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University of San Francisco

THE EFFECTS OF SINGLE GENDER VERSUS COEDUCATIONAL
ENVIRONMENTS ON THE SELF-ESTEEM DEVELOPMENT AND ACADEMIC
COMPETENCE OF HIGH SCHOOL FEMALES

A Dissertation

Presented to

The Faculty of the School of Education
International and Multicultural Education Department

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

by
Carol Langlois

San Francisco
December 2005

This dissertation, written under the direction of the candidate's
dissertation committee and approved by the members of the committee,
has been presented to and accepted by the Faculty of the School of
Education in partial fulfillment of the requirements for the degree of
Doctor of Education. The content and research methodologies presented
in this work represents the work of the candidate alone.

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ACKNOWLEDGEMENTS

I would like to acknowledge several individuals who have made a significant contribution to the successful completion of my dissertation. First, I would like to express my deep gratitude and appreciation to my dissertation committee. I respect Sister Mary Peter Traviss for taking on the role as chair of my committee. This meant so much to me, especially since I was not a student in the ICEL program. Her guidance, encouragement and constant support helped me make it through. I would like to extend my deepest appreciation to Father Collins, who not only served as a member of my committee, but also as my academic advisor. His belief in my ability kept me on the pathway to success. I must also thank Dr. Galang for her reassuring comments and insightful feedback. I feel very fortunate to have known these individuals.

Next, I would like to extend my love and deepest admiration to my parents for their unconditional support. The high value they placed on our education has played a critical role in my academic development and success. I would not be where I am today if it were not for them and their attitudes toward education.

Finally, I would especially like to thank my husband, J. Michael Fernandez, not only for his support, love and encouragement, but also for his friendship. He was that friend, who I leaned on constantly throughout this academic process. He amazes and inspires me every day to do more and to be more. He showed me that I could do anything I put my mind to. Thank you for being in my life.

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CHAPTER I

THE RESEARCH PROBLEM

Introduction

Self-esteem is a global concept of self worth. It is defined as how well one likes who they perceive themselves to be and how much a person likes, accepts, and respects himself or herself overall as a person (Bandura, 1986; Erikson, 1966; Harter, 1988). What matters for self-esteem is the degree of discrepancy between the value an individual places on some skill or quality and the amount of that skill or quality the individual sees himself or herself as having (Harter, 1988, 1990). Healthy self-esteem can serve much like a shield of armor against the challenges of the world. Self-esteem is not a fixed concept and it changes throughout one's lifespan (Chapman & Mullis, 2002; Erikson, 1966; Harter, 1988). It is ever evolving and frequently fine-tuned, affected by an individual's experiences and perceptions.

This view differs from self-concept, which is defined as how one sees him/herself in the context of the world. When referring to self-concept, the question "Who am I?" becomes supreme (Bandura, 1986; Piaget, 1977). The foundation of self-concept occurs in infancy with the relationship of mother and child (Erikson, 1963; Piaget, 1977). The infant realizes that he/she is a separate object from others, most specifically the mother. The formation of age appropriate self-concept is necessary in planting the seeds for self-esteem development. Therefore, positive self-esteem is built upon accurate and age appropriate self-concept. With age, self-concept becomes less concrete and more abstract

as children start to see themselves in relation to the others around them (Piaget, 1977). By the time of high school self-concept is not only a physical, but an abstract construct as well. Unlike self-esteem, self-concept is an enduring construct and does not change with age; it simply gains intellectual maturity. For purposes of this research study, the focus will be on self-esteem of the individual and not the self-concept; therefore, the construct of self-esteem will be explored more thoroughly than the construct of self-concept.

Self-esteem can be influenced heavily by external factors and measured by societal standards. Peers can be a major influence on a child's self-esteem especially during the critical period of adolescence called high school (Harter, 1990; Lee & Marks, 1992). Adolescents spend more time in the classroom with peers than at home with family members (American Association of University Women, 1995). Erikson (1966) maintained that an adolescent's peer network could directly define approval or disapproval for one's acts and behaviors. This peer influence can impact future choices and actions based on past experiences, directly shaping who one becomes. However, with age and maturity comes the ability to view personal actions realistically through a self-determined lens and not society's viewpoint (Erikson, 1963). During adolescence many of these core values and beliefs about self begin to take shape and the relationships built have an influence on that development. Subsequently, as the adolescent gets older, he/she will choose environments and situations that are congruent with his/her beliefs about self.

Family can be another factor which may contribute to the rise or fall of positive self-esteem (Harter, 1988). Messaging by parents is often a powerful tool for building self-esteem. Children who feel heard by their parents and perceive themselves as

important to the make up of the family tend to have more positive self-esteem.

Adolescents, who feel well liked by their parents, tend to have higher self-esteem (Coleman, 1961). Children who hear positive affirmations that they are pretty, smart, or good athletes tend to have higher self-esteem as well (Harter, 1990). Language in the home can have a direct impact on the formation of healthy adolescent self-esteem.

Gender is also identified as one of those variables important to the adolescent development of self-esteem (Chapman & Mullis, 1999; 2002). Building strong self-esteem is a major aspect in the development of any person, especially that of a young girl during these critical years. The findings of D'Ambrosio and Hammer (1996) claimed that the classroom is a microcosm of society. Male/ female classroom interaction needs to be looked at closely to better understand the affect youth have upon one another in the school setting and how the interaction can effect academics and self-esteem.

Research Problem

The topic of coeducational versus single gender education has created much discussion and controversy through the years (Coleman, 1961; Dale, 1971; Goodlad, 1984; Marsh, 1989). When looking for environmental benefits for the growth of positive self-esteem development, there has not been a definitive answer to the coeducation versus single gender question. Is one academically superior over the other, when looking at self-esteem development? Many chief proponents have tried to prove the pros of their preferred institution, hanging firmly to their beliefs. The promoters of coeducation strongly believe that the self-esteem of females is not harmed in these academic settings

(Dale, 1969, 1971, 1974; Feather, 1974; Goodlad, 1984). The defenders of single gender education insist that their institutions can actually improve female self-esteem (Coleman, 1961; Lee & Bryk, 1986). The difficulty with much of the older research on this topic is the restrictive choice of population (Dale, 1969, 1971, 1974; Feather, 1974; Schneider & Coutts, 1982). Males remained the primary focus of research by Dale, Feather, and Schneider et al., only investigating the female experience in so far as it complimented the male classroom experience, leaving the female experience out of the equation.

Assumptions had been made about female development in coeducational settings based on this research focusing primarily on males (Chubb, Fertman & Ross, 1997). Little focus was placed on the isolated female experience to determine the best environment for girls to flourish academically and build positive self-esteem. Because the male experience was regarded as normative, females were ignored as subjects of research and their experiences were devalued (Gilligan, 1982).

According to Sadker and Sadker (1994) and D'Ambrosio and Hammer (1996), it is during the grammar school years that females perform equally well or even outperform males academically and at the same time, show signs of well developed self-esteem. Females go through many challenging changes during their lives, one being puberty. Chubb et al., (1997) claimed in their study that once a female enters puberty, her academic performance as well as over all self-esteem gradually declined in the coeducational high school setting. O'Malley and Bachman (1983) also correlated low self-esteem with poor academic success in high school for females highlighting the urgency of this issue. The topic of this research will explore some of the factors affecting adolescent female self-esteem.

Research Purpose

The purpose of this study was to investigate the relationship between the decline of self-esteem and academic competence among high school females in the Bay Area. Researchers (American Association of University Women, 1995; Lee & Bryk, 1986) maintained that female self-esteem tends to drop during high school with the lowest point being sophomore year for females in both single gender and coeducational classrooms. Females in single gender high schools, however, show higher levels of achievement and self-esteem by senior year. Christine Sauer (2000) found that the highest point of female self-esteem remained lower than the lowest point of male self-esteem during the high school years. This study looked at the relationship between adolescent males and females in a coeducational classroom setting and investigated how the male presence may affect female self-esteem development. In addition, this study explored how the lack of male presence at a female institution may affect female self-esteem development.

Background and Need

For the purpose of this study, the researcher adopted Sandtrock's (2002) definition of adolescence, i.e., ages 12 through 18. This period has been considered one of the most fascinating and complex transitions in the lifespan encompassing biological, physical, behavioral, and social transformations. According to Lee and Bryk (1986), "adolescence is a critical period for the formation of attitudes about oneself" (p. 394). These transformations are complex and confusing for many youth, therefore in need of fostering and guidance inside as well as outside the classroom (Feiring & Lewis, 1991).

In the early 1960s and 1970s it was believed that a coeducational learning environment offered adolescent males the best educational as well as developmental environment in which to grow and prosper (Dale, 1969, 1971, 1974; Hyde, 1971). Dale's research supported the opinion that males responded better in coeducational environments on most scales of measurement used. Dale hypothesized that males performed better in coeducational environments while females performed the same in either environment. It was believed that male progression would be greatly improved by coeducation while the same environment would not be harmful to female learning. Unfortunately, this research placed little emphasis on the female experience in these environments, and therefore unsupported conclusions about female academic and personal development have been made in the literature (March, Smith, Marsh & Owens, 1988). As claimed by Lee, Marks and Bryd (1994), "because the male experience was regarded as normative, girls and women were ignored as subjects for research, and their experiences were devalued and treated stereotypically" (p. 94). Sadker and Sadker (1994) reasoned that self-esteem of elementary school aged girls remained high even though they received less time and attention, help and fewer academic challenges from teachers. However, over time this constant reinforcement of passivity resulted in a decline of independence and self-esteem happening most dramatically during the high school years. Chubb et al., (1997) noted that throughout high school, adolescent male self-esteem was consistently higher than adolescent female self-esteem for all four years. Seeing that children spend much of their daily lives in the classroom, the educational environment plays a key role in their transition from childhood to adulthood. This

environment is critical to the academic and developmental needs for both males and females.

Monaco and Gaier (1992) suggested that adolescent males and females develop self-esteem and self-image very differently. For girls and boys, academic settings will influence achievement and self-esteem in ways that cannot be compared to one another fairly. Academic setting can be equally important in the development of female self-esteem when considering the influence peers have on each other inside the classroom.

Because of their differences, providing boys and girls with similar educational environments cannot insure that both genders will benefit equally from them. Adolescent males and females are motivated in the classroom by different factors, and have dissimilar definitions for academic achievement. Lee and Bryk (1986) declared that females in their study benefited from a single gender environment during high school. Girls were more positive about academics in general; they showed greater achievement and had higher educational aspirations after high school. In comparison to their counterparts in coeducational settings, they found that by their senior year, females from single gender high schools were less likely to show signs of stereotypical sex role attitudes and favored higher levels of educational aspiration. Lee and Marks (1992) argued that more positive gender socialization may occur for students in single gender schools, where the environments are less conditioned by stereotypical roles of gender relations. Single gender education may offer young women a robust environment academically and socially for them to develop into strong, confident women with positive self-esteem.

Dale (1969, 1971, 1974) has posed the belief that since society is naturally mixed gender, educational experiences should occur in a mixed environment as well. If females are socialized in coeducational settings from the start of their educational experience, they will not be overwhelmed once leaving this school environment when embarking on the world. Dale's (1971) research suggested that the female presence added to the learning experience for male students. Contemporaries of Dale, such as Feather (1974) and Schneider and Coutts (1982) stated that coeducation would offer females a more purely academic experience rather than an all female education. The all boys' schools of that time were known for academic rigor and depth, while the all girls' schools were not.

Conceptual Framework

Theories developed by Albert Bandura (1977), Stanley Coopersmith (1967) and James Marcia (1966) have all linked the development of self and positive environment to healthy self-esteem. Other studies by Branden (1994), Reasoner (1983) and The California Task Force (1990) have supported the same belief. Adolescent female self-esteem is put to the test during the high school years, but an understanding of female developmental and environmental needs within the classroom can help contribute to the building of positive self-esteem (Lee & Marks, 1992). Other researchers have reasoned that a single gender environment could be more empowering, offering girls more freedom to speak their minds in disagreement during classroom discussions and debates (Coleman, 1961; Lee & Marks, 1992). Also noted was the increased interest among females in the last 30 years to take on leadership roles (i.e., student government positions

and group project leads) that are generally occupied by males in many coeducational classrooms.

A major theory used in this conceptual framework is Erik Erikson's (1963) Theory of Psychosocial Development. He chronicled eight phases of human life exploring how physical changes and environment were linked to the development of self and identity. He proposed the following stages of psychosocial development as occurring during one's lifespan.

- (a) Trust versus Mistrust
- (b) Autonomy versus Shame and Doubt
- (c) Initiative versus Guilt
- (d) Industry versus Inferiority
- (e) Identity versus Role Confusion
- (f) Intimacy versus Isolation
- (g) Generativity versus Stagnation
- (h) Wisdom versus Despair

This study focused on Erikson's 4th stage of psychosocial development, which he referred to as Industry vs. Inferiority and his 5th stage of psychosocial development he termed Identity vs. Role Confusion (1963). Stage 4 begins at or around age six. This is the point in development where children enter school and learn the appropriate norms within a classroom and seek to gain teacher approval. At this stage, a new understanding for the term, "success" is defined within a child's mind. Children are seeking academic competence and success comes in the form of grades, mastering classroom directions and obedience. Girls usually flourish during this stage academically and often develop a strong sense of self (Erikson, 1966; Sadker & Sadker, 1994). However, during the later years of stage 4, about age twelve when males and females are exiting junior high school,

they develop more sophisticated views of themselves and the opposite sex (Bandura, 1977). For many girls, this may happen at an earlier age than their male counterparts considering that it is females who tend to enter puberty more quickly. A shift in the way they see themselves and how they relate to one another begins between boys and girls. This is where the complexities of stage 5 development emerge.

Gradually, around the age of thirteen children enter stage five of development (1963). According to Erikson, this is the critical period of development where self-esteem declines for most adolescents especially girls (1966). This stage in development is related to puberty where the adolescent is essentially positioned between childhood and adulthood. Adolescents are primarily concerned with whom they appear to be in the eyes of others. This is the stage of development where children become independent and gain confidence. They begin making their own decisions, questioning the world as well as themselves. A sense of true self starts to emerge and the ego identity begins to grow.

Erikson (1966) referred to two forms of identity development during this 5th stage: the occupational identity as well as the sexual identity. The occupational identity deals with the concepts of career and success. The idea of being a contributing member of society becomes important to the adolescent. At the same time, the sexual identity is also forming, seeking the need for personal relationships with the opposite sex. The constructs of self-concept and self-esteem as well as puberty converge to the forefront for females causing this to be a challenging time. Females are deciding who they want to be in the classroom academically and thus the occupational identity. They are also occupied with how they want to be seen by their peers and thus the sexual identity. They are

seeking affirmation, forming alliances and cliques for security. These two forms of identity cannot be separated, therefore causing inner turmoil and questioning.

