition academically at an all girls school might cause students to be pushed less
- C. Single-sex high schools do not promote greater self-concept for girls
 - a. Single-sex schools do not promote more positive body image
 - i. More weight management issues and more negative body images
 - ii. The negative effects of strong female competition in an all girls setting
 - b. Girls at single-sex schools have lower self-esteem due to unrealistic standards about body image and what constitutes success
 - i. Girls at single-sex high schools tend to describe successful women as being consistently thin; therefore they may be likely to make a distinct connection between success and thinness
 - c. Address the lack of information/research regarding eating disorder students in single-sex versus coed schools

- d. Effects family upbringing and family background have on academic success (not only educational setting effects)
- e. Research only conducted in the private sector

Part IV: Hypothesis

- A) The question being addressed is whether single-sex education is most beneficial for high school level females. The issue is whether single-sex high schools promote greater academic achievement and better self-concept for girls than coeducational schools.
- B) Single-sex education is the more beneficial choice for girls at the high school level. High school age girls are more successful at this academically and wind up being more motivated and confident women. The social construct of single-sex schools help develop girls at the high school age level into confident, self sufficient women. Women who attend single-sex high school will tend to have more radical views about gender and be less inclined to fill the traditional female roles in life.
- C) Public single-sex high schools should be offered (either in the form of separate schools or just separate classrooms) so that every family has the option to decide for themselves which type of educational setting they would like to have their child in.

Part V: Methodology

- A) Convenience Sample
 - a. 100 college females whom attend a small Catholic college in the Northeast
 - b. Forty girls who attended single-sex high school and sixty who attended coed high schools
- B) Tools: Survey questions (both qualitative and quantitative)
- C) Data Analysis
- D) Findings

Part VI: Conclusion

- A)
 - a. The problem is whether coed high schools or single-sex high schools are most beneficial for high school girls. A decision is to be made about whether single-sex schools have a more positive impact on girls academically and socially. Once this question is answered a decision can be made about offering single-sex schools as an option across the country.
 - b. The belief at the beginning of the research is that single-sex high school is the best choice for girls of that age. The educational and social experience at an all girls high school is believed to promote greater academic success and more positive self-concept. The single-sex environment allows girls to flourish as students and women, not feeling intimidated or over powered by their male peers. The belief is that there still exist some stereotypical ideas about gender and academics. Many teachers and students are guilty of believing that men dominate in academics, this belief could hinder girls ability to shine in this area. The sense of empowerment which is instilled in girls attending all girl high schools will allow them to acquire the confidence and ability to succeed.
 - c. What you found is unknown
 - d. Concluding statement can not be made as of now
- B) Implications for social work is unknown entirely because results have not yet been determined

- a. Practice: The results could help school social workers address issues regarding high school girls and their education. The results could improve social workers' understanding of high school age girls and what influences/pressures they are experiencing at this time in their lives.
- b. Research: These results could potentially answer some of the unanswered questions regarding single-sex education and the impact it has on this specific population.
- c. Policy: These results could determine whether or not it is in a social workers best interest to support legislation and policies which promote single-sex education. Social workers must be fully aware of the benefits or disadvantages associated with sending a female student to a single-sex high school, this way social workers will know whether or not it is in the clients best interest to recommend this route of education.

INTRODUCTION

Single-sex education is the practice of conducting educational environments where males and females attend separate classes or separate buildings, these are more common among private schools. Public schools on the other hand have notoriously been coeducational. However, recently U.S. public schools have expressed an interest in experimenting with single-sex classrooms. Single-sex classrooms are those where the males and females would not necessarily be separated into different buildings, but simply educated in classrooms solely with peers of the same sex. Some single-sex classrooms are offered to only some grade levels, while others are for certain subjects. Public educational systems must decide if these single-sex classrooms may be more appropriate options for students. Male high school students tend to excel equally as well at single-sex and coed schools, while high school girls tend to excel more when in single-sex settings. Single-sex educational settings are proving to be more beneficial for high school girls. Beneficial in this context, which educational setting allows girls to succeed greater academically, have a more positive self-concept, and possess less traditional sex-role attitudes.

Single-sex classrooms are a reality which has been explored by the private and parochial education sectors for quite some time. American public schools have recently started to experiment with single-sex classrooms, in response to parents desire to have more choices in public education. Many parents have wanted to send their children to single-sex schools, but have been unable to do so because of the high costs of private and parochial education.

In 2006, the U.S. Department of Education issued changes to the Title IX legislation which had been passed in 1972. The new amendments added in 2006 made the legislative piece more flexible, allowing public education systems to offer single-sex programs more freely. These amendments added to Title IX may very well have something to do with the large increase

in the number of single-sex public programs offered in the last 7 years. In March 2002, there were only eleven public schools which offered single-gender classrooms in the United States. This number jumped significantly in October 2009 when it was found that there are now at least 545 public schools in the United States offering single-sex educational opportunities. Most of these schools are coed schools which offer single-sex classrooms, but which retain at least some coed activities (National Association for Single Sex Public Education). The increase in the number of single-sex public education programs has stirred the need for more in-depth research about single-sex environments.