For girls in a coeducational setting, this can pose a difficult dilemma. Females struggle internally with the stereotypical roles of young women while testing male/female relationships all the while dealing with their changing bodies. This confusion can lead to a drop in academics as well as self-esteem for females in a coeducational environment (Boland 1995; Sadker & Sadker, 1994). These issues affecting female development during high school have motivated a large body of research to ask the following questions resulting in several inconclusive findings. This research was one more effort to analyze fresh data about this perplexing area. To do so, it will address the following research questions:

Research Questions

- 1) To what extent is female self-esteem linked to academic competency?
- 2) To what extent is female self-esteem affected by the presence of males in a coeducational classroom setting?
- 3) To what extent is female self-esteem affected by the lack of male presence in a single gender classroom setting?

Limitations

The scope of knowledge needed in survey design is one which takes time and experience. A researcher's inexperience in formatting a survey was a limitation for this study. In creating a survey, the researcher does not know how truthfully the respondents answer the questions. The researcher could only rely upon the self reporting which may or may not be accurate. The age of this group is fifteen years old and the subjects may have seen the need to please the researcher and answered as they felt the researcher would like them to do. Also, because the survey was distributed by a different teacher at each school, there may be some discrepancy in response choices from the subjects causing inconsistent data findings.

The one-on-one interviews inherently caused limitations for a study. The researcher may or may not have secured an accurate cross section of students with varying levels of self-esteem interested in participating. Quite possibly only those individuals with mid to high levels of self-esteem would want to be contacted by the researcher for follow-up interviews skewing the results. As with survey design, the issue of wanting to please the researcher may have occurred for the participants.

Delimitations

The major delimitation of this study was the creation and use of a self made survey tool which may not truly measure self-esteem. Self-esteem perception and attitude can change over time for an adolescent; therefore the conclusions drawn from

this study are only pertinent to a particular age and time. In addition, this group was geographically restricted and a student's motivation for taking the survey could not truly be determined. By using four specific schools from the bay area, the results are limited to this particular population and region, not generalizable to the larger population of sophomore females across the nation. By choice, the researcher selected the four schools used in the study; however, by further narrowing the scope to Catholic, private schools again the responses may only be pertinent to this particular group and may not be representative of self-esteem findings for the larger population. Also, creating one-on-one follow up interviews selected from this same population limited the findings to a generalized population. The researcher used a limited sample size for the study. Two hundred surveys were sent out and 100 were then randomly selected for the study and analyzed. Lastly, using a one-on-one interview design among ten girls may have lessened the risk of group think mentality, however it created selectivity among those who participated and reduced the actual true representation of the study.

Significance

This current study was designed to contribute to the body of research on female self-esteem development. Possibly, the information this study will add to the body of literature can be instrumental in helping assess female development in the single gender as well as in the coeducational classroom. Educators may be able to foster a better learning environment which enhances the self-esteem of adolescent females. Much of the research conducted on this topic has focused on the classroom setting, family

relationships, teacher/student interaction, or the impact of sports on the self-esteem development of adolescents. This study focused on the social interaction of females in the single gender classroom as well as between males and females in the coeducational classroom. This research may determine that one particular school setting enhances the self-esteem of young females, information which could be shared with teachers and educational institutions. The purpose of this study was to contribute to the existing research on single gender as well as coeducational school settings in terms of building positive self-esteem for the continued development and growth of youth.

The strength of this study laid in its mixed methodology approach. Much of the research in this field has relied on quantitative methods such as survey measurement tools as the sole means for collecting and interpreting data. Using a survey coupled with interviews not only allowed the researcher to analyze data, but also to understand the affect of these young participants at this particular age. It allowed their stories be told in their own words, which can be a very powerful research approach. Also, much of the research conducted on secondary education has been done outside the United States. The researcher attempted to add to the research and understanding of the U.S. adolescent high school experience.

Claims have been made that single gender schools by design are more selective and affluent, housing students from higher socioeconomic groups that tend to lack diversity when compared to their coeducational counterparts. Therefore, much of the research findings on the benefits of a single gender education when compared to coeducational education has been discredited because of these implied discrepancies in

student populations. This research was conducted in evenly paired schools, which catered to low to middle income families with highly diverse student populations in both settings. Also, unable to find a survey which met the needs for this research study, a new survey was designed, created and implemented by the researcher in hopes of uncovering more information related to this very important topic of female self-esteem.

Conclusion

An important distinction to make during this review of literature is to understand the different high school environments. The research conducted outside the United States was primarily carried out in public schools while the studies in the United States focused on the Catholic and/or private school. Possibly, the difference of opinion coming from these academic studies was in part caused by dissimilar school settings creating very dissimilar conclusions.

Definition of Terms

Terms used in this study are defined as follows:

Adolescence: The ages of twelve through eighteen.

Psychosocial stages: The stages of personality development suggested by Erikson, (1966) including trust, autonomy, initiative, industry, identity, intimacy, generativity, and ego integrity.

Puberty: The collection of hormonal and physical changes at adolescence that brings about sexual maturity.

Self-esteem: A global judgment of self worth: how well you like who you perceive yourself to be.

Self-concept: The broad idea of “who am I?” including the existential self as well as the categorical self.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The literature reviewed in this section investigated the writings on the single gender versus coeducational high school debate. It put into historical context what the leading researchers had to say about this controversial topic. It explored the research on adolescent educational experiences in the coeducational as well as in the single gender classroom. Lastly, it investigated the research linking female self-esteem to academic competency. This research suggests whether placement in a single gender or coeducational high school had any major affects on the self-esteem development of adolescent females.

The review of literature for this study was compiled into three sections: the literature on Catholic, single gender and coeducational high schools, academic achievement and self-esteem development of high school females and finally Erik Erikson's Theory of Psychosocial Development (1963) which formed the conceptual framework for this research.

History of Catholic Education

The history of Catholic education can be traced back to the institution of the church itself. The Lord prepared his disciples to spread his word after his life mission on earth was completed. Much later, this led to the formation of more structured churches,

missions and schools throughout Europe. U.S. Catholic education dates back to 1606 (National Catholic Educational Association, 2004). The Spanish and French came to the new world claiming land for their mother country. The goal was to gain territorial dominance, wealth and to educate the natives in Christianity. The Franciscans and the Jesuits were among the first to educate these people of the new world. The Franciscans opened the first Catholic school in what is now known as St. Augustine, Florida (Burns, 1937). Once the original colonies were established, the Jesuits formed a preparatory school in Newtown, Maryland, in 1677 to educate young men during the week and to act as a house of worship on Sundays.

The middle of the 19th century saw an increased interest in Catholic education due to the large number of Catholic immigrants coming to the United States. To serve these growing communities, American Catholics first tried to reform the public schools; this attempt, however, failed. Therefore, the Catholics began building their own schools, largely aided by religious orders such as the Sisters of Mercy and Sisters of the Immaculate Heart of Mary (NCEA, 2004). As stated by Thomas H. Groome in the *HarperCollins Encyclopedia of Catholicism* (1995), "throughout history, there is no more compelling instance of Catholic commitment to education than the school system created by the U.S. Catholic community" (p.1289). Today, approximately 400 years after that first Catholic school opened in Florida, Catholic schools continue to flourish under the guidance of the Catholic Church and the Catholic communities who support them. Catholic schools have been dedicated to educating the whole child: heart, mind and spirit.

The nurturing of self-esteem is a powerful component of their mission and commitment to every student they teach.

The Single-Gender and Coeducational Controversy

Coleman (1961), one of the early researchers investigating the single gender versus coeducational debate, conducted his research within the United States among 10 schools located in northern Illinois. These schools were a mixture of both public and Catholic high schools. He was interested in observing the possible differences in academic achievement as well as the environmental effects and how they related to social interaction. His research led him to question the very existence of coeducation as a high school option. Coleman stated, "coeducation may be inimical to both academic achievement and social adjustment" (p. 51). He believed that for females and males alike to be socially adjusted and academically prepared, single gender education was the appropriate option. He noted, "adolescents are looking to each other rather than to the adult community for their social rewards" (p.11). This in turn has significant implications for educational theory and practice. When the students in his study were asked, whose disapproval would be hardest to take: a parent, friend or teacher? Boys rated their friend's disapproval as most difficult to take by 42.7% in comparison to their teacher's disapproval of 3.5 %. Also, the girls rated their friend's disapproval as most difficult to take by 43.3 % to their teacher's disapproval of only 2.7 %. This indicates that the classroom is a micro-society for boys and girls where peer influence is heavily weighted. Coleman's data illustrated that popularity, wealth, athleticism and physical

beauty were rated as more important than academic achievement among the students. Coleman advocated that coeducation was actually causing maladjustment among the youth surveyed in his study.

Dale (1969, 1971, 1974), like Coleman, looked at this same debate of academic achievement and social adjustment among students. Dale's research was conducted in Great Britain within public school settings. His research on the same issues ended with a very different conclusion than Coleman's. Dale examined this controversy by interviewing teachers about their perceptions of students' social and academic development in the classroom. According to Dale (1974) his findings demonstrated that the typical coeducational setting was "a happier environment for both staff and pupils than the typical single gender school environment" (p. 273). He reported that there were no academic or attitudinal differences for females at either type of institution. He believed that the social interaction and the affective benefits observed at the coeducational institutions were as strong as the academic progress made by the students attending the single gender institutions. Lastly, he suggested that males within a coeducational academic setting had higher academic achievement than males within the single gender institutions. Dale (1969) concluded, "the progress of boys is probably improved by coeducation while that of girls is not harmed" (p. 267). He did support the notion that single gender schools were more disciplined than coeducational schools. The educational movement during that time was toward making school and the lives of students more enjoyable, which is what many of the coeducational environments were providing.

Prompted by the studies of both Coleman and Dale, Feather (1974) conducted his own research. Like Dale, his research occurred outside the United States. Feather focused on student values and levels of school satisfaction among juniors and seniors in 19 high schools throughout Australia. Through the use of a survey, students were asked to rank their personal values and levels of school satisfaction. Feather's data determined that there was no significant difference in the values of the girls and boys attending the single gender schools with those attending the coeducational schools. He noted that females from single gender schools saw their own schools as placing more emphasis on the importance of being helpful and having good manners. He concluded that he found no proof to support Coleman's claim that coeducational schools were counterproductive and had adverse effects on the adolescents attending those institutions.

Schneider and Coutts (1982) took the same stand as Feather and disputed Coleman's claims. They found no academic or achievement related differences between the students attending single gender schools from those attending coeducational schools. They concluded, "it remains for further research to ascertain whether or not the apparent advantage enjoyed by coeducational students occurs at the expense of academic achievement" (p.906). They cautioned that the differences may simply lie in the type of students attending these institutions instead of a school-type effect.

Riordan (1985) explored this subject matter further when he conducted a comparative study investigating three different types of high schools within the United States: Catholic single gender, Catholic coeducational and public coeducational schools. Although he used data gathered from a previous study, Riordan argued that it was wrong to analyze Catholic coeducational and Catholic single gender schools as one category

because the effects may differ between these two school types. During his research, he examined the female experience separately from the male experience and paid closer attention to the data produced for the female population. His findings indicated that single gender schools, by design were more academically challenging than the coeducational schools. Table 1 highlights some of these differences.

Table 1

School Achievement Comparing Three Types of Schools
School Type

Variable	Mixed Public	Mixed Catholic	Single gender Catholic
Vocabulary	52.57	54.77	56.75
Reading	52.53	54.08	55.35
Math	52.6	54.05	55.04
SAT verb	464.95	461.54	471.42
SAT math	502.43	469.94	481.58

Students attending the single gender schools outperformed the students at the coeducational public and Catholic schools. He observed that the single gender schools were approximately a half of a year ahead of the other schools when looking at academic achievement. The girls from the single gender institutions outperformed the females from the coeducational Catholic schools as well as the public schools when it came to vocabulary, reading comprehension, and math. In addition, the same students showed a slight advantage on standardized tests, (i.e., the SAT) over the students attending the

coeducational Catholic schools. Riordan found that the females from the single gender institutions were “the most favored group in any comparison” (p. 533).

Researchers Lee and Bryk (1986) expressed great concern over the small amount of research being conducted at the secondary level of education, so for their study they used the data from the national survey *High School and Beyond* (1985) conducted by Jerry West for the National Center for Education Statistics. They analyzed the data of 1,807 sophomore males and females compiled from 75 Catholic single gender and coeducational high schools within the United States during the years of 1980 and 1982. This study observed male and female participants over a two-year period of time; once during sophomore year and again during senior year. For their study, Lee and Bryk focused on academic achievement, educational aspirations, locus of control, sex role stereotyping and attitudes among students related to academics. They too analyzed the data for the girls and boys separately and found large gains academically for females at single gender institutions. Table 2 explores some of these gains in reading, math and science achievement.

Also illustrated are the differences in educational aspirations and levels of sex role stereotyping found among the girls at these institutions. The sophomore girls attending the single gender high schools outperformed their coeducational counterparts by senior year in all areas. They watched 30% less television and spent 1.2 more hours weekly on homework assignments. They expressed a more positive attitude toward academics and held higher career aspirations. In addition, they were less likely to express stereotypical sex role attitudes.

Table 2

Achievement Between Sophomore and Senior Year

Variable	Coed Schools	All Girls' Schools
Reading		
Achievement		
Sophomore year	10.47	10.89
Senior year	11.88	12.66 *
gain	1.41	1.72 *
Mathematics		
Achievement		
Sophomore year	20.89	20.58
Senior year	22.74	22.66
gain	1.8	1.99
Science		
Achievement		
Sophomore year	11.85	11.75
Senior year	12.52	13.04
gain	0.68	1.26 **
Educational		
Aspirations		
Sophomore year	7.03	7.4 *
Senior year	6.98	7.46 **
gain	-0.02	0.02
Sex Role		
Stereotyping		
Sophomore year	6.8	6.52
Senior year	6.29	5.85 *
gain	-0.51	-0.73

* $p < .05$. ** $p < .01$, both one-tailed

Lee and Bryk (1986) discussed the controversy surrounding the single gender versus coeducational debate and pointed out that the data of many researchers was divided on this issue. Marsh (1989) criticized Lee and Bryk for using a one-tailed test

during their study, which Marsh considered inappropriate for this type of research. Marsh believed that it was not possible to have significant effects at the $p < .05$ level in favor of coeducation using a one-tailed test. He would have liked to have seen the data examined by means of a two-tailed test at the $p < .01$ level of significance for proper analysis. Marsh concluded that the changes in the variety of outcomes were unaffected by school type based on the data from the *High School and Beyond* study (West, 1985). Many of the changes were related to sex differences, but again, these differences were not affected by school type. Marsh insisted in his article that Lee and Bryk strongly suggested that “coeducation may be detrimental to the academic or social development of girls” (p.70), Marsh disagreed. Lee and Bryk stood by their data and proclaimed that single gender schools were on the decline just as data, such as theirs, began showing the positive impact of single gender education for females. They wrote:

What has been considered by some to be an anachronistic organizational feature of schools may actually facilitate adolescent academic development by providing an environment where social and academic concerns are separated. Perhaps a second look at this disappearing school type is warranted. (p. 381)

The results from their research recognized that single gender schools might serve to sensitize young women to their academic and career potential in an atmosphere free of social adolescent pressures sometimes caused by the presence of the opposite sex. They recommended that all girls' schools should be considered as a positive educational option for young women.