Most of the research which has been conducted regarding this issue has been done at the postsecondary level. The majority of the research concerning the secondary level has been conducted outside the United States, this only helps us so much (Lee & Bryk, 1986). We do know that there are statistically less single-sex high schools present in the United States than there are coed schools. The majority of these single-sex high schools are private. There was notoriously little interest in the public sector for single-sex education until recent legislative developments such as Title IX (Weil, 2008).

Single-sex environments do affect the students differently than coed schools; however, the effects are more dramatic when it comes to girls (Lee & Bryk, 1986). Some preexisting research which examined the effects of attending coed and single-sex schools determined that girls benefited a great deal more from the single-sex environment than boys did (Marsh, 1989). Single-sex environments are believed to be more favorable for high school girls because it allows girls the opportunity to succeed in areas such as math and science, two fields which are stereotypically thought of as being male dominated (Lee & Bryk, 1986).

Single-sex schools allow girls to succeed in areas where they may not have if their male peers were present (The National Association for Single Sex Public Education). It is a common educational belief that boys have a tendency to steal their teachers' attention, making it more difficult for girls to have direct contact with their teachers. Girls who attend single-sex high schools are also said to have higher test scores, higher self-esteem, less traditional sex-role attitudes and are frequently more involved in school leadership positions (Thompson, 2003).

Women who graduate from single-sex high schools not only tend to have less traditional sex-role attitudes, but they are also more likely to choose less traditional fields of study upon entering college. Women who attend single-sex high schools are indeed more likely to choose more male dominated majors than their female peers who attended coed schools (Thompson, 2003). Since single-sex high schools allow girls the opportunity to excel and explore in fields which are traditionally male dominated, girls in these settings have more confidence and experience in these fields making them want to pursue careers in these areas later on.

There is much concern regarding, not only the academic effects of single-sex schools, but also the social effects on students. There is question about whether single-sex schools promote more body conscious attitudes and higher eating disorder rates (Tiggemann's, 2001). The issue of self-esteem is of major concern when talking about high school girls in general, considering that 90% of those who have eating disorders in the United States are women between the ages of 12 and 25 (The Alliance for Eating Disorders Awareness). If one educational setting proved to be more effective in generating positive self esteem and body image, then this educational setting might very well be chosen more frequently as the preferred option. Although there is research about body image in single-sex versus coed schools, there has not been any definite conclusion about which environment promotes healthier body image. This aspect of female social

development must be looked into more closely, as it is definitely a major issue in the United States.

Not everyone is in favor of single-sex education. Some organizations, such as The American Association of University Women and The National Coalition for Women & Girls in Education, find the issue of single-sex education to be a complicated one (The American Association of University Women.com & The National Coalition for Women & Girls in Education.com). According to both of these organizations' responses to the Title IX changes, they worry that the single-sex classrooms will not have the necessary safeguards in place to prevent increased gender stereotypes and discrimination. The NCWGE worries that separate classrooms will cause gender inequality and potentially result in less resources and opportunities being provided for the all-girl classrooms (NCWGE).

Social workers have an interest in this debate because their, "primary responsibility is to promote the well-being of clients" (Code of Ethics). Social workers attempt to determine what educational setting is most beneficial for high school girls. They are dedicated to ensuring gender equality and believe all sexes have the right to the best possible education. Social workers could potentially help find qualitative research about single-sex versus coeducational personal experiences. Considering there were, as of May, 2008, 35,920 social workers working in elementary and secondary schools in the United States, it is clear that this educational system would be of concern to them (United States Department of Labor).

For women, the high school experience is a crucial time in their lives. During high school, most women begin to weigh their options regarding career goals and lifestyle choices. Educational and vocational programs are extremely beneficial during this time. If the high school experience is successful, a woman will most likely put a greater emphasis on academic

achievement (Marsh, 1989). Finding an environment which is socially suitable for a child will hopefully allow them to perform to the best of their ability.

MAIN POINTS

The lack of determinant research regarding single-sex education leaves many policy makers, parents and educators unsure about the impact of single-sex education and wondering which type is more effective, and for whom. Further research will help education systems decide whether they should offer single-sex programs, and will help both policy makers and educators to create programs in public schools which will be most effective. There has not been enough consistency in the limited findings surrounding this topic to make generalization about whether single-sex is more or less beneficial for high school girls (Sax, 2009).

The lack of single-sex programs in U.S. public schools makes it difficult to conduct this research. However, the recent interest in the option has raised many questions. Most single-sex schools in the country are privately run schools (NASSPE). These single-sex private schools may show to be more beneficial for their female students than other coeducational settings, but it is not accurate to say that the only reason they do better at these schools is because the opposite sex is not present. There are a variety of resources available to private school students which are not available for public schools because of financial reasons. It is difficult to compare private and public education for this reason. When looking at single-sex versus coed schools, the demographics of the populations must be similar, and the variables must be consistent.

During the 1800's, many female figures emerged as advocates for female education. Mary Lyon, Catherine Beecher, and Emma Willard are a few women who opened schools exclusively for women (National Women's History Museum). These women along with others stepped forward in order to provide women the opportunity to seek an education, which they had

not had before. Even though these women were successful in further incorporating women into the educational system, there still existed a major concern about women's inability to seek higher education (high school and college level).

At the Women's Rights Convention held in 1848 in Seneca Falls, NY, one of the major complaints documented in the Declaration of Sentiments was that "The history of mankind is a history of repeated injuries and usurpation's on the part of man toward women, having in direct object the establishment of an absolute tyranny over her. ...He had denied her the facilities of a thorough education, all colleges being closed against her." This convention and the opening of the world's first coeducational college, Oberlin College in Ohio, really sparked the new demand for higher female education (NWHM).

Single-sex education was originally explored by public schools as a means of solving behavioral issues present in inner city schools. The single-sex option seemed to be helpful but was fought by various groups of individuals who felt it would further instill gender distinctions and biases. Another reason single-sex schools got phased out during the 1960's and 1970's was for financial reasons. Having coed schools was cheaper than having separate schools based on gender (Lee and Bryk, 1986).

In the past, American women have struggled to obtain educational rights. Women were not given the opportunity to pursue an education for quite some time; the field of education had originally been a place designated for males. The emergence of the women's rights movement during the 1960s initiated a fight against sexual discrimination in the U.S. Title IX of the 1972 Federal Education Amendments was a major step for female educational advocates. It prohibited discrimination on the basis of sex in educational institutions that received federal aid. Although these movements and laws helped open educational doors for women and girls, gender

discrimination in the classroom still existed. Women and girls were not given the same opportunities or challenges as the males, and therefore, their educational experience was hindered.

The United States Department of Education published new education regulations concerning single-sex education in response to the No Child Left Behind Act. These regulations were published on October 25 2006. The provisions were added as amendments to Title IX, and gave school districts a bit more flexibility when it came to implementing single-sex programs (United States Department of Education). These provisions were published with the intention to legalize more flexible single-sex education in public schools. The new regulations allow coeducational public schools (elementary and secondary schools) to offer single-sex classrooms, and single-sex schools.

This legislation mandates that school districts abide by a list of regulations when initializing single-sex classrooms or schools. These regulations hope to ensure that the programs are run effectively and appropriately. Some of these regulations include providing a rationale for why the district is offering a single-gender classroom in that area, providing a coeducational option to that classroom in the geographic region, and conducting a review of the class every two years to determine whether the single-sex classroom option is still necessary. All public school districts must offer an alternative option for the opposite sex within the district. This option does not have to also be single-sex; it can be a coeducational setting (NASSPE).

The benefits associated with women being educated in single-sex programs include greater academic success, greater self-esteem, and less traditional sex-role attitudes. If these benefits are true, then it would be in this countries best interest to send all girls to single-sex high schools. Although the findings which support this belief are not extremely significant, they are

still there. Further information would help us to generalize about single-sex schooling more effectively.

Women who attend single-sex schools show greater academic success and commitment to their studies. These single-sex female graduates typically spend more time studying than their coeducational counterparts, showing more dedication and emphasis on their studies. Nearly two-thirds of women who graduate from single-sex high schools report spending eleven or more hours per week studying or doing homework, while less than half of the women who attended coed schools admit to putting forth that much effort. These women also spend more time studying with other students and tend to use tutoring opportunities and time with teachers outside of class more frequently. Female students in single-sex environments appear more motivated when it comes to their studies and more dedicated to achieving the high academic goals they set for themselves (Sax, 2009).

These successful women who attended single-sex high schools also tended to score higher on standardized tests, specifically the SATs, as compared to their coed counterparts (Sax, 2009). Therefore, not only do women from single-sex high schools put more time and effort into their education, but they are also more successful academically. SATs are a factor in the college acceptance college; therefore it can be assumed that girls who attend single-sex high schools have a tendency to attend better academic colleges and universities.

The women who attend single-sex high school have a greater chance of attending a selective four-year college (holding academic qualifications constant) than graduates from coed schools; however, these single-sex graduates were not more likely to attend an all female college (Thompson, 2003). The women who attend single-sex high schools also show a bit more interest in attending graduate school. Around 71 to 66 percent of women who attended single-sex high

schools admit that upon entering college their main concern was preparing for graduate studies (Sax, 2009). These women have obviously set high academic standards for themselves and often choose to plan ahead in order to ensure their professional success. Higher education is of great importance to many of the women who come out of single-sex high schools.

This academic success in a single-sex environment could most definitely be attributed to the fact that boys are not present in the classroom. Boys have a tendency to steal teacher's time and attention, and often are perceived as greater competition in subjects such as math and science. Girls in single-sex programs are not forced to compete with boys for teacher's attention and they are given the opportunity to be considered the top students in classes (including math and science). Leadership opportunities which are usually occupied by male high school students are entirely open to those girls who attend single-sex schools. The ability to achieve political and academic success has a direct effect on how these high school girls feel about themselves. The confidence level is much greater in females who graduate from single-sex programs, possibly due to the pro-feminist manner in which many of these all-girl schools are run and partially due to the fact that these girls are empowered to believe that the sky is the limit (Thompson, 2003).

At all age groups, research shows that girls in girls-only classrooms are more likely to explore "non-traditional" subjects such as computer science, physics, woodworking, engineering, etc. (NASSPE). Girls who participated in single-sex education seem to also display greater confidence in their mathematical ability and computer skills upon graduation as compared to their coed counterparts (Sax, 2009). These subjects have been labeled as traditionally male dominated fields, which is why girls in coed high schools have previously felt they could not or should not attempt to succeed in these subjects.