In 1991, Marsh conducted a second study using the same *High School and Beyond* data (West, 1985). He evaluated the public, Catholic single gender and Catholic coeducational high schools and focused on the main effects of school type. Marsh (1991)

found that the differences in achievement were largely related to the characteristics of the students who attended single gender schools or coeducational schools rather than the type of school dictating the suggested academic gains. His results contradicted Riordan's (1985) data as well as Lee and Bryk's (1986) findings. He found no statistically significant differences between public and Catholic schools when related to academic orientation. Differences in academic achievement could be explained by other background variables or academic orientation and not school type. Marsh determined that the advantages of Catholic single gender education from sophomore to senior year are "quite modest at best" (p. 339) based on the data from the *High School and Beyond* study.

Self-Esteem and Adolescent Females

The literature on adolescent self-esteem is extensive. Some researchers support the concept that there is a decline in self-esteem once a child transitions from childhood to adolescence (Eccles, Wigfield, Flannagan, Miller, Reuman & Yee 1989; Marsh, Parker & Barnes, 1985; Piers & Harris, 1964; Rosenberg, 1986; Savin-Williams & Demo, 1984; Simmons, Rosenberg & Rosenberg, 1973). Other researchers have reported a rise in self-esteem during the transition to adolescence (Marsh, 1989; McCarthy & Hoge, 1982; Mullis & Mullis, 1992; O'Malley & Bachman, 1983; Roeser & Eccles, 1998). Chubb, Fertman and Ross (1997) asserted that there was no change in self-esteem levels during high school. However, Robins, Trzesniewski, Tracy, Gosling and Porter's (2002) study indicated that during adolescence, female self-esteem dropped by a 2.1 ratio to adolescent males during the ages of 13 to 17 years. Two meta-analyses; one conducted

by Kling, Hyde, Showers and Buswell (1999) and the other by Major, Barr, Zubek and Babey (1999) reported the same.

Rosenberg (1986) suggested that puberty might be a significant factor having a more profound effect on females than males causing this decline in self-esteem especially since boys and girls start off with relatively the same self-esteem levels during childhood. However, he insisted this alone cannot account for the decline throughout the entire adolescent experience. As claimed by Robins et al., (2002) “some aspect of the adolescent experience adversely affects self-esteem, but it does so more strongly for girls than boys” (p. 430).

How Schools Shortchange Girls, (American Association of University Women, 1995) was the first national survey to link the decline in self-esteem scores among adolescent females to the decline of academic achievement in the classroom. This study surprised the educational community and challenged many of the present day views on education and self-esteem. The researchers surveyed 600 boys and 2,374 girls between the ages of 9 and 15 years nationwide exploring the impact gender had on self-confidence, academic interests, and career goals. The survey examined the differences in perception between girls and boys and concluded that by the time girls finish high school they lose confidence in their academic abilities, self-esteem and career aspirations in startling disproportion to their male classmates. From the onset of middle school, 60% of the females polled in this study said they were happy with the way they were. However, by senior year of high school, that figure dropped to 29% of all females still happy with the way they were, creating an overall drop by 31%. Forty seven percent of the males

polled for this study retained their overall happiness with self from middle school through senior year of high school. Also, female perception of what they were good at academically dropped by 22% while male perception dropped at a much smaller rate, 13%, over the same period of time. According to the data, this declining sense of self inhibits females from taking action and accurately gauging their abilities. The authors concluded, “girls’ low self-esteem and consequently lower aspirations are problems that school can-and must- help solve” (p. 5).

One study, *The Impact of Ethnogender on Self-Esteem Among Adolescents* conducted by Dukes and Martinez (1994) concluded that females of most races had lower self-esteem than their male counterparts when surveyed using the Rosenberg Self-Esteem Scale (1965). The RSE is a 10-item questionnaire, which uses a Likert scale of measure to gauge adolescent self-esteem. Scores on this exam range from 10, the lowest, to 40 being the highest. Rosenberg's work examined how social aspects like race or ethnicity in combination with institutions, like schools, relate to self-esteem development.

Through their data, Dukes and Martinez (1994) proclaimed that gender is a bigger indicator than race when it comes to understanding adolescent self-esteem. Robins et al. (2002) reached this same conclusion, during their 2002 research study. For the Dukes and Martinez study, the mean score on the overall RSE was 31.50 for males and 29.83 for females. Their research noted that global self-esteem of females, which they defined as “the aspects of self that deals with the perceived ability to perform in an institutional context” (p.108) is generally lower than that of males. When considering that schools are the main institutions where males and females interact, this places females at a

disadvantage in the classroom. Based on this information, it is not surprising that adolescent females will show signs of lower self-esteem. As stated by Dukes and Martinez, “schools have tended to reward the conformity of females” (p.113).

Unfortunately, over time this conformity can lead to lower levels of self-esteem among female students.

Francis and James (1998) suggested that maybe the difference in self-esteem levels between adolescent males and females could be related to gender bias within self-esteem testing. To test their theory, they used the Coopersmith Self-Esteem Inventory (1967) as their survey tool. Coopersmith designed his original work to assess the origins of self-esteem in children. Their evaluation was conducted with populations from the age of eight to fifteen and indicated that 10 out of the 25 items were gender biased in favor of the males. They believed this could explain the lower levels of self-esteem found among adolescent females.

Chapman and Mullis (2002) replicated the Francis and James (1998) study. They found gender bias favoring males in only 5 questions, disputing the previous claim that the differences could be attributed to a bias and not varying levels of self-esteem between males and females. However, in the end, it was suggested that the discrepancy in data could simply be explained by the use of different populations. Francis and James conducted their research in Great Britain while Chapman and Mullis tested adolescents within the United States. They concluded that the difference may be more cultural than anything based on these populations.

Adolescent Females and the Classroom Experience

Research presented by Bandura (1977) hypothesized that children will respond positively or negatively to a given environment, based on the praise or punishment received. Often, people are reinforced or punished for modeling the behavior of others. For adolescents, they quickly learn the acceptable norms for their behavior by observing peers around them. Bandura's (1986) later research suggested that if an adolescent female was criticized for speaking out in a classroom, she did not speak out again. He also detected that once other female students observed this negative interaction, they, too, did not speak out. The lines of division between what is acceptable for males and females become increasingly apparent and females saw the dissimilar treatment of boys and girls in the classroom. Many females retreated and became docile or almost invisible in a coeducational classroom as the males continually responded to questions and aggressively interacted with teachers.

According to Harter (1990) self evaluation by adolescence becomes interwoven with peer relationships, school performance and a feeling of competence. The classroom becomes the central environment for this. Harter insisted that in order to understand adolescent self-esteem, the dominant culture as well as that culture's ideals and values must be understood. Harter stressed that these two factors were strongly related and in need of attention. The 1995 report issued by The American Association of University Women (AAUW), pointed out that learned helplessness found among females in the classroom is accepted and supported by students and teachers alike. During their years from middle school to high school, females consistently observed males being reinforced in the classroom. Overtime, males had a tendency to view their academic

success as related to ability while females will view their academic success as simply luck. These factors can intensify a slow decline in perceived academic competence and self-esteem among females. According to the AAUW, for some females, the academic culture is one where “to be viewed as cool is to be labeled as stupid” (p .49) by one’s peers in the classroom. This sends the clear message that brains and popularity do not coexist if the popular culture does not permit them to do so.

Gage and Berliner (1992) wrote,

...the evidence is accumulating, however, to indicate that level of school success, particularly over many years, predicts level of regard of self and one's own ability; whereas level of self-esteem does not predict level of school achievement. The implication is that teachers need to concentrate on the academic successes and failures of their students. It is the student's history of success and failure that gives them the information with which to assess themselves. (p. 159)

Sadker and Sadker (1994) declared that the self-esteem of females in grammar school remained relatively high even though they receive less time, help and fewer academic challenges from their teachers. However, this constant passivity resulted in a slow decline in independence and self-esteem as the girls entered high school and the decline continued in high school.

Chubb, Fertman and Ross (1997) conducted a study where they investigated whether self-esteem levels changed from ninth to twelfth grade in high school. More specifically they were interested in whether there were gender differences associated with these changes. They conducted their research using adolescents from a small U.S. community made up of working class and middle class families from a suburban and a rural area. They had 172 participants in total for their study with the average age being 15 years. The gender split was 41% male to 59 % female. They used a two-way analysis of variance (ANOVA) for their study and the results showed that there was a significant

effect for gender, but not for grade. Male self-esteem was consistently higher than female self-esteem throughout the four years of high school. The differences in self-esteem scores were significant ($p = .0013$). Table 3 shows the relationship between self-esteem scores, gender and grade.

Table 3

<i>Self-Esteem by Gender and Grade</i>						
Group	N	9 th	10 th	11 th	12 th	Total
Female	102					
M		28.81	28.82	28.65	29.37	28.91
SD		5.33	5.34	5.77	5.88	
Male	70					
M		31.70	31.19	30.20	31.56	31.16
SD		5.23	4.82	5.65	5.68	

Although self-esteem levels did not change drastically over the four-year period of time, males did have significantly higher levels of self-esteem than did the females. Chubb et al., (1997) speculated that somewhere between elementary and high school the effects of puberty and the impact of gender played a significant role on self-esteem and somehow negatively affected females. One suggestion made in the study was that girls received disproportionate amounts of reinforcement and less feedback from teachers, indicating that the classroom may be a contributing factor toward this decline. However, locating the variables affecting this decline would be difficult, but it would be a good start on the road to improvement for female happiness and success.

Owens, Smothers and Love (2003) maintained:

To understand the position of girls and women in education requires an understanding of changing structures and complex processes and a commitment to breaking down the barriers, which continue to result in female disadvantage. If America is to hold the best possible future for our people and civilization, she cannot afford to waste a primary resource--our nation's girls and women. (p. 5)

Conceptual Framework

This research study was based on a foundation of developmental theory. Through theory, a better understanding of how self-esteem develops for adolescents can be examined and applied to classroom settings and academic competency. Erik Erikson's (1963) theory served as the foundation for this conceptual framework. His theory combined with the analysis of his work by some of his contemporaries, has been matched with the key concepts as they relate to Erikson's stage five of development, identity, gender and adolescence.

Erik Erickson's Theory of Psychosocial Development (1963) chronicled the different phases of human life exploring how physical changes and environment are linked to the development of the mind. Influenced by Freud and his Theory of Psychosexual Stage Development (1905), Erikson proposed eight stages of development occurring during one's lifespan also known as the *Eight Ages of Man* (1959). Erikson explained how at each stage a balance between two contradicting concepts was important for growth and positive psychological development as well as movement toward the next stage. Figure 1 shows the lifespan of his theory, chronicling the ages from birth through older adulthood as they relate to each stage of development.

VIII.									Wisdom vs. Despair
VII.								Generativity vs. Stagnation	
VI.							Intimacy vs. Isolation		
V.						Identity vs. Confusion			
IV.					Industry vs. Inferiority				
III.				Initiative vs. Guilt					
II.			Autonomy vs. shame						
I.	Trust vs. Mistrust								
Ages	0-1	2-3	4-5	6-12	13-18	19-25	26-40	41 +	

Figure 1. Erikson's Theory of Psychosocial Stage Development contains eight stages of growth.

Stage one, Trust vs. Mistrust is the infantile stage where the newborn bonds with the mother and she becomes the central figure of importance. The infant develops reassurance from her with each feeding that she will not go away, creating hope. However, there is always that possibility of her not returning, so the child is in a constant state of trust and mistrust at the same time. It is dependent upon the mother whether she fosters the trust and consistently returns to the child. Stage two, Autonomy vs. Shame and Guilt is celebrated by mastering the skill of toilet training and having control over one's body. The child now has the choice of when and where they control or choose not to control their bodily functions. Again, the importance of the duality for both sides is

emphasized for positive growth. Stage three of development is Initiative vs. Guilt where the child learns that independence from the mother is possible. He/she starts to set goals and envisions a personal purpose. Slowly, the child stretches the boundaries of his/her physical environment as well as his/her psychological connection to mother struggling along the way.

Industry vs. Inferiority is stage four of development and marks the last stage of childhood before adolescence begins. Stage four begins around age 6, this is the point in development where children enter school and learn the appropriate norms within a classroom, seeking to gain teacher approval. Confidence starts to develop as children undertake projects and complete them. During the later years of stage four around age 11 to 12, males and females are exiting junior high school with changing views of themselves and the opposite sex. After stage four of development, there starts a separation between boys and girls in the way they see themselves and how they relate to one another. Gradually, children enter stage five of development Identity vs. Role Confusion. Adolescents become very self conscious with their bodies and expressed thoughts during this stage (Erikson, 1959). This point in development is where puberty and adolescence converge around age thirteen. Erikson claimed that, "identity is the center of any and all disturbances occurring during this stage; identity cannot be separated from puberty" (Evins, 1966). At this stage the adolescent has his/her cognitive capacities and is now looking to find where he/she fits into the culture. Erikson discussed how one's environment is critical during this period. If an adolescent is not given choices in his/her environment, he/she will be forced to conform to the dominant culture. He

clarified that highly structured environments create little inner conflict for an adolescent while unstructured environments cause much more inner conflict for an adolescent which can lead to identity confusion.

Stage six, Intimacy vs. Isolation begins the adult stages of development. This is where healthy individuals are capable of deep relationships with friends as well as intimate relationships that lead to commitment and marriage. Those who are not capable will close themselves off from the world, however healthy individuals have a balance of both; committing to another while holding on to their own identity. Generativity vs. Stagnation is stage seven. During this stage, well developed adults are occupied with having children, focusing on career and being creative while those in stagnation have not fully determined a life path and meaning. Erikson's (1963) 8th and last stage of development is called Wisdom vs. Despair. This stage describes the later years of life where adults integrate all the earlier stages and come to understand the wisdom of faith, life and self. If one does not comfortably accept his/her life choices, he/she can fall into despair and unhappiness looking back on an unfulfilled life. Healthy individuals achieve understanding and wisdom successfully coming full circle with their understanding of self.

Analysis of Erikson by Contemporaries

Erikson's Theory of Psychosocial Development (1963) was the catalyst for others to look at lifespan development in much the same way he suggested through his theory. The two key concepts of his theory that have been analyzed, debated and discussed most

often are his concepts of identity and intimacy. These critical components of his theory occur during the developmental stages five and six. The focal point of this dissertation is stage five development; therefore the research more fully explores the importance of this stage through others' writings.

James Marcia (1966) elaborated on Erikson's theory, by expanding on identity as described in stage five of development. Marcia subdivided adolescence into four different areas: diffusion, foreclosure, moratorium and achievement. For youth experiencing diffusion, they are unsure of themselves and their identity, yet they are not actively seeking a comfortable identity. Identity foreclosure refers to youth that are completely closed off from themselves and do not actively think about self, values or goals. They remain in a constant state of stagnation. Moratorium refers to an identity where an adolescent acknowledges that he/she is unhappy and actively or passively seeks an alternate identity. Lastly, Marcia spoke of those adolescents, who reach identity achievement and are able to acknowledge and resolve individual crisis and establish true goals for self.