Without male students present, women in all-girls schools or classrooms have a greater chance of succeeding in math and science. Girls in coeducational schools tend to hesitate to become involved in math and science programs, due to insecurities or worry about stepping outside the traditional sex roles. The cultural stereotypes which tell girls that they will not be as successful in these fields as men discourages girls from even trying. Single-sex environments give girls a chance to explore these subjects without the intimidation and fear of competition with their male peers. Ten percent more of the girl's school graduates rate their confidence in math and computer abilities high at the start of college compared to their peers from coed schools. That is, 47.7 percent of women entering college from single-sex schools feel well prepared in math, as compared to 36.6 percent from coed schools (Sax, 2009). It is obvious that given the opportunity women are able to succeed in math and science, but in coed settings they are not often given the same chance.

The American culture puts a great deal of pressure on high school girls about balancing work and family. High school is the time when many students begin to weigh their professional options and set goals for themselves personally and professionally (Monaco & Eugene, 1992). It is crucial that at this time the students receive guidance and are informed about the many possible lifestyles they could pursue. The hesitation to explore more male dominated fields and pursue more intense career areas may be due to the internal conflict which so many adolescent girls have about whether it is appropriate for them to pursue a career and a family (Monaco & Eugene, 1992). Many girls struggle at an early age when deciding whether to pursue a more mother friendly career, like education, or to become a more high powered executive in a career focused in something more like business.

Not only are girls from single-sex programs more likely than their coed counterparts to become involved in traditionally male dominated subjects, but they also tend to gravitate toward male dominated professional fields and college majors. Graduates from all-girl programs are more likely to choose sex integrated fields more than their coed counterparts. However, they are still not more likely to choose these male dominated fields over traditionally female ones. The desire to study male dominated fields in college stems from the fact that all girl schools tend to promote less traditional sex-role attitudes. The stereotypical gender roles are ignored, and the women in these settings do not feel limited because of their gender. Girls in single-sex programs do not find their interest in male dominated fields to be odd until they reach a coeducational setting in college where they find themselves the minority (Thompson, 2003).

Some psychologists believe that coed programs tend to have a “gender intensification” effect, “Gender intensification means that when girls and boys are together, they are very mindful of what the prevailing culture says is appropriate for girls, and what's appropriate for boys (NASSPE).” As a result, the coed format often has the unintended consequence of intensifying gender roles, despite a school systems best effort. Despite what we like to believe, our culture does tend to be a sexist culture (these sexist attitudes exist even more frequently with children and adolescents than with adults). The prevailing culture sends various gendered messages to children and adolescents that influence girls to act one way and boys to act another. These cultural expectations or norms start even at birth, with the gendering of colors (boys are blue and girls are pink). Single-sex environments, if implemented properly, offer an opportunity to tear down those gender stereotypes and make the students more open minded. In all girls settings, the standard for what is considered “cool” expands, and girls feel less judged for making “non-traditional” decisions regarding their involvement in school and academics.

Teenage sex and unwanted pregnancy is a particular field of interest for many individuals who study single-sex vs. coeducational schools. It is not surprising that teenage sex and unwanted pregnancies are more common at coed schools. Not only are boys more accessible to girls in coeducational environments, but also the fact that girls and boys share a social network, which makes it difficult for girls to say no (NASSPE). Peer pressure surrounding sex is a great deal more influential in coed school environments because boys and girls coexist in the same social network, which gives girls less control. Once one couple in their circle of friends starts becoming sexually active, they all do because they are all intermixed and feel pressure to live up to that standard. Teenage pregnancy in the U.S. is currently a major issue. In 2009, the teenage pregnancy rates increased in 26 states (Jayson, 2009).

Girls in single-sex school have an easier time making their decisions independently about sex. This may be due to the fact that the peer culture in single-sex schools is less focused on heterosexual relationships and more focused on academic achievement and extracurricular success. These girls also have an easier time imagining life without their boyfriends, because losing your boyfriend often has little to do with losing your girl friends. Girls at single-sex schools have more control in their relationships and are often more confident in the fact that they are worthy with or without a boyfriend. Since these girls are less likely to be sexually active, this could be the source for preventing many unwanted pregnancies (NASSPE).

Self-esteem often correlates with achievement and motivation for girls in high school (NASSPE). Self-esteem has to do with one's degree of self-confidence and self-awareness. One who has high self-esteem feels highly about themselves and thinks they are worthy and capable without limitations. Sixty percent of women from girls' schools report self-confidence, compared to 54 percent from coed schools. However, more than 80 percent of girl's school graduates

consider their academic performance highly successful compared to 75 percent of women from coed schools (Sax, 2009). The higher self-confidence found in all-girls schools obviously has an affect on how these women perceive their academic achievements. The greater self-confidence, the more successful one believes she is.

Women in single-sex settings generally receive more recognition for their accomplishments, through awards, scholarships, and opportunity for leadership positions. These opportunities are ones which are typically awarded to males in coed schools. These forms of recognition serve as a confidence booster for these female students. An increase in confidence contributes to academic success and vocational motivation (Monaco & Eugene, 1992).

In girl-only learning environments, girls are more often exposed to successful female role models. There are frequently more female than male teachers and administrators in all-girl schools and the students which succeed as best athletes, class president and valedictorian are also women (Thompson, 2003). These role models inspire girls and make them feel more capable and deserving of success. Female teachers and administrators can open girl's eyes to the various opportunities available to them as women, and guide them to overcome those social barriers which so unfairly exist.

High school girls at coed schools tend to base their self-esteem on the opinion of their male peers. Many girls are distracted by their male peers. They worry that their assertiveness in class or extra curricular activities will make the men in the school view them poorly or make them feel less attractive (Monaco & Eugene, 1992). Acceptance of others is important to adolescent girls, and acceptance for many girls consists of being accepted and well liked by boys. This is dangerous in a coed setting and could hold female students back from achieving what they deserve.

Generally because female graduates from single-sex high schools report having a more positive self-worth and greater levels of self-esteem, we would assume that they also have lower rates of eating disorders and more positive body images. This however is not entirely true. The rate of eating disorders does not vary greatly between coed and single-sex environments (Tiggemann, 2001). Girls in single-sex schools often associate professional success and academic achievement with thinness, body image. There is little understanding why this is the case, but it emphasizes how greatly concerned women are in our society about body weight and appearance. This cultural ideal is seen across the board and does affect every woman despite their high school environment.

Opposing Points

Some worry that single-sex education is a step back, taking us away from gender equality in education which so many individuals have fought for over the years (NCWGE). Some organizations believe that single-sex education puts women at higher risk of being discriminated against in the work force, and makes women less prepared for the real world upon graduation (NCWGE).

Researchers who believe that single-sex education is detrimental for high school girls fear that the Title IX regulations put into place in 2006 do not guarantee adequate safeguards which are necessary to prevent increased sex discrimination in the classroom (NCWGE). The fear is that damaging stereotypes about women in education will resurface once boys and girls are separated in the educational system (NCWGE). Single-sex programs often promote unequal educational settings for boys and girls because they tend to allocate fewer resources for the all girls' programs. The programs also might become more gender specific pushing programs for girls that focus on stereotypically female career options and academic subjects. Often the girls in

the all girl settings suffer because they have access to less educational programs and opportunities than they would have been provided had they stayed in a coeducational setting (NCWGE).

Opposition to single-sex education often stems from the belief that boy and girls do not learn differently. Each individual has a different style of learning; learning habits are not gender specific. Boys and girls do not necessarily respond to different educational approaches more efficiently, it is therefore unnecessary to separate them into separate classrooms or schools. Educational needs are not gender based; there is no proof which shows that boys and girls don't respond to the same teaching techniques and classroom organization. The more sensitive boy or the more assertive girl may have a different learning style than their peers of the same sex. Many boys and girls respond positively to the same educational approaches (NCWGE).

The research opposing single-sex education for high school girls says it will be extremely damaging if educators and administrators are put into these single-sex environments without proper training in this type of educational setting. There needs to be sufficient mandatory training for individuals who choose to educate in single-sex environments, which requires them to know the achievement goals for this specific setting. The professionals need to understand that teaching in single gender schools may require different techniques to be administered, and they may need to make adjustments in the way they run their classrooms in order to avoid any increased forms of discrimination or sexist attitudes. The way in which educators and administrators conduct themselves can have a huge impact on the student's level of motivation and confidence surrounding their education (NCWGE).

Single-sex education is often argued against because it is hypothesized that it not prove to be beneficial for boys or girls in the United States, and might potentially be detrimental for girls

(AAUW). There is reason to believe that traditional gender roles will further be promoted in single-sex setting and that girls will not be pushed as hard to strive academically. Women and girls are not only able to succeed academically once they are removed from coeducational settings. Women and girls have made important progress in coeducational schools which will only continue if girls are given the opportunity to do so. The competition and mixed gender environment pushes high school girls and allows them to get a sense of the real world which awaits them upon graduating high school (AAUW).

It is reported that single-sex education does not make women feel equal during their high school years. It makes them feel inferior because separation inadvertently tells girls they are not good enough to succeed among their male peers. This separation suggests to women that they can only be successful academically when male competition is taken out of the picture. This reinforces the traditional sexist ideal that says women are inferior to men and are unable to be as successful or intelligent as them. If girls in single-sex schools sense this underlying reason for the separation it may result in lower self-concept and less academic motivation and confidence (AAUW).

This separation is extremely unrealistic and does not prepare women for the mixed gender society which they will be immersed in post graduation. Girls who attend single-sex high school are unable to deal with the male competition in their studies like their female peers who attended coeducational schools. These single-sex graduates are not socialized in a mixed gender setting finding it more difficult to succeed than in their prior single-sex environment. All high school graduates will eventually be working or coexisting side by side with the opposite sex, therefore it is important for high school girls to learn to work cooperatively with the opposite sex before entering the real world (Mael, Smith, Alonso, Rodgers & Gibson, 2005).

A popular argument for single-sex girl schools is that they promote greater self-concept and a healthier body image. This, however, is debatable as research shows that eating disorders and distorted body images are not more popular in one setting than the other (Tiggemann, 2001). Girls in single-sex high school are actually more likely to make a distinct connection between success and thinness (Tiggemann, 2001). This is a dangerous belief which reinforces the unrealistic views of society about successful women. Connecting appearance with success is a harmful concept which could lead women to believe that they are more appealing because of their looks than their academic success and career achievements.