Gail Sheehy (1976) agreed with Erikson's theory that people move through life marked by identifiable stages as well as critical crisis situations. However, she proposed that people go through six distinct stages during life and not eight as presented by Erikson. Through her own life experiences, she realized that individuals are subject to more restrictions and contradictions during the earlier stages of development. She reported that this was even more prominent among women and the choices they make. Sheehy believed that one never fully resolves any issue, but still progresses with his/her

development. Progress on to the next stage occurs once a major life issue is not considered a main focal point of anxiety for the individual any longer. Unlike Erikson, she did not believe that age served as a definitive maker for development and crisis. In addition, she focused primarily on females and their stage development.

Strongly influenced by Erikson's Theory of Psychosocial Development, Levinson (1978) developed a theory on the evolution of the individual life structure, divided into four distinct areas. He agreed with Erikson's claim that the lifespan development is linked to age and the mastering of certain skills at critical points. Erikson's theory emphasized the first third of one's life, as the most critical. Levinson disagreed with Erikson (1963) and Sheehy (1976). He focused his theory on the adult years and expanding on Erikson's adult stages of development. His theory begins roughly around the age of seventeen and expands extensively over the adult years. Lastly, unlike Sheehy, he believed that women went through the same stages as men and in the same order.

Erikson (1963) has been criticized for using males as his primary target of research in developing his Theory of Psychosocial Development (Gilligan, 1979). Like Sheehy, Gilligan suggested that the patterns of development for women are different than that of men when looking at self and interpersonal relationships. She believed that for women identity and intimacy were interwoven while for many males, the two were considered separate. Although Erikson acknowledged that many issues in his theory may occur and be resolved differently for women, he still proposed these two points of crisis as separate and distinct stages in his theory.

Meacham and Santilli (1982) appreciated the concepts of Erikson's theory, but criticized the presentation of his information. Like many before them, they, too, focused on his concepts of identity and intimacy, but questioned whether one must always be in a constant struggle and/or state of crisis as they move from stage to stage. They wondered whether individuals could successfully progress from a developmental point without resolving a prior crisis at an earlier stage as suggested by Erikson. Also, they criticized Erikson for not defining what a successful resolution of crisis may look like for an individual. To Meacham and Santilli, the concepts were intriguing, but lacked some of the concrete markers emphasizing growth and development.

Erikson's stage five (1963) was scrutinized by Newman and Newman in 1991. They evaluated Erikson's theory and expanded on his number of developmental stages from eight to eleven. They redefined the adolescent years into two separate stages, early adolescence and later adolescence. They insisted that this was such a defining stage in one's development that it must be explored in more depth. Early adolescence describes the years of physical change going on with one's body as well as the forming of true friendships. Later adolescence is the period of fidelity toward an individual identity and independence in thoughts and actions. Newman and Newman believed strongly in the importance of identity, but were concerned by Erikson's lack of depth surrounding this critical concept as it occurred in adolescence.

Lastly, Donald Capps (2004) advocated the 8 stages of development introduced by Erikson, but found that each crisis and its resolution took an individual roughly a decade to resolve and not a few years as postulated by Erikson. Capps, like Levinson,

(1978) focused on the later years of development and hypothesized that there were six stages related to the adult years versus the three proposed by Erikson. He took issue with Erikson's placement of identity development as occurring during stage five. Capps believed that identity crisis was more applicable to the struggles facing adults in their forties. He strongly agreed with the concept, but disputed the age at which one deals with identity.

Summary

This review of literature addressed the issues of self-esteem and academic competence found among high school females. The educational battle of single gender versus coeducational environments proved to be a difficult debate. The literature for both sides was well tested and supported, yet the researchers' findings have been inconclusive. Academic achievement and adolescent self-esteem are powerful concepts, which attract much attention in the academic world. Whether one supports single gender or coeducational schools, all would agree that adolescence is a difficult time for many youth. Puberty, fitting in, wanting to be well liked by one's classmates, and peers can have an effect on who an individual becomes. Therefore, creating a classroom culture which can be sensitive to these issues as well as the academic needs of all students can only lead to the development of well adjusted men and women, who are academically competent and possess positive self-esteem.

Erikson's (1963) stage five of development is a significant period that has been addressed by many researchers. Identity and identity formation lay the foundation for

who an individual becomes. According to Erikson, this formation beginning in adolescence, is highly influenced by peers and environment. The classroom then sets the tone that will ultimately determine who either will flourish or fail within this academically dominant culture. Can self-esteem be linked to academic competence? And can the presence or lack of male presence in the classroom effect the self-esteem of the young girls in these environments in either a positive or negative manner?

Very little research has focused solely on the female experience in an academic environment, linking self-esteem to academic competence. Therefore, this study was designed to contribute to the body of research on female self-esteem development. Much of the available literature focused on the classroom setting, family relationships, teacher/student interaction, or the impact of sports on the self-esteem development of adolescents where the male experience remained the primary focus. As stated in the research questions, this study focused on the social interaction of females in the single gender classroom as well as between males and females in the coeducational classroom. Literature related to this topic did not investigate the extent by which female self-esteem was affected by the presence or lack of male presence in a classroom setting. This research may determine that one particular school setting may enhance the self-esteem of young females.

CHAPTER III

METHODOLOGY

Restatement of the Problem

Self-esteem among adolescent females tends to drop during the high school years (American Association of University Women, 1995; Lee & Bryk, 1986; Sadker & Sadker, 1994). The past research on self-esteem tended to focus on the male experience in the high school classroom (Dale, 1969, 1971, 1974; Hyde, 1971). Little focus was placed on the isolated female experience in a coeducational and/or single gender high school to suggest the best academic environment for girls to flourish and build positive self-esteem. Also, the challenge of puberty facing young girls at this critical time has probably added to the decline in academic performance as well as over all self-esteem (Chubb, Fertman & Ross, 1997; Erikson, 1966). The topic of this research explored these factors affecting adolescent female self-esteem during high school.

Research Methodology and Design

This study addressed the above issues using a mixed methodology approach. A survey design was used with follow up face-to-face interviews to add richness to the researcher's findings. The surveys served as a source of data collection and allowed for a practical means to examine a large population of subjects (Creswell, 2003). The

interviews provided the opportunity to explore topics in depth with a select number of respondents. In dealing with this particular age group, one-on-one interviews deemed the more appropriate follow up tool. Adolescents have a tendency to think alike, particularly in group situations possibly due to peer pressure or the need for acceptance. Research has shown that this “group-think” mentality peaks at age twelve (Janis & Mann, 1977). Since the participants used for this study were roughly 15 years of age, interviews served as a better source of accurate information. The interview coupled with a survey allowed the researcher to record the affective as well as the cognitive aspects of the data from the adolescent respondents. Therefore, the study incorporated quantitative as well as qualitative methods.

Population and Sample

The population used for this study was sophomore females enrolled in Catholic high schools. A total of 200 surveys were sent; 50 females from each of the 4 schools were solicited for the survey. Simple random sampling was applied to each of the rosters of the four high schools. Two of the high schools were coeducational and two were single gender institutions. High schools with minority representation (Hispanic, Asian and African American) were solicited to create a multiethnic base for this study. The survey sample was limited to only those females who had not switched from a single gender to a coeducational institution or vice versa after their freshman year. This request was presented to the subjects in a pre-notification letter for screening purposes. Only those girls who indicate not switching schools had the option of being randomly selected from the sample.

The interview sample was 10 randomly selected females from the pool who volunteered their participation. Only those girls who designated an interest for partaking in the interviews, based on their response from the survey, were randomly selected by school type. The four high schools used in this study were all small to mid-size high schools with populations ranging from 250 to 1195 students. All four schools offered a very similar look and feel considering their similar religious affiliation, school mission and purpose, location and values. The adolescents attending these schools were from low to middle-income families and came from varying ethnic backgrounds.

Instrumentation

The survey, Academic Self-Esteem Perception Questionnaire (Appendix A), was developed by the researcher based on the writings of Coopersmith (1967) as well as the concepts employed by William Fitts (1996) in the Tennessee Self-Concept Scale. This survey instrument sought to collect data on self-esteem attitudes among high school females in both single gender and coeducational settings. Academic competency for both groups was also measured by self-reported academic competency performance as well as their grade point averages.

Academic Self-Esteem Perception Questionnaire

This survey, the Academic Self-Esteem Perception Questionnaire is a 25-item survey using a 5 point Likert type measuring scale offering response options ranging from “strongly disagree” to “strongly agree”. This survey had three major divisions: (a)

self reported self-esteem as it relates to academic competency, (b) the extent to which female self-esteem is affected by the presence of males in a coeducational classroom, and (c) the extent to which female self-esteem is affected by the lack of male presence in a single gender classroom through self reported means. Table 4 shows the relationship between the research questions, the survey questions, and the interview questions.

Table 4

Research, Survey, and Interview Matrix

Research Questions	Survey Questions	Interview Questions
Research Question #1	See questions: 2, 4, 5, 6, 7,10, 13, 14, 15, 20, 25	See question: 7
Research Question #2	See questions: 16, 17, 18, 19 as well as: 1, 3, 8, 9, 11,12	See questions: 1, 2, 3, 4, 5, 6, & 8
Research Question #3	See questions: 21, 22, 23, 24 as well as: 1,3, 8, 9,11,12	See questions: 1, 2, 3, 4, 5, 6, & 8

Survey questions #2, #4, #5, #6, #7, #10, #13, #14, #15, #20, and #25 relate to Research Question One and will focus on academic competency. Survey questions #1, #3, #8, #9, #11, and #12 all focus on female self-esteem in both school settings and will relate to Research Questions Two and Three. Survey questions #16, #17, #18, and #19 correlate to the data on female self-esteem in coeducational settings, and correspond to

Research Question Two. While survey questions #21, #22, #23, and #24 identified with female self-esteem in single gender environments and associated to Research Question Three only. A 60% response rate was required to ascertain confidence in the survey responses.

Validity

A panel of professionals was asked to gauge the validity of this survey, the Academic Self-Esteem Perception Questionnaire (Appendix A). A letter introducing the researcher (Appendix B), a copy of the 25-item Academic Self-Esteem Perception Questionnaire, a validity panel evaluation form (Appendix C), and a demographic check list (Appendix D) were sent out to seven experts in the field of adolescents or adolescent self-esteem. The panel was comprised of educators, researchers, and survey specialists. A complete list of the panel can be found in Appendix E. All materials were mailed to the validity panel after approval by The Institutional Review Board for the Protection of Human Subjects (IRBPHS) at The University of San Francisco was granted in January, 2004 (Appendix F). The researcher requested the panel to complete the evaluation questionnaire and have them returned by January 30, 2005. For their convenience, a self-addressed stamped envelope was provided. All suggestions made by the experts were taken into account for the final revision of the survey. Some suggestions provided by the validity panel included the rephrasing of questions #3, #13, and #20 for clarity. It was recommended that some questions be framed in the negative such as questions #2, #6, and #11 to make sure those taking the survey are paying attention to the questions. It was suggested that more sophisticated language be used throughout the survey when writing

for an audience of 15 year olds. It was also proposed that simplifying the structure of some sentences occur, as in the case of questions #5, #8 and #12. Lastly, clarification of the directions on page two of the survey was necessary to remove any confusion between which questions were to be answered by which population of girls.

Reliability

A test-retest reliability study was conducted to establish the stability of the survey over time. The identified panel was comprised of 20 sophomore females from a nonparticipating coeducational Catholic high school in San Francisco. This panel closely resembled the universal population for this study. The subjects were given the researcher designed survey, the Academic Self-Esteem Perception Questionnaire (Appendix A), by a school designated classroom teacher during Psychology class, collected and received by the researcher during the last week in January, 2005. A second copy of the survey was handed out to the same selected panel 3 weeks later during the third week of February, 2005. The results were mailed to the researcher's home. Reliability testing was used to establish the internal consistency of the survey. Test-retest reliability among the girls was found to be at 100%. In addition, reliability using Cronbach's coefficient alpha, a much more robust method, determined reliability at .762 level. This lies slightly higher than what is considered the acceptable minimal value of .70. Therefore, the level of reliability reached by the self-esteem scale is acceptable.

Interviews

Ten face-to-face, focused semi-structured interviews were conducted with a randomly selected number of respondents from the pool, who volunteered their participation. A copy of the interview questions can be found in Appendix G. Five females from each school type were randomly selected and contacted by phone or email for a 30 minute taped follow-up interview. Only those girls who designated an interest for partaking in the interviews, based on their response from the survey, were randomly selected by school type. Interview questions #1-6 and #8 as well as subsequent conversation relate to both Research Questions Two and Three. Interview question #7 and subsequent related conversations correspond to Research Question One.

Collection of Survey Data

The survey, Self-Esteem Perception Questionnaire, was administered to four high schools from the bay area. All four high schools used in the study were referred to by a letter assignment of (school) A, B, C, or D. All four high schools were Catholic schools in the Archdiocese of San Francisco; two were single gender and two were coeducational. Consent forms from all four schools have been secured and a copy of the school permission forms can be found in Appendix H. The surveys were hand delivered to all four schools by the researcher and presented to the principals. Along with the surveys, the principals were given parent consent letters, student pre-notification letters, instruction, envelopes, and a box for collecting the surveys. A copy of the informed consent letter can be located in Appendix I. Participants also received the student pre-notification letter

(Appendix J), from their school introducing the researcher, stating the purpose of the study as well as the designated time-line. Once all the consent forms had been collected from the schools, the surveys were distributed to them during the third week of March, 2005. The subjects at the single gender schools received the survey during either their English or Science class by a school designated teacher. The subjects from the coeducational high schools received the same pre-notification letter with instructions that they would receive the survey in their English class by their school designated teacher. The survey took each subject approximately 15 minutes to complete. Confidentiality was granted to all subjects; they submitted the survey in a sealed envelope provided and were instructed to place the survey in a box designated at the front of their classroom. The fact that the survey was passed out as opposed to mailed helped to cut down non-response related issues. The researcher then collected the boxes of surveys from each high school. All surveys were secured by the last week of April, 2005.

Analysis of Survey Data

The raw data from the surveys was compiled and the results from the single gender schools and the coeducational schools were compared within group as well as between the two groups. The scores from the single gender schools and the coeducational schools were reported by means of descriptive statistics. The variability of scores was expressed by range and the distribution of scores was displayed by use of bar charts.

In response to Research Question One, "To what extent is female self-esteem linked to academic competency?" a regression analysis was conducted as well as *t*-tests

comparing the mean scores of the females within the single gender high schools to those from the coeducational high schools. In response to Research Questions Two and Three, “To what extent is female self-esteem affected by the presence of males in a coeducational classroom setting or by the lack of male presence in a single gender classroom setting?” *t*-tests were used to compare the mean scores among the 50 girls within each identified group setting.