It is not the school setting which promotes a negative or positive body image, it is the society and the influence of the media at large. It is virtually impossible for a school setting to erase all the media expectations high school girls are exposed to. Girls are going to compare themselves to other women and try to attain society's ideal body regardless of whether they attend school with boys or not. A woman's desire to be thin is something which spans across the nation (Tiggemann, 2001).

It is not solely the school environment or the media influences which causes a girl to be more academically and socially successful. It has a great deal to do with the girl's family situation and her family's core values regarding gender. Children are exposed to gender roles before they have even entered the educational system; therefore, children enter elementary school with a predisposition about what is expected of boys and girls. The way in which parents decide to raise their children has a great effect on how their child perceives gender. If a child's parents have a traditional marriage where the father is in charge and the mother stays at home and tends to the domestic work, the child internalizes these gender roles and often has trouble seeing any other roles as "normal" (Berns, 2007).

Race, ethnicity and family income level are important factors in high school and college achievement rates, regardless of gender. The statistics show that white children are more likely to graduate high school and attend college than their African American and Hispanic peers. Likewise, children from higher-income families are more likely to graduate high school and attend college than their peers from lower-income families. This shows that academic success and the rate of academic achievement are closely related to a child's family situation and background. Gender and the environment which one is educated in are not the deciding factors for whether an individual is successful in their academic life, it is a great deal more complicated than that (AAUW).

Research regarding single-sex education has been conducted mainly in the private sector. It cannot be assumed that because single-sex schooling works for high school girls in the private sectors it will definitely work for girls in public school environments. Economic status, family situation and cultural status may also have an effect on how high school girls succeed during these years. There is more diversity present in public schools regarding economic status and cultural background than there is commonly in private schools; therefore, it is essential that research be conducted among the public sector as well to make sure that the addition of other variables does not have some kind of major effect on the evidence produced. The findings regarding private single-sex programs cannot be applied to public school programs, because these settings vary too much to begin with (Bradley, 2009).

Methodology

A survey was distributed among 100 female college students ages 18 to 22. The college where the survey was distributed is a small Catholic college located in the Northeast. The sample group consists of forty girls whom attended single-sex high school and sixty girls whom coed

schools. The survey was designed in a way which is intended to decipher whether the female college students that make up the convenience sample benefited more from a single-sex high school experience or a coeducational high school setting. For the purpose of this study, the term benefited is being used as, whether the girls who graduated from single-sex high school developed a more positive self-concept and succeeded greater academically. The variables being measured in order to determine which high school setting appears to be more beneficial are the degree of self concept the girls possess, their ability to succeed in more male dominated academic fields, their gender role beliefs, and their degree of academic success. Self concept refers to the degree of self-esteem the girls possess regarding their body image, their concept of self worth and level of academic confidence. There are at least two questions pertaining to each variable.

The survey has 20 questions which are both open ended questions and multiple choice questions. The research being done will strive to produce both quantitative and qualitative results, in order to make sure the information produced is as inclusive as possible. The reliability of the survey instrument will be measured by using the SPSS program, by calculating the reliability coefficient using 25 individuals' survey answers. The goal is to show that the individuals' answers are consistent; this will help prove that the instrument is clearly asking the questions it hopes to and is producing honest answers.

The survey questions will be valid to the topic at hand. This survey will be distributed among a group of about 100 women, although this sample is not large enough to make mass generalizations it will hopefully produce enough information to make some valid points about the advantages and disadvantages of single-sex education for high school females. This

information could potentially be applicable to the female population at this particular college and other colleges in the same region with similar demographics.

DATA FINDINGS AND ANALYSIS

The sample surveyed were a group of one hundred female Providence College students. Of the one hundred female students surveyed, forty attended single-sex high school, while sixty attended coeducational high schools. The survey which these individuals completed asked students to answer a series of twenty questions. Three of these twenty questions had to do with measuring the individual's self-esteem, four had to do with measuring the individual's degree of motivation regarding their career and education, and four had to do with whether they held traditional views about female roles. There were two open ended questions which allowed students to identify their college major which they had chosen and the number of extracurricular activities which they had participated in during high school. The remainder of the questions covered questions regarding whether or not the females ever suffered from an eating disorder, and which portion of the SAT they scored highest on.

These groups of questions were created in order to measure the variables which were chosen by the researcher. These variables included students' level of self esteem/self concept, their degree of career and academic motivation, whether they excelled more in more male dominated academic fields, their level of involvement in extracurricular activities, and how they view women's role in society (either a more traditional or contemporary view of women's roles). These variables were measured for those individuals whom attended single-sex high schools and for those whom attended coed high schools. This allowed analyze the data in a way which would present relative findings regarding the research question. The ultimate goal was to determine if

attending single-sex schools made a difference in the way these girls developed in these five categories.

According to the findings the majority of college women still tend to declare majors in the Liberal Arts spectrum. These majors include psychology, social work, social science, education, art history and global studies. The majority of those girls who attended single-sex high school and had declared a college major, had chosen a major in the Liberal Arts spectrum (55%), so did the majority of girls whom had attended coeducational high schools (63.3%). The girls who answered that they had chosen a business or science oriented major were the minority for the single-sex and coeducational groups; however, there was a much smaller gap between the typically female majors and more male oriented majors when it came to the single-sex group of individuals. A total of 45% of the girls who attended single-sex school had chosen accounting, marketing, management, health policy and management, political science, finance, economics or biology. In comparison, of the girls who attended coeducational high schools, only 36.6% of them had chosen a major which would more typically prepare them for what is said to be a male dominated career. It seems as though there are more girls declaring business and science majors coming from single-sex environments as compared to coeducational environments; however, college females for whatever reason still tend toward majors having to do with human service regardless of the type of high school they attended.