Collection of Interview Data

The focused semi-structured one-on-one interviews were 45 minutes long. Five females from each type school were randomly selected and contacted for the follow-up interview. The participants were offered confidentiality and pseudonyms were used. All interviews took place after school onsite in private offices designated by each school’s principal during the month of May, 2005. All interviews were taped with the written consent of the participants (Appendix I). All tapes were labeled and held in a secure location within the researcher’s home during the interview process. Once the taped interviews were completed and review for themes, all tapes were destroyed.

Analysis of Interview Data

The data collected from the one-on-one interviews was used to add affect to the researcher’s findings. The researcher transcribed the 45-minute sessions and combed the transcripts for recurring themes in the dialogue. During analysis of the transcribed notes, categories of responses were identified and coded. All coded responses were then tallied

and interpretations from the data were summarized for both groups of females and compared. The researcher has ascertained if the interviews support the survey findings, show no added value, or even if they contradict the quantifiable data collected from the surveys.

CHAPTER IV

FINDINGS

Introduction

The analysis of data was conducted to answer the three questions posed in Chapter One:

- (a) To what extent is female self-esteem linked to academic competency?
- (b) To what extent is female self-esteem affected by the presence of males in a coeducational classroom setting?
- (c) And, to what extent is female self-esteem affected by the lack of male presence in a single gender classroom setting?

All data was collected by the methods stated in chapter three and analyzed. The scores from the single gender schools and the coeducational schools were reported by means of descriptive statistics. A regression analysis ran for Research Question One and *t*-tests were used to analyze the data for Research Questions Two and Three. This chapter reports the data in two sections. First, the quantitative results from the 100 surveys are presented as they relate to the research questions in numeric order, followed by descriptive statistics showing the *t*-test results. Second, the qualitative results from the 10 one-on-one interviews are presented as themes that emerged from the responses to the interview questions. They are divided between those responses from the five girls attending the single gender schools and the five girls attending the coeducational high schools.

Survey Results

In response to Research Question One, “To what extent is female self-esteem linked to academic competency?” Survey questions #2, #4, #5, #6, #7, #10, #13, #14, #15, #20, and #25 were analyzed by use of regression analysis with responses displayed below in Table 5. This research question was seeking an answer to how the students felt about themselves in relation to self-esteem and whether there was a correlation between their academic competency and the self-esteem scores.

Table 5

Relationship Between Research Question One and Survey Questions 2, 4-7, 13-15, 20, and 25

Column	A	B	C	D	E	F	G	H	I	J	K
Survey Question	School Type	N	Mean	Median	SD	Range	Strongly Agree (%)	Agree (%)	Neither (%)	Disagree (%)	Strongly Disagree (%)
2	Both	100	2.67	2	1.010	4	4	18	25	44	9
4	Both	100	3.61	4	1.043	4	19	41	27	8	5
5	Both	100	3.82	4	1.009	4	22	55	10	9	4
6	Both	100	3.74	4	1.088	4	25	45	12	15	3
7	Both	100	3.91	4	0.793	4	18	63	12	6	1
10	Both	100	3.66	4	1.017	4	19	45	23	9	4
13	Both	100	3.83	4	0.877	4	19	55	18	6	2
14	Both	100	4.4	4	0.985	4	47	37	7	7	2
15	Both	100	3.37	3.5	0.489	2					
20	Coed	50	4.28	4	0.757	2	46	36	18	0	0
25	Single	50	3.9	4	1.111	4	38	30	18	12	2

When considering the population of 100 girls as a whole, the results tallied from survey question #2 showed that they challenged themselves academically in the classroom and had a competitive nature. Fifty-three percent of the girls (columns J + K) compared themselves academically to the other girls in both the single gender and

coeducational groups, and 74% (columns G + H) felt just as competent as the other girls in class according to the results from question #13. When asked question #7, 81% (columns G + H) felt that they comfortably fit in well with their peers and 77% (columns G + H) confidently spoke up when clarification from the teacher was needed for a class assignment. A strong 64% (columns G + H) of the girls liked raising their hands in class (question #10) and a slightly smaller population (60%) were also comfortable being randomly called upon by a teacher (question #4). Yet, their answers to question #6 indicated that 70% (columns G + H) of the girls felt that they did not do well in school and were not happy with their academic performance. When looking specifically at grade point average, question #14, 84% (columns G + H) of the girls felt that their GPA's could be stronger, yet the average GPA was a 3.37 and the median GPA was a 3.5 out of 4.0 according to question #15.

When the 50 girls attending the coeducational schools were asked question #20, how they compared themselves to the boys in class, 82% (columns G + H) confidently felt they were just as bright as the boys at school. None of the girls attending the coeducational schools responded negatively to question #20. When the girls attending the single gender schools were asked how they perceived they would compare academically to boys in a high school class, 68% (columns G + H) of the girls believed that they would feel just as smart as the boys if they were in class with them as indicated by the results from question #25.

In response to Research Question Two, "To what extent is female self-esteem affected by the presence of males in a coeducational classroom setting?" survey questions #16, #17, #18, and #19 were analyzed by use of *t*-tests for the 50 girls attending the two

coeducational high schools. The researcher explored the social relationship between males and females in the academic classroom, examining the impact males have on females in a positive or negative manner. The results listed below in Table 6 indicated that the girls attending the coeducational schools strongly enjoy having male classmates. Ninety percent of the girls “agreed” with question #16 (columns E + F) while only 4% of the girls “disagreed” with this question. However, when asked if they would like to work in groups without males, 44% of the girls were “undecided” on question #17. The remaining 56% of responses were distributed between the positive (24%) and negative (32%) response options. When asked if male classmates liked to hear their ideas, (question #18), a strong 62% “agreed” (columns E + F) while another 36% were again “undecided”. The remaining 2% “disagreed” with this question. When asked if having boys in class helped their self-esteem, (question #19), the girls were divided. Fifty-two percent “agreed” (columns E + F) while 36% were “undecided” and the remaining 12% of the girls “disagreed” with this question.

Table 6

Relationship Between Research Question Two and Surveys Questions 16, 17, 18, and 19

Column	A	B	C	D	E	F	G	H	I
Survey	Mean	Median	SD	Range	Strongly Agree (%)	Agree (%)	Neither (%)	Disagree (%)	Strongly Disagree (%)
Question									
16	4.2	4	0.728	3	34	56	6	4	0
17	2.92	3	0.9	4	4	20	44	28	4
18	3.64	4	0.598	3	4	58	36	2	0
19	3.54	4	0.885	3	14	38	36	12	0

Note: N=50

In response to Research Question Three, “To what extent is female self-esteem affected by the lack of male presence in a single gender classroom setting?” survey

questions #21, #22, #23, and #24 were analyzed by use of *t*-tests for the girls attending the single gender schools and the results are displayed in Table 7. Again, the researcher explored the social interaction, which occurred in the classroom, examining the impact males might have on females in a positive or negative manner (survey questions #21, #22, #23, and #24) at the age of 15 years.

The data indicated that of the 50 participants from the single gender schools, 56% (columns E + F) preferred not working in groups with boys, another 26% responded “undecided” to question #21 and the remaining 18% “disagreed” (columns H + I). When asked if they would enjoy the possibility of working in groups with boys (question #22), 70% (columns E + F) said they would enjoy this option. Again, a high 22% responded “undecided” to this question. Yet, when asked if not having boys in class would help their self-esteem, (question #23), 60% “agreed” (columns E + F) while another 28% were “undecided” and the final 12% “disagreed” (columns H + I) with this question. Lastly, when asked question #24 regarding whether having boys in the class would help build their self-esteem, the slight majority of 54% were “undecided”, another 34% “disagreed” (columns H + I) with this question and the remaining 12% (columns E + F) believed that having males in the class would help their self-esteem.

Table 7

Relationship Between Research Question Three and Survey Questions 21, 22, 23, and 24

Column	A	B	C	D	E	F	G	H	I
Survey	Mean	Median	SD	Range	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Question					(%)	(%)	(%)	(%)	(%)
21	3.5	4	1.111	4	18	38	26	12	6
22	3.74	4	0.777	3	12	58	22	8	0
23	3.82	4	1.155	4	38	22	28	8	4
24	2.72	3	0.904	4	4	8	54	24	10

Note: N=50

Survey questions #1, #3, #8, #9, #11, and #12 were asked of all the 100 girls in the study and they relate to both Research Questions Two and Three. These questions referred to the comfort levels the girls experienced with self and others. Table 8 shows the responses to these questions.

Table 8

Relationship Between Research Questions Two and Three and Survey Questions 1, 3, 8, 9, 11, and 12

Column	A	B	C	D	E	F	G	H	I
Survey	Mean	Median	SD	Range	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Question					(%)	(%)	(%)	(%)	(%)
1	4.59	5	0.637	2	67	25	8	0	0
3	4.14	4	0.841	4	36	48	11	4	1
8	3.14	3	1.137	4	14	26	24	32	4
9	3.69	4	0.692	3	11	49	38	2	0
11	3.65	4	1.086	4	21	44	19	11	5
12	3.11	3	0.994	4	7	29	37	22	5

Note: N= 100

When the girls were asked if they enjoyed being a girl, 92% (columns E + F) responded favorably to question one, while the remained 8% were “undecided”. Eighty-four percent (columns E + F) felt that at the age of 15, they had a strong group of friends who respected them. Eleven percent were “undecided” and the remaining 5% “disagreed” with question #3. Their responses widely varied to the statement “I can feel discouraged in class.” Forty percent “agreed” (columns E + F) with this statement, 36% “disagreed” (columns H + I) and another 24% were “undecided” toward question #8. A majority of 60% (columns E + F) felt that their female classmates liked to hear their ideas in class, while another 38% remained “undecided”. Sixty-five percent of the girls (columns E + F) found it hard to speak up in class, while another 19% were “undecided” and the remaining 16% (columns H + I) “disagreed” with question #11. When asked

question #12, 36% (columns E + F) said that they have a leadership role in their school, while 37% were “undecided” and 27% (columns H + I) “disagreed”.

Analysis

The survey questions and the oral responses were categorized into one of three areas: those relating to self-esteem, those relating to academic performance (self reported GPAs), and lastly, social competence. All correlation coefficients were low, none of them reached a statistical significance at the conventional .05 level. Consequently, the results do not provide sufficient evidence against supporting the null hypothesis, which states that there is no correlation between self-esteem and perceived academic competence.

The girls attending the single gender schools showed no correlation between self-esteem and academic competence, while the girls attending the coeducational schools showed a low significance ($p = .073$) correlation ($r = .356$) on the same scale indicating that as self-esteem increases, there is some evidence to indicate that academic performance increases as well. Table 9 illustrates the results of the t-tests conducted for the two independent groups. Figures 2, 3, and 4 show the frequency distribution of scores for academic performance, self-esteem, and social competence. Students in the all girls' schools scored slightly higher on academic performance and self-esteem, but somewhat lower on social competence. Students from the coeducational high schools scored slightly lower on academic performance and self-esteem, but somewhat higher on social competence. In general, the results indicated that all self-esteem levels were average, GPAs were high, and social competence was above average for both groups of girls. The results indicated that the mean level of academic performance and self-esteem are similar

for the 50 girls attending the single gender high schools when compared to the 50 girls attending the coeducational high schools. The two variables remain similar in both academic settings.

Table 9

T-test Analysis

Measures	Survey Questions	Type of School	N	Mean	SD	Maximum
Academic Performance	15	All Girls	50	3.374	0.42	4
	15	Coed	50	3.371	0.55	4
Self-Esteem	1 through 14	All Girls	50	49.68	6.29	70
	1 through 14	Coed	50	48.98	6.95	70
Social Competence	21 through 25	All Girls	50	17.68	1.95	25
	16 through 20	Coed	50	18.58	1.66	25

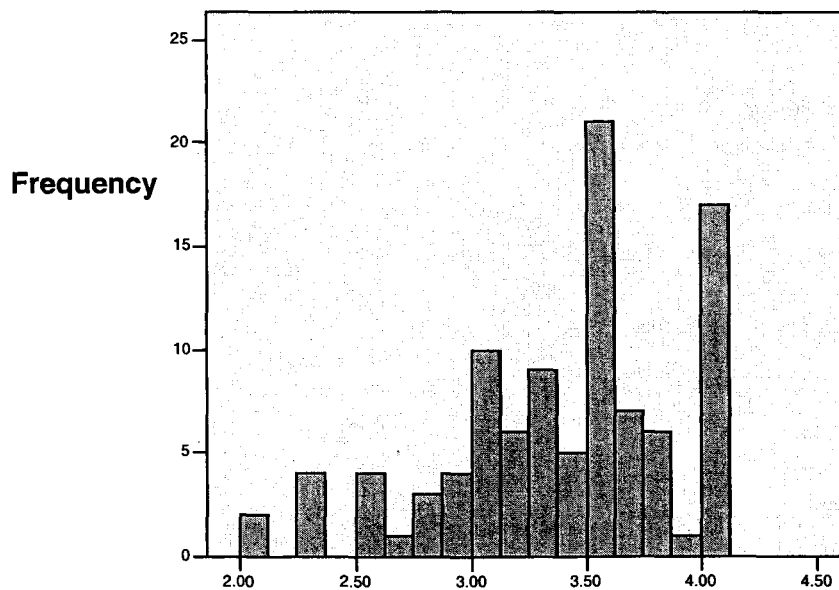


Figure 2: The academic performance (GPA) of 100 girls attending single and coeducational high schools in the Bay Area.

Note: 3.374= Single Gender
3.371= Coeducational

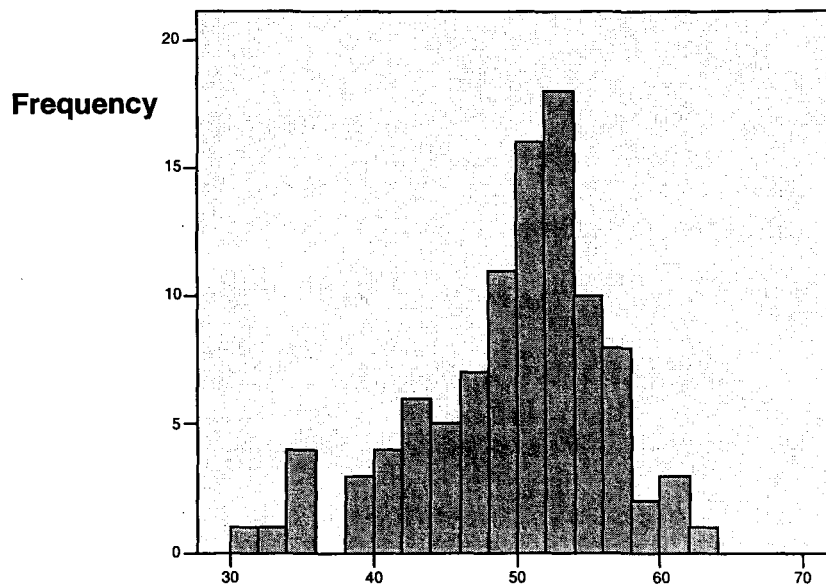


Figure 3: The self-esteem measure for 100 girls attending single gender and coeducational high schools in the Bay Area.