More single-sex students stated that they had scored higher on the math portion of their SAT than any other section. Eighteen of the forty single-sex students surveyed said they scored highest on the math portion of the SAT's. This information is important because mathematics is commonly said to be a weakness for girls, and is promoted as a male dominated academic field. Girls may have had the opportunity to excel further in math while attending single-sex

environments because they did not feel the pressure to compete with their male peers. They also may have received greater support in their math classes, and were given more attention by teachers a result of absence of their male peers. There was an equal amount of girls who attended coed high schools that did best in writing and math. These minor findings might not directly be a result of the educational environments in which these girls were educated; however, there is a possibility that it had an impact.

Traditional views about women mean the belief that a woman should be most concerned with her family and home life. Those who believe in women should fulfill the traditional role believe women should not abandon their homes to pursue careers and education in the real world. The Mann-Whitney Test conducted using the data gathered showed that there is a statistical significance between whether one attended a single-sex or coed high school and whether they have more traditional views of women's roles ($p < .05$). The p value was determined to be .013, which makes the relationship between these two variables somewhat significant. This Mann-Whitney Test shows that girls who attend single-sex school have a tendency to have less traditional views about what they believe the role of women is in our society. They tend to agree that women should have a place in the workforce and not feel tied to the role of caretaker.

Table 1.0
Relationship between educational setting and views about gender roles

	<u>Traditional Views</u>
Mann-Whitney U	886.500
Wilcoxon W	1706.500
Z	-2.481

Asymp. Sig. (2-tailed)

.013

An interesting pattern observed by the researcher was the fact that every girl who attended coed high school said they saw themselves getting married on future. There were very few individuals who stated they would or may not get married; however, these few females were all women who attended single-sex high school. The significance was not great enough to report, however this pattern does show that the institution of marriage is still very important to women of this age, and most women do plan to get married whether its because of societal pressure or their own desire.

The questions which measured the girls' level of self-esteem were regarding importance of appearance, how they view themselves, and how often they feel self conscious. These answers were added up to determine the level of self esteem which girls whom attended single-sex schools had versus those girls who attended coed schools. The Mann-Whitney Test conducted to find the significance between the type of school environment attended and the individual's level of self esteem. The significance showed that the p value was again lower than .05, it was .026. This number means that a direct significance can be identified regarding these two variables. This significance shows that girls who attended single-sex high school reported having a more positive self esteem and self concept than their female peers who attended coed high schools.

Table 2.0

Relationship between educational environment and self esteem

	<u>Self- Esteem</u>
Mann- Whitney U	904.000
Wilcoxon W	1724.000

Z	-2.232
Asymp. Sig. (2-tailed)	.026

Questions were asked in order to indicate the level at which these female students were motivated about their career goals and educational aspirations. These questions included questions about why these individuals decided to attend college, whether or not they considered their education an important part of their development, and how much effort they put forth as a student. The Mann-Whitney test conducted which evaluated the significance between whether the individuals' school environment affected how motivated they were about their career and education proved to be significant. The p value for this Mann-Whitney Test was .043. This is significant, and shows that the individuals who attended single-sex tend to be more motivated or put more emphasis on achieving success in their educational and professional lives.

Table 3.0

Relationship between educational setting and level of motivation regarding career/academics

	<u>Motivation about career/school</u>
Mann-Whitney U	939.000
Wilcoxon W	1759.000
Z	-2.021
Asymp. Sig. (2 tailed)	.043

There did not prove to be any significance regarding the correlation between the rate of females suffering from eating disorders and the type of school attended. Only two females admitted to having suffered from an eating disorder in high school, and both attended different

school environments. These results were surprising, and might be more accurately looked at if a larger sample was worked with.

The survey instrument did prove to be relatively reliable. According to the reliability test performed the Cronbach's Alpha is .759, this number shows the instrument distributed is reliable because it is close to one. This survey was reliable in this setting, with this population size and dynamic, because it was able to produce the information necessary to answer the intended question. This instrument might not prove to be reliable during another research analysis, but for this particular study it provided exactly what was needed.

Conclusion

Deciding where to send a child for their freshman year of high school is a very important and difficult decision. It is hard to tell which high schools are "the best," and it becomes even more difficult to determine which high schools are the best suited when you are given more options. The single-sex option is not one which is extremely prevalent in public school systems; however the option does exist in some states as well as in many private school settings.

Single-sex environments are extremely controversial. Many believe they are extremely beneficial, especially for high school females, while others think that they are detrimental to high school girls' education. Some believe that single-sex high schools allow girls to succeed greater academically, and develop greater self concept and a more positive self image. Single-sex environment are said to promote greater opportunities for high school girls because they feel less pressure to compete with their male peers, and are able to succeed in areas which are normally thought of as male dominated fields. The ability to become more involved in extracurricular activities and have greater success in their studies could potentially promote more self confidence in high school girls and make them more motivated students with higher reaching

career goals. Single-sex schools are believed to eliminate traditional gender role beliefs and produce women who have a more individualist and career oriented attitude.