Note: 49.68 = Single Gender

48.98 = Coeducational

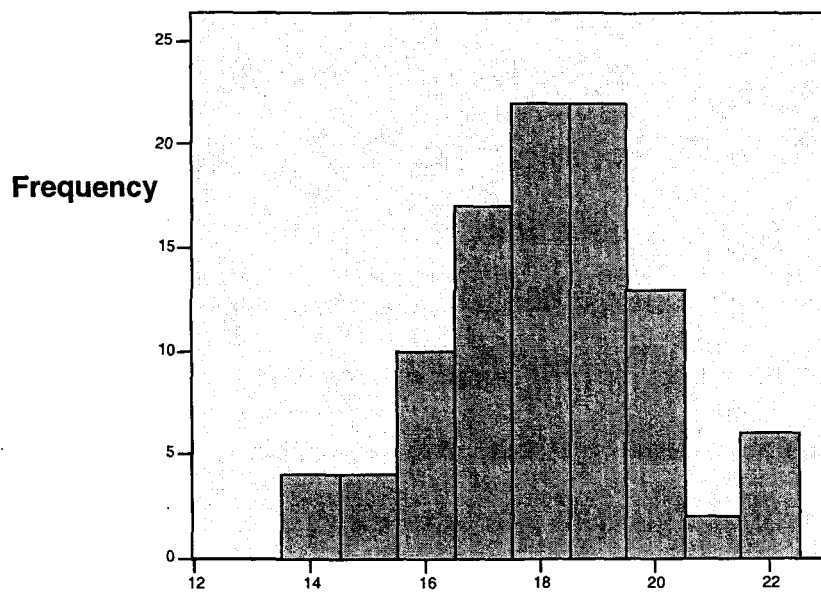


Figure 4: The social competence measure for 100 girls attending single gender and coeducational high schools in the Bay Area.

Note: 17.68 = Single Gender

18.59 = Coeducational

Survey Summary

In summary, the overall survey responses showed that all 15-year-old girls faced similar issues related to self-esteem whether attending single gender or coeducational high schools. The presence of males and/or the lack of male presence in the classroom is not necessarily the defining factor affecting the self-esteem of young girls at this age. All the girls surveyed in this study underestimated their academic achievement and felt they did poorly in school. They were all motivated and shared a strong desire to perform better academically. Lastly, the data indicated that all the girls maintained average levels of self-esteem based on the collected data for the surveys; however, they all self-proclaimed having low to moderate levels of self-esteem regardless of the school type.

Interview Themes

The interview section is divided into two segments; those interviews conducted with the girls attending the single gender schools followed by the interview responses from the girls attending the coeducational high schools. Themes emerged from the interviews after three careful readings. The interviews were conducted with a total of 10 girls from the study. Five of the girls were randomly selected from coeducational high school settings while the other five were randomly selected from single gender high school environments. The girls were selected from a total of four high schools in the Bay Area. Table 10 shows the distribution of the girls among the four schools involved with this study.

Table 10

Interview Matrix

Name	School
Ann	A
Betty	A
Cindy	B
Donna	B
Ellen	B
Fran	C
Gloria	C
Helen	D
Isabel	D
Jenny	D

Note: 1. Pseudonyms used for the girls
 2. Letters denote the high school's name

All participants were in their sophomore year of school. Each taped session ran 45 minutes long. The girls were interviewed at their schools in a private room provided by the schools' principals or appointed faculty persons. All those interviewed were given pseudonyms and their corresponding school was identified only by a designated letter. The interview allowed the researcher the opportunity to add affect to some of the survey question responses. The survey sample was limited to only those females who had not transferred from a single gender to a coeducational institution, or vice versa, after their freshman year. This request was presented to the subjects in a pre-notification letter for screening purposes (Appendix A). Only those girls who indicated not changing schools had the option of being randomly selected from the sample. The interviews followed the transcribed set of questions (Appendix E) as presented in chapter one. These were open-ended questions that related to self-esteem, academic competence, as well as social competence. Additional questions arose from the collected survey data and were incorporated. Also, comments made by the participants during the interviews were noted and incorporated into the taped sessions. As stated in chapter three, all interviews were

taped with the written consent of the participants (Appendix G). All tapes were labeled and held in a secure location within the researcher's home during the interview process. Once the taped interviews were transcribed and reviewed for themes, all tapes were destroyed. The survey data coupled with the quantitative findings of the surveys have added to the richness of the study. The general themes which emerged from the interviews were: academic rigor, over-achievement, socializing, boys, dating, shyness, concentration difficulty, and low self-esteem.

Single Gender Schools

Question One was asked by the researcher to gauge a general sense for how the girls felt about their schools. In response to Question One, the general theme among the girls attending the single gender schools was that they liked their school because it provided a level of comfort and structure for them. The schools seemed less aggressive without boys, which put many of the girls at ease. Also, the lack of boys created no competition among the girls to gain male attention. As Ann volunteered, "I feel more comfortable, [in a single gender high school] I'm shy around guys and I speak up more now in class, plus everyone is going through what I am going through too" (Langlois, 2005, p.2). What the girls did not like about their high school was what they referred to as, "the gossiping nature of many of the girls". They felt that girls could be pettier than boys, and more verbally hurtful at school. However, if given the option they felt that they would still choose a single gender school. Ellen agreed that "girls are whinny, but you get used to it. This [a single gender school] is better" (Langlois, 2005, p.8).

Academic Advantages and Disadvantages

Question Two asked the girls about the academic advantages and disadvantages one may experience at a coeducational high school. The girls mainly focused on the disadvantages. Their responses were that it would be harder to concentrate with boys in the class because they are “immature” and “caused disruptions”. They were also concerned with the level of attention and or interaction they would get from teachers if the boys were present. As one of the girls claimed,

Because guys are immature, the teachers take on the guys more and they don't really bother to make sure that the girls know everything. So then the girls have a harder time I think. I think it [teacher attention] would be more directed toward the guys, which people usually do say. (Langlois, 2005, p.11)

The only advantage they mentioned was related to the after high school experience. They presented the idea that once they all enter college, girls from a coeducational high school may have a better sense of how to interact with boys in class as well as socially.

Question Three asked the girls about the academic advantages and disadvantages one may experience at a single gender high school. The girls generally believed that they were more academically outspoken because of not having boys in class. The girls claimed that they competed for academic attention instead of male attention. Betty stated, “Guys are immature basically, so in class they throw paper at you, messing around. It [a single gender school] encourages girls to step it up and work harder here” (Langlois, 2005, p.13). All the subjects from the single gender schools in this study were academically focused and felt this was related to not having boys in their classes. Ann asserted, “You don't have to concentrate on the guys around you because they aren't there, so you all just concentrate on class because there is nothing else you could possibly concentrate on”

(Langlois, 2005, p. 9). Cindy agreed, “They are all pushing you to do better, so when everyone else is doing it, you will want to too. It’s better to be around an environment that is just girls” (Langlois, 2005, p. 5). The girls also suggested that the single gender environment fostered more personal contact among the girls offering a more peaceful environment. Donna reported seeing more physical conduct in her single gender school, which she had never experienced at her middle school. The main disadvantage cited was the academic climate found in a single gender school. The girls maintained that classes can be very serious at times, almost uncomfortable. Whereas, they felt that males can add a sense of humor or ease to a classroom setting. In addition, the girls mentioned that their in-class discussions tended to focus on female-based scenarios and topics such as feminism instead of male biased examples.

Social Advantages and Disadvantages

Question Four referred to the social advantages of their school as well as the disadvantages. Again, the girls centered on the disadvantages. Socially, they felt behind when it came to interacting with boys. The overwhelming theme discussed was shyness. The girls felt shy around boys and did not interact with many. In general, the only males they knew were the friends of their brothers or maybe a few male neighbors. Otherwise, they did not interact with many males inside or outside of school. They did not state any social advantages for attending a single gender school when asked Question Four.

Question Five referred to the social advantages and disadvantages of a coeducational high school. The girls focused on the advantages as they perceived them.

They cited that having male attention at school would probably make them feel good about themselves. Also, interacting with boys on a daily basis would make them more comfortable around them instead of nervous or anxious. Being shy was a common theme shared. All the girls volunteered the information that they did not have boyfriends.

Self-esteem

Question Six focused on self-esteem and whether the girls felt their self-esteem would be different if they were to attend a coeducational high school. The girls at the single gender schools were divided on their responses to this question. All the girls interviewed expressed having either low or moderate levels of self-esteem. None of them felt that they had high levels of self-esteem. Nor, could they verbalize why they felt that their self-esteem was low or moderate instead of high. The girls interviewed, who stated having low self-esteem, felt that their self-esteem would be the same if they attended a coeducational high school; it would remain low. However, the girls who stated having moderate levels of self-esteem felt their self-esteem would suffer at a coeducational high school. They believed they would lose some of their confidence that they had gained from attending a single gender school. As Cindy expressed it,

I feel if I went to a coed school, after my sophomore year, I would not have gotten as much confidence in the classroom. Once you get that confidence, you can like, actually do things and it gives you confidence all around to do other stuff.
(Langlois, 2005, p. 14)

For those who shared having moderate levels of self-esteem, there was a common theme of involvement with outside activities, which they felt fostered their self-esteem such as sports, musical instruments and/or family.

Academic Competence

Question Seven focused on academic competence. The researcher was seeking to investigate if the girls would underestimate their academic ability, overestimate their academic ability or accurately gauge their ability. The girls unanimously felt that they should perform better in school even though they held high GPAs. They cited that being surrounded by academically driven girls made them work harder in a single gender classroom. One girl declared, "I don't just want to get good grades, I want to get the highest" (Langlois, 2005, p. 15). They did not remember things being so competitive during their coeducational middle school experience.

The researcher asked the girls an eight and final question regarding their self-esteem. Seeing that all the girls believed that they had low or moderate levels of self-esteem instead of high, the researcher was interested in discovering why the girls felt this way. None of the girls were able to verbalize specific and tangible reasons; however, Ellen was able to give some personal insight on this topic:

It's hard to gain that [self-esteem], I'm not really confident with anything really; my appearance or how I act. I'm shy and I'm only comfortable around people that I know for like a long time. I don't know, I think a lot of people go through that and I just want to build that up somehow, but I'm not sure how.
(Langlois, 2005, p.6)

The same questions were asked of the five girls selected from the coeducational high schools. The researcher discovered two major facts during the interview process with the girls from both the single gender and coeducational schools. First, none of girls attending the coeducational high schools had ever attended a single gender high school, while all the girls from the single gender high schools had attended coeducational

grammar and middle schools. This experience gave the girls from the single gender schools a frame of reference not available to the girls interviewed from the coeducational high schools. This may have affected their responses. Second, four out of the five girls attending the single gender high schools came from a public school background. When asked to identify disadvantages found at their present schools, this was very difficult for some of the girls. They could not compare the differences between their previous public school experiences with their current private high school experience because their private schools were vastly different from anything they had experienced before. Therefore, they could not speak of any disadvantages. They saw their single gender school education almost as a privilege.

Coeducational Schools

In response to Question One, the main themes were school size and socializing. The girls attending the coeducational schools liked their schools for the size and social aspects. They found the environment friendly and lively. However, what they disliked were exactly the same factors. Small size classes, where everyone knows every one else, could be tiresome for them at times.

Academic Advantages and Disadvantages

Question Two asked the girls about the academic advantages and disadvantages found at their school. The respondents cited that the major advantage was having boys in class with them. They believed that this allowed for a different perspective to be shared in class and made for more lively class discussion and participation. Isabel believed that “We get to hear from the guys. Boys think differently than girls, you get to hear what

they think, their side” (Langlois, 2005, p. 15). Also, they shared that boys can add humor to class, making it less boring. As one girl stated, “At this age, we are more interested in the boys and not the teacher. It [interest in boys] gets in the way of learning, but it’s better to have the boys than not” (Langlois, 2005, p.17).

In response to Question Three, which referred to the academic advantages and disadvantages of a single gender school, a common theme that surfaced was one of structure and more focused classrooms. Helen explained, “My friend goes to one [single gender school] and I can tell just by her GPA, I think they are much more focused in class. Less distractions around I guess” (Langlois, 2005, p. 22). However, the interviewees felt that too many girls could also cause a lot of drama at a single gender school. Helen said,

Girls there are more focused on what the teacher is doing up front. They aren’t so much distracted by him over there, but girls and girls, they can cause a lot of drama; two girls liking one guy can be trouble. (Langlois, 2005, p.17)

Lastly, the fact that they did not get to hear a male perspective in class discussions also surfaced as a disadvantage for attending a single gender school.

Social Advantages and Disadvantages

Question Four referred to the social advantages and disadvantages of attending a coeducational high school. The girls believed that the social advantages of a coeducational school would be seen after high school when they attend college. They suggested that they would be able to interact with males more easily inside as well as outside the classroom since it was already a part of their typical day. The disadvantages that surfaced were relating to dating. The girls believed that if one “liked” a boy who

was in class with her, it could be very distracting for them. Fran summarized, “Guys like girls and girls like guys, so that can become a distraction in class. You know, if you are dating someone in your class then that is a distraction but we are attracted to each other” (Langlois, 2005, p. 25). However, if a boy they “liked”, did not “like” them back, they could feel badly about themselves and this could affect their grades. Helen whispered,

Sometimes maybe I might not feel good if I like a guy in class and he doesn't like me back. It makes me wonder hmm... why not? Or, if like my GPA goes from good to bad; I can easily not feel good about myself. (Langlois, 2005, p. 20)

Two out of the five girls interviewed said that they had boyfriends while all five girls admitted to liking boys at their school.

Question Five related to the social advantages and disadvantages of attending a single gender high school. An advantage mentioned for the girls attending a single gender school was that they did not have to deal with “liking” boys in school because it was a non-issue. However, they defined the disadvantage to be the same; having boys in class added to the experience. This question posted a dilemma for many of the girls.

Self-esteem

When asked Question Six, which referred to self-esteem, the girls could not respond because none of the girls had ever attended a single gender school. Therefore, the researcher found no general response themes from Question Six.

The girls attending the coeducational schools answered Question Seven similarly to the girls attending the single gender schools. They too felt that their self-esteem was low to moderate. For those who claimed their self-esteem to be moderate, success in

outside school related activities was the stated reason. All the girls interviewed did very well in school and have above average GPAs, but felt that they could do better.

Question Eight was the final question and related to their levels of self-esteem. Seeing that the girls believed that they all had low or moderate levels of self-esteem instead of high, the researcher was interested in exploring why the girls felt this way. The girls had a lot of difficulty verbalizing why they believed this to be true. Jenny said,

Usually, like before in middle school I had high self-esteem, but then I got to high school and it's lower because there is a lot of pressure to have a boyfriend and girl friends and stuff. But next year, I don't care. I'm just focusing on my academics. (Langlois, 2005, p. 27)

Summary

The overall interview responses from the group matched clearly with the responses to the survey questions. The girls from the single gender schools were much more academically focused while the girls attending the coeducational schools were more socially focused. All the girls interviewed saw strengths and weaknesses for attending a coeducational as well as a single gender high school. Overall, the girls preferred attending their identified school type regardless of their cited disadvantages. All the girls interviewed felt they could do better academically and they all claimed having low to moderate levels of self-esteem. However, there was not a sense of wanting to achieve more because of a grade. It seemed more related to pleasing others; an outward expression of approval rather than an internal desire to achieve. Many of these themes correlated to the survey findings. The results presented in Chapter Four indicate clearly that self-esteem perception among 15-year-old girls is low regardless of school type. A more detailed summary and a discussion of the findings are presented in the next chapter.

CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

This final chapter of the dissertation summarizes the results while offering conclusions and implications for how this data can provide more knowledge surrounding the topic of adolescent self-esteem among 15 year old girls. Also, recommendations for future practices are discussed, which may aid in the educational practice and self-esteem building of fifteen year old girls at these institutions or at future institutions to come.

The primary purpose of this study was to investigate the relationship between the decline of self-esteem and perceived academic competence among fifteen year old high school females in the Bay Area. This study looked at the relationship between adolescent males and females in a coeducational classroom setting and investigated how the male presence may affect female self-esteem development. In addition, this study explored how the lack of male presence at an all female institution may affect female self-esteem development.

As explained in chapter three, this study addressed the above issues using a mixed methodology approach. A survey design was used with follow up face-to-face interviews to add richness to the researcher's findings. The interview coupled with a survey allowed the researcher to record the affective as well as the cognitive aspects of the data from the adolescent respondents. From these employed methods the following conclusions have been drawn.

Major Conclusions

In conclusion, the findings in Chapter Four clearly show that fifteen year old girls face many challenges during their sophomore year of high school. All the girls surveyed and interviewed took their academics seriously and worked hard to achieve good grades. However, the discrepancy between achieving good grades and their perception of good grades bore a different reality. All the girls maintained strong GPAs during their sophomore year as shown by the data in Chapter Four. Yet, the majority specified not performing well in school and not being happy with their academic performance, whether attending a single gender or a coeducational high school.

The second major conclusion, when looking at the girls attending the coeducational high schools, was the importance they placed on having males in the classroom. Ironically, this became the biggest problem for many of them. Having males in class with them seemed to offer great pleasure and excitement as well as the greatest source of disappointment and sadness. Almost all the girls stated that they enjoyed having males in class with them, (90%) because they felt it was important to hear the male perspective. Also, a strong majority of the girls surveyed, (82%) felt just as bright as the boys in their class. This was evident from the survey data as well as their interviews. Yet, when asked if they would like group work without males their responses were divided. The minority of girls, (32%) would not enjoy group work without males, while the majority were “undecided” when asked this question. When looking at self-esteem building in the classroom, more than half the girls surveyed, (62%) felt that the boys

liked to hear their ideas in a classroom setting; however, when asked directly if having boys in class helped foster their self-esteem, only half agreed with this question.

Third, the girls attending the single gender schools were also asked questions regarding their self-esteem in relation to males in the classroom setting. Their responses to these questions were somewhat contradictory. Half the girls surveyed, (56%) said they enjoyed group work in class without males present. However, when asked if they would like the possibility of working in groups with males a strong majority, (70%) stated they would. Yet, when asked if not having males in the class helped their self-esteem, again a majority of 60% agreed. One can only assume that many of the girls are curious about having males in class, but do not see them adding to their learning experience or their self-esteem, but rather providing a social outlet.

Lastly, all 100 of the study participants were asked general questions related to social competence and personal happiness. A majority of the girls, (84%) felt that they had a strong group of friends that respected them and they believed that the other girls in school liked hearing their ideas in class. Yet, 40% felt that they could become discouraged in class at times and the majority of respondents, (65%) found it hard to speak up in class. This may correlate to the shyness theme shared among the girls attending the single gender schools, but does not provide a relevant reason for this occurrence among the girls attending the coeducational high schools. One can conclude that it may not be the other female classmates causing them to feel discouraged in class, but rather their male classmates.

Also noted was the fact that many of the respondents throughout the survey responded “undecided” to many of the survey questions causing the researcher to

speculate on reasons. The researcher can only wonder why there were such a high number of non- responses from the survey questions. Possibly this is simply an example of learned helplessness as described by the AAUW (1995). Their passivity is accepted by their peers as well as their teachers and this becomes part of their daily school life.

These contradictory and non-statistically significant results did not allow the researcher to compare the two types of schools and prevented the answering of the question whether self-esteem accounts for as much of the variance in academic achievement in the all girls schools as it does for the coeducational schools. The *t*-test results for the two independent schools indicated that there were no statistically significant differences between the single gender school girls and the girls attending the coeducational institutions on both measures of self-esteem and academic achievement.

Implications

The researcher can only speculate that fifteen year old girls underestimate their academic achievements and strive to achieve more, believing that higher grades will make them happier with themselves. None of the girls could accurately measure or express their academic ability. The girls surveyed and interviewed were all good students, yet they felt they should do better in school. It seems they correlate higher grades with happiness or fulfillment. However, this becomes a never attained goal many girls strive for setting themselves up for disappointment. This directly relates to self-esteem and self worth; however, the girls interviewed did not see this connection nor did they discuss the relationship between the two.

The girls attending the coeducational high schools did acknowledge that having boys in class could affect how they directly feel about themselves. Yet, they continue to put themselves in situations that caused them rejection and hurt at the hands of their male classmates. They look outward seeking acceptance and happiness in the form of male attention and approval instead of looking inward. In addition, they viewed males in class as a distraction from learning, but chose male attention over learning from the teachers. The researcher can only assume that they can see a connection between boys and their own self-esteem at this age, but cannot accurately understand the level of influence; nor do they have the tools or maturity to do something about it and build their self-esteem in ways that are more positive.

The girls attending the single gender schools more accurately gauged how males in class could affect their academic achievement. However, not having males in class may have reinforced the high levels of shyness found among the girls. This caused them to be socially awkward and anxious, in contrast to the girls attending the coeducational schools. The survey and interview data showed that they would like to have males in class for social purposes, but strongly felt that at their age they would accomplish more academically without them present. The girls attending the coeducational schools were much more socially mature than the girls in the single gender schools because of the differences in environment.

Because of these contradictions, the researcher did not gain as much depth from the interviews as had been anticipated. One reason for this may have been that the girls were nervous or uncomfortable in a one-on-one meeting with the researcher, especially since they did not know what questions were going to be asked of them nor had they ever

met. In addition, the time of year may have been a factor which affected the survey and interview results. The surveys were collected by the end of April and all interviews were conducted in the month of May. During this time of year, students are excited about summer vacation and so the girls may not have focused on the survey questions and interview questions.

Recommendations for Practice

The collected data from this study suggests the following recommendations:

(a) That parents look at the single gender and coeducational options more closely when choosing a school for their child. Each type of school has its one set of unique weaknesses and strengths; however, one may serve as a better source of education for their particular child.

(b) That girls attending coeducational high schools be given the opportunity to work on a proportion of class projects without their male classmates. Many of the girls showed an interest for this based on the data collected through this study.

(c) That schools discuss self-esteem in the classroom as part of school curriculum. At this age there are many confusions going on with identity, puberty, and maturity. Having schools take an active role in discussing this issue would bring the issue to light and possibly help many of the students.

(d) That girls from single gender schools be given more social outlets and opportunities to interact with boys. The isolation of a single gender school seemed to create anxiety for many of them towards boys in general, which can easily be minimized.

Recommendations for Future Research

The data from this study suggests the following recommendations for future research:

(a) That more data collection occur for this age group so a precise instrument can be created, which accurately measures self-esteem. High school is a complex time, more information regarding females at this age needs to be collected so schools, and educators can better understand this population.

(b) That if this study were to be replicated, a total of eight or ten schools be involved. This would provide more data to strengthen the validity of the study.

(c) That class observations take place before the interviews are conducted. Much can be gained by observing the social interactions between males and females in a coeducational classroom as well as by watching the interaction among females in a single gender environment. In addition, it gives the interviewees the chance to get to know the researcher before interviews are conducted.

(d) That male students also be surveyed and interviewed regarding their perceptions of their female classmates. This data may provide further insight regarding this complex age and population through the eyes of the male student.

(e) That teacher performance measures be taken into consideration along with the self reported GPAs when looking at academic competence.

(f) That if the study were to be replicated, surveys would be distributed and interview might be conducted at a different time of the year. Future researchers should not select the months close to summer vacation or those close to the major holidays.

This would cut down the level of student distractions and possibly provide more accurate and robust data.

(g) That a longitudinal study be conducted to follow these young girls from their sophomore year through their senior year to see if the results varied between the girls at the single gender and coeducational high schools after two years.

Summary of this Study

This study set out to answer the three research questions probing the topic of self-esteem. One, “To what extent is female self-esteem linked to academic competency?” Two, “To what extent is female self-esteem affected by the presence of males in a coeducational classroom setting?” And Three, “To what extent is female self-esteem affected by the lack of male presence in a single gender classroom setting?”

The survey data as well as the interviews both suggested that self-esteem is not necessarily linked to academic competence when looking at a population of 15 year old girls. Those attending both types of schools did very well in school, but were not happy with their overall academic performance and felt that they should perform much better. This was true for the girls who expressed having moderate levels of self-esteem as well as those who expressed having low levels of self-esteem. The researcher discovered that all girls regardless of school type and academic standing perceived themselves as poor students at this age. The researcher was surprised that a high GPA did not correlate to how they felt about themselves (i.e., their self-esteem). One wonders if this self perception would hold true for their fifteen year old male counterparts at school.

In reviewing the data related to Research Questions Two and Three, the researcher concluded that there is not a high correlation between self-esteem and the presence of males in a coeducational classroom or the lack of male presence in the single gender high school classroom. However, it was clear that not having males in the single gender classrooms created a level of uncertainty and lack of self assurance among the girls. They were almost awkward and socially challenged when they communicate with boys, yet craved that interaction at the same time. The girls from the coeducational schools stated that the opinions of their male classmates mattered more than what the teacher was telling them at the front of the classroom. The researcher concluded that the social maturity of the girls was quite high by having males in the classroom; however, their academics suffered and was regarded not as important as the social aspects of school. It is clear that both groups of girls seek approval, their value and self-worth from others instead of from within. They are on a quest for self discovery, but seem to be looking in the wrong location.

High school is a complex and confusing time for all adolescents. The ambivalence found in their responses to the survey questions as well as in the interviews led the researcher to conclude that 15 year olds are simply confused about who they are, who they want to be, and how they want to be perceived. All this directly relates to self-esteem. They have not gained the mental maturity to handle many of the changes occurring within their body and mind. The girls interviewed were consistently saying the statement, "I don't know" before or during the answering of a question posed by the researcher. In some ways, this statement seemed more telling than their actual responses to the interview questions. Possibly, this statement served for them as some sort of safety

net for what they perceived may have been a wrong answer or it provided a way to downplay their intellectual capacity. As Erikson stated in his theory (1959), this stage of development is a trying time for adolescents. This is the point in development where they become self-conscious with their expressed thoughts and closely monitor what they say. However, the researcher believed something deeper was expressed through that repeated statement. It seemed more like a request for help or guidance along the pathway of adolescence and self-esteem building. They were clearly declaring to the researcher that they were no experts on this topic. But if they, by being 15, are not the experts on the topic, who is? Many of the girls came to the interview hoping the researcher would provide them with information or tools on how to strengthen their own self-esteem instead of wanting to answer the interview questions. In conclusion, this raised a question in the mind of the researcher about the level of communication found between adults and 15 year olds. Do adults engage in conversation with adolescents, which provides them the opportunity to share personal feelings and opinions? Possibly, open dialogue on this topic could be the solution or at least a starting point to help adolescent girls think positively about themselves and build stronger self-esteem. A comment made by one of the girls interviewed for this study spoke closely to this issue. Ann stated,

I agreed to do this interview because you asked for my opinion and I couldn't believe it. I like it when I know that my opinion is counting for something because I have a lot of opinions on this topic [self-esteem] and others. A lot of people don't ask for my opinion on stuff because I'm not too social I guess. But I can represent a lot of girls, who also have a lot of emotion that they'd like to share. So, thanks for talking to me, to us. I think this helps. (Langlois, 2005, p.3)

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APPENDIXES

APPENDIX A

Academic Self-Esteem Perception Questionnaire

Academic Self-Esteem Perception Questionnaire

Dear student, please read through the following statements and circle the answer which most closely relates to you. Please answer as honestly as possible. The survey should take no more than 15 minutes and all answers are confidential. When completed, return this survey to the front of the room in the envelope provided. Thank you

Key :	Strongly Disagree 1	Disagree 2	Neither XXXX 3	Agree 4	Strongly Agree 5
1) I enjoy being a girl.	1	2	3	4	5
2) I don't compare myself academically to others in class.	1	2	3	4	5
3) I have a strong group of friends who respect me.	1	2	3	4	5
4) I like being called upon in class.	1	2	3	4	5
5) I ask for clarification from my teachers when needed.	1	2	3	4	5
6) I feel I don't do well in school.	1	2	3	4	5
7) I feel that I fit in with the other students.	1	2	3	4	5
8) I can feel discouraged in class.	1	2	3	4	5
9) Girls like to hear my ideas in class.	1	2	3	4	5
10) I like to raise my hand in class.	1	2	3	4	5
11) I find it hard to speak up in class.	1	2	3	4	5
12) I have a leadership role at my school.	1	2	3	4	5
13) I feel as smart as the girls in class.	1	2	3	4	5
14) I feel my GPA could be better.	1	2	3	4	5
15) My present GPA is _____					

Dear student, please read through the following statements and circle the answer which most closely relates to you. Please answer as honestly as possible. The survey should take no more than 15 minutes and all answers are confidential. When completed, return this survey to the front of the room in the envelope provided. Thank you

Key	Strongly Disagree 1	Disagree 2	Neither XXXX 3	Agree 4	Strongly Agree 5
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Coeducational schools only:

16) I enjoy working in groups with boys.	1	2	3	4	5
17) I'd enjoy working in groups w/out boys.	1	2	3	4	5
18) Male classmates like to hear my ideas.	1	2	3	4	5
19) Having boys in class helps my self-esteem.	1	2	3	4	5
20) I feel just as smart as the boys at school.	1	2	3	4	5

Single gender schools only:

21) I enjoy working in groups w/out boys.	1	2	3	4	5
22) I'd enjoy working in groups with boys.	1	2	3	4	5
23) Not having boys in class helps my self-esteem.	1	2	3	4	5
24) Having boys in class would help my self-esteem.	1	2	3	4	5
25) I'd feel just as smart as boys at school if they were in class with me.	1	2	3	4	5

Age _____

Name of School _____

I would like to be contacted for a 30 minute follow-up interview because I feel that I have a lot to share with you on this topic. Yes _____ No _____

Please supply a phone number or email address for follow-up.

(Optional) _____ First name (optional) _____

Thank you!