On the opposing side, many individuals believe the single-sex environment does a poor job of preparing female students for the real world. Often at future universities and definitely in the workforce, these women are going to be put in the mix with their male peers; some believe separating the sexes during high school gives girls an unrealistic sense of the competition that will exist in the future. Some worry that separating the sexes will further instill traditional gender roles and could potentially end up depriving girls of some of the resources which would be available to them in a coed setting.

Many social work professionals are involved in the United States educational system. The educational system is extremely relevant to all social work professionals who work with children because their clients are directly affected by the structure of the school environment. Social workers are extremely concerned with advocating for the needs of their clients; finding evidence regarding whether single-sex or coed schools are more beneficial for high school girls would help the parents of these individuals make more educated decisions about where to send their child to high school. Research regarding this topic would allow the social work profession to support or negate the implementation of single-sex educational programs, depending on what the findings prove. Knowing what educational setting will benefit girls' socially and academically will allow social workers to better serve this particular community, and possibly enable them to understand this stage in a female's life more accurately. This research could outline the needs of high school girls more clearly, allowing social workers to better relate and help these individuals.

This particular research study has its own limitations because of the sample population and the constraints in which the study was conducted. The population sampled was one which only consists of Catholic College students in the Northeast; therefore, the findings cannot be considered generalizations. There could be bias attitudes because of religious backgrounds, and attitudes of students in the Northeast could be completely different from those attitudes of college students on the West coast. The sample population was only a hundred female college students, which is not enough to say that these attitudes are consistent with all college females.

There is a distinct gap in the research regarding single-sex education. This mainly results from the lack of single-sex programs in the United States, especially in the public sector. Examining single-sex schooling in the private or parochial sector does not provide accurate data regarding the advantages of single-sex programs in public schools. There are a variety of variables which could cause private school programs to appear more successful than public school ones (these include better resources, more academically successful students and funding).

Before single-sex schools become implemented in education systems across the country, the legislation regarding the issue needs to be fine tuned. There is reason to believe that some of the current legislation which dictates how single-sex programs are structured is unclear and may result in negative educational experiences. Educators and administrators in these school systems must be properly trained to teach in single-sex environments. The resources allocated to all girls schools must also be closely regulated in order to make sure these programs are receiving equal opportunities and resources.

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Single-Sex versus Coeducational Experiences

1. During high school were you educated in a single-sex or coeducational setting?
 - a. Single-sex
 - b. Coed
 2. Are you currently attending a college or university, and if so what is your major/minor?
-
-

3. Why did you choose to attend college?
 - a. You wanted to expand on your education and get a degree which you could use as a professional
 - b. Your parents made you
 - c. You wanted to find a husband
 4. What subject did you score highest on during your SAT's?
 - a. Math
 - b. Verbal
 - c. Writing
 5. What are your career goals? In other words what do you plan on doing once you are completely done with you undergraduate and/or graduate studies?
-
-
-

6. Are you a motivated individual when it comes to career goals and aspirations? Do you have high expectations for yourself as a professional?
 - a. Yes
 - b. No
7. Do you intend on having a family of your own later in life?
 - a. Yes
 - b. No

7.5 If you did answer yes to question 6, do you plan on putting your career on hold once you become a parent? Or do you envision yourself having both a family and a career?

- a. Want to have it all (both a career and children)
 - b. Once a family comes you intend on quitting your job
8. Did you choose your major because it was one which will enable you to work and be a mother at the same time?
- a. Yes
 - b. No
9. Have you ever been diagnosed with an eating disorder? Either during high school or college.
- a. Yes
 - b. No
10. How would you rate yourself as a student?
- a. Extremely dedicated
 - b. Puts in an average amount of time and effort into my studies
 - c. Puts in minimal effort
11. What is your current college GPA?
-
12. Do you believe that women should act according to traditional gender guidelines, a.k.a. women should ultimately be stay at home mothers who perform most of the domestic duties and men should go into the workforce and act as bread winner?
- a. Yes
 - b. No
13. Do you consider your education an important part of your development as a woman?
- a. Yes
 - b. No
14. Do you consider yourself to be a successful and beautiful woman?
- a. Yes
 - b. No
15. How self conscious are you about your body?
- a. Extremely
 - b. Moderately
 - c. Not at all
16. Is your appearance a top priority for you?
- a. Yes
 - b. No

17. Besides academic classes what other extracurricular activities were you involved in during high school? (Can choose as many as apply)
- a. Student Congress
 - b. Peer Counseling or Ministry
 - c. Fine Arts (Band, theatre, chorus, dance)
 - d. Athletics
 - e. Community Service
 - f. Honor Societies
 - g. Clubs: Specify: _____
 - h. Other: _____

This Section Only Applies To Those Females Who Attended Single-Sex High School

18. If you attended an all girls school do you believe you were more successful because of the absence of your male peers?
- a. Yes
 - b. No
19. For those who attended all girls schools and now attend coed colleges or universities, do you feel have difficulty conducting yourself in a coed classroom? In other words do you tend to participate less or do you feel you are paid attention to less by professors?
- a. Yes
 - b. No