APPENDIX B

Letter to Validity Panel

December, 2004

Dear,

My name is Carol Langlois and I'm a doctoral student in the School of Education at the University of San Francisco. I've created a survey as part of my research study and my primary population of interest is high school females. I'm interested in looking at self-esteem development of young women in their academic environment and how we as educators can foster a better atmosphere for all women in education. This study will look closely at the relationship between males and females in the coeducational classroom as well as the lack of male presence in the single gender classroom. Also, self-reported academic competency for females in both these environments will be evaluated.

As an educator/researcher in this field, I value your constructive criticism and would like to ask your opinion of my survey. I look to you for guidance and suggestions based on your experience and knowledge for this area. Thus, I am writing to invite you to be a member of my validity panel.

Enclosed you will find

- 1) The Academic Self-Esteem Perception Questionnaire
- 2) A validity panel evaluation form
- 3) A demographic check list
- 4) A self-addressed stamped envelope

Thank you for taking the time to read my letter and I hope you will be able to help me with my research in this critical area by responding to my questionnaire. If you are interested in the results of my research, I'd be happy to share my findings with you. I would appreciate if you could please fill out the questionnaire and demographic check list and mail back to me. Below is my contact information for your convenience.

Sincerely,

Carol Langlois
carol_langlois@yahoo.com

APPENDIX C

Validity Panel Evaluation Form

Validity Panel Evaluation Form

Please circle the answer which best fits your opinion of my survey, question (12-15) require a written response. Feel free to write on the survey as needed.

9. In understanding my research questions listed above, will the survey questions allow the researcher to draw appropriate conclusions about this population? Yes No

10. Based on your knowledge of this age group and/or issues of self-esteem, does the survey appear to measure perceived adolescent self-esteem? Yes No

11. Does the survey appear to measure the perceived academic competency for this particular age group? Yes No

12. Should any item be removed? Yes No

If so, which and why? _____

13) Should any item be modified? Yes No

If so, which and why? _____

14) Should any themes or issues be added to the survey? Yes No

If so, which _____

15. Do you have any suggestions for me?

Again, thank you for your time. Please send back the evaluation form (and survey if needed) in the self-addressed stamped envelope provided by January 15, 2005.

Sincerely,

Carol Langlois

APPENDIX D

Demographic Checklist

Demographic Checklist of Validity Panel

Directions: Please complete the following information and return it in the envelope provided.

Name _____

Date _____

City _____ State _____

Present

Position _____

Please fill in your field of expertise _____

Number of years in this field _____

	Male	Female
Gender		

Do you have any experience constructing a survey?

YES	NO

Do you have any experience teaching high school students?

YES	NO

If so, please write in the number of years _____

Highest degree earned	College/University
BA/BS	
MA/MS	
Ph.D/ Ed.D	

What type of high school did you attend?

Coed/Catholic	
Coed/Public	
Coed/Private	
Single Gender/Catholic	
Single Gender/Private	
Boarding School	

APPENDIX E

Composition of Validity Panel for Survey

Composition of Validity Panel for Survey

	Name	Background
1	Ann Cromeey	Ann is a teacher at Convent of the Sacred Heart HS in SF where she has been teaching English for 15 years. She holds a MA from SFSU.
2	Brittany Gillespie	Brittany is a teacher at Marin Catholic HS where she has been teaching Science for 4 years. She holds a BA degree.
3	Colin Silverthorne, PhD	Colin has worked for the Psychology department at USF for over 25 years. He holds a PhD. in Social Psychology from the University of Cincinnati and he teaches courses in Statistics and Questionnaire Development.
4	David Shaffer, PhD	David is a faculty member at the University of Georgia working for the Psychology Dept. He holds a PhD from Kent State University.
5	Jessica Samuolis, PhD	Jessica received her PhD from Fordham University in 2003. Her post-doctoral research is with Columbia University on youth and smoking.
6	Mary M. Livingston, PhD	Mary is a faculty member at Louisiana Tech U. for the Psychology Dept. She holds a PhD.
7	Steve Phelps, EdD	Steve is a teacher at S.I. High School in SF where he teaches Psychology. He has been teaching for 33 years. He received an EdD from USF.

APPENDIX F
IRBPHS Approval

From: IRBPHS <irbphs@usfca.edu>
Subject: IRB Application #04-115 - Approved
To: langlois@usfca.edu
Cc: traviss@usfca.edu

January 4, 2005

Dear Ms. Langlois:

The Institutional Review Board for the Protection of Human Subjects (IRBPHS) at the University of San Francisco (USF) has reviewed your request for human subjects approval regarding your study.

Your application has been approved by the committee (IRBPHS #04-115). Please note the following:

1. Approval expires twelve (12) months from the dated noted above. At that time, if you are still in collecting data from human subjects, you must file a renewal application.
2. Any modifications to the research protocol or changes in instrumentation (including wording of items) must be communicated to the IRBPHS. Re-submission of an application may be required at that time.
3. Any adverse reactions or complications on the part of participants must be reported (in writing) to the IRBPHS within ten (10) working days.

If you have any questions, please contact the IRBPHS at (415) 422-6091.

On behalf of the IRBPHS committee, I wish you much success in your research.

Sincerely,

Terence Patterson, EdD, ABPP
Chair, Institutional Review Board for the Protection of Human Subjects

IRBPHS University of San Francisco
Counseling Psychology Department
Education Building - 017
2130 Fulton Street
San Francisco, CA 94117-1080
(415) 422-6091 (Message)
(415) 422-5528 (Fax)
irbphs@usfca.edu

<http://www.usfca.edu/humansubjects/>

APPENDIX G

Interview Questions

Interview Questions

- 1) I like/dislike my (coeducational or single gender) school because
- 2) I think some of the academic advantages or disadvantages of a coed school are
- 3) I think some of the academic advantages or disadvantages of a single gender school are
- 4) I think some of the social advantages or disadvantages of a coed school are
- 5) I think some of the social advantages or disadvantages of a single gender school are
- 6) I think my self-esteem would be (same/different) had I gone to the other type school. Why?
- 7) I feel academically competent at my school because
- 8) I feel that my level of self-esteem is (low, moderate or high). Why?

APPENDIX H

School Permission Forms



IMMACULATE CONCEPTION ACADEMY
Since 1883

September 29th, 2004

Permission from Institution

Institutional Review Board for the Protection of Human Subjects
University of San Francisco
2130 Fulton Street
San Francisco, CA 94117

Dear Members of the Committee:

On behalf of *Immaculate Conception Academy*, I am writing to formally indicate our awareness of the research proposed by Carol Langlois, a student at USF. We are aware that Ms. Langlois intends to conduct her research by administering a written survey to our students.

I am responsible for *employee relations and am the principal of this school*. I give Ms. Langlois permission to conduct her research in our school.

If you have any questions or concerns, please feel free to contact my office at 415-824-2052.

Sincerely yours,

Sister Janice Therese Wellington, O.P.
Principal



MERCY HIGH SCHOOL COLLEGE PREPARATORY L

3250 Nineteenth Avenue
(415) 334-0525

San Francisco, CA 94132
Fax (415) 334-9726

September 27, 2004

Institutional Review Board for the Protection of Human Subjects
University of San Francisco
2130 Fulton Street
San Francisco, California 94117

Dear Members of the Committee:

On behalf of Mercy High School, I am writing to formally indicate our awareness of the research proposed by Carol Langlois, a student at USF, who intends to conduct her research by administering a written survey to our students.

I am responsible for employee relations and am the principal of Mercy High School. Ms. Langlois has my permission to conduct her research in our school.

If you have any questions or concerns, please feel free to contact my office at 415-334-9932.

Sincerely,

Dotty McCrea, Ed.D.
Principal

/ak



*"Doing Great Things
With the Women God Sends Us"*

www.mercyhs.org



SACRED HEART CATHEDRAL PREPARATORY

1055 Ellis Street • San Francisco, CA 94109 • 415.775.6626 • www.shcp.edu

October 1st, 2004

Permission from Institution

Institutional Review Board for the Protection of Human Subjects
University of San Francisco
2130 Fulton Street
San Francisco, CA 94117

Dear Members of the Committee:

On behalf of *Sacred Heart Cathedral Prep*, I am writing to formally indicate our awareness of the research proposed by Carol Langlois, a student at USF. We are aware that Ms. Langlois intends to conduct her research by administering a written survey to our students.

I am responsible for *employee relations and am the principal of this school*. I give Ms. Langlois permission to conduct her research in our school.

If you have any questions or concerns, please feel free to contact my office at (775-6626 ext. 726).

Sincerely,

A handwritten signature in black ink that reads "Ken Hogarty". The signature is written in a cursive, flowing style.

Ken Hogarty
Principal
Sacred Heart Cathedral Prep



SAINT MARY'S COLLEGE HIGH SCHOOL

PERALTA PARK • 1294 ALBINA AVENUE • BERKELEY • CALIFORNIA 94706-2599
TELEPHONE (510) 526-9242 • FAX (510) 559-6277 • WWW.SAINTMARYSCHS.ORG

February 7, 2005

Permission from Institution

Institutional Review Board for the Protection of Human Subjects
University of San Francisco
2130 Fulton Street
San Francisco, CA 94117

Dear Members of the Committee:

On behalf of *Saint Mary's College High School*, I am writing to formally indicate our awareness of the research proposed by Carol Langlois, a student at USF. We are aware that Ms. Langlois intends to conduct her research by administering a written survey to our students.

I am responsible for *employee relations and am the principal of this school*. I give Ms. Langlois permission to conduct her research in our school.

If you have any questions or concerns, please feel free to contact my assistant at (510) 559.6255.

Sincerely,

A handwritten signature in black ink, appearing to read "Kathleen Ryan McGuire". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Kathleen Ryan McGuire
Principal, Saint Mary's College High School

APPENDIX I
Informed Consent

University of San Francisco
Consent to Be a Research Subject

Purpose and Background

Ms. Carol Langlois, a doctoral student in the School of Education at the University of San Francisco is doing a study on self-esteem among sophomore females in the bay area. All information obtained will assist in further improving the quality of education for young girls in high school settings. Carol Langlois is interested in understanding the possible differences in self-esteem development between girls attending single gender Catholic high schools compared to those attending coeducational Catholic high schools. She has received permissions from your high school principal and the Institutional Review Board for the Protection of Human Subjects at the University of San Francisco to conduct this study.

I am being asked to participate because I'm a female in my sophomore year attending a Catholic high school in the bay area.

Procedures

If I agree to be a participant in this study, the following will happen:

1. I will receive a copy of the Research Subject's Bill of Rights.
2. I will complete a short questionnaire giving basic information about myself to include: age, GPA and type of school I'm attending.
3. I will complete a 15 minute survey about self-esteem.
4. I will participate in a 30 minute follow-up interview with Carol Langlois, (only if I choose to do so), during which I will be asked about my educational history, grades, comfort level in the classroom as well as my feeling about my classmates.
5. I will complete the survey at my school and participate in the interview at a private office designated by my school principal.

Risks and/or Discomforts

1. It is possible that some of the questions on the self-esteem survey may make me feel uncomfortable, but I am free to decline to answer any questions I do not wish to answer or to stop participation at any time.

2. Participation in research may mean a loss of confidentiality. Records for this study will be kept as confidential as is possible. No individual's identity will be used in any reports or publications resulting from the study. Study information will be coded and kept in a locked file at all times. Only Carol Langlois will have access to the files and all participants will be given pseudonyms if they choose to participate in the interviews.

Benefits

There will be no direct benefit to me from participating in this study. The anticipated benefit is to further the body of research investing self-esteem development of adolescent females.

Costs/Financial Considerations

There will be no financial costs to me as a result of taking part in this study.

Payment/Reimbursement

I understand that participation in the study is voluntary and I will not be financially reimbursed.

Questions

I am free to call the researcher anytime at (415) 422-5168.

If I have any questions or comments about participation in this study, I should first talk with the researcher. If for some reason I do not wish to do this, I may contact the IRBPHS, which is concerned with protection of volunteers in research projects. I may reach the IRBPHS office by calling (415) 422-6091 and leaving a voicemail message, by e-mailing IRBPHS@usfca.edu, or by writing to the IRBPHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080.

Consent

I have been given a copy of the "Research Subject's Bill of Rights" and I have been given a copy of this consent form to keep.

PARTICIPATION IN RESEARCH IS VOLUNTARY. I am free to decline to be in this study, or to withdraw from it at any point. My decision as to whether or not to participate in this study will have no influence on my present or future status as a student or employee at USF nor will it affect my performance or academic standing with my high school.

My signature below indicates that I agree to participate in this study. Because I am below 18 years of age, I need a parental signature as well.

Subject's Signature

Date of Signature

Parent/Guardian's Signature

Date of Signature

Signature of Person Obtaining Consent

Date of Signature

APPENDIX J

Student Pre-notification Letter

Student Pre-notification Letter

March, 2005

Dear Student:

My name is Carol Langlois and I'm a doctoral student in the School of Education at the University of San Francisco. I've created a survey as part of my research study and my primary population of interest is you! I'm interested in looking at the self-esteem development of young women in Catholic, private, high schools in the Bay Area. I want to learn how we can foster a better academic atmosphere for all women in education.

Please know that all your responses will be held confidential and no names will be asked for on the survey. I need your help to further understand how young women perceive themselves, their self-esteem, their classmates, and their learning environment. I hope you will take 15 minutes out of your day to fill out the survey, which will be presented to you within 3 days time. Along with the survey will be an envelope for your privacy and convenience to place the survey in. All surveys will be collected by your school and sent back to me. I ask that you please fill out the survey as honestly as possible. I'd certainly be happy to share with you my final results once the information has been compiled and I have provided my email address for your convenience.

Note: I request that only the girls who have not switched between a single gender and coeducational high school partake in this survey. On the survey, I will be asking for volunteers to meet with me for one-on-one follow-up interviews. Please feel no pressure to participate.

Thank you in advance for your time.

Sincerely,

Carol Langlois
carol_langlois@yahoo.com

The University of San Francisco

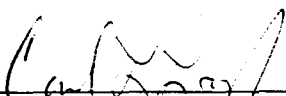
THE EFFECTS OF SINGLE GENDER VERSUS COEDUCATIONAL ENVIRONMENTS ON THE SELF-ESTEEM DEVELOPMENT AND ACADEMIC COMPETENCE OF HIGH SCHOOL FEMALES

Self-esteem among adolescent females tends to drop during the high school years (American Association of University Women, 1995; Lee & Bryk, 1986; Sadker & Sadker, 1994). The past research on self-esteem tended to focus on the male experience in the high school classroom (Dale, 1969, 1971, 1974; Hyde, 1971). Little focus was placed on the isolated female experience in a coeducational and/or single gender high school to suggest the best academic environment for girls to flourish and build positive self-esteem. Also, the challenge of puberty facing young girls at this critical time has probably added to the decline in academic performance as well as over all self-esteem (Chubb, Fertman & Ross, 1997; Erikson, 1966). The topic of this research explored these factors affecting adolescent female self-esteem during high school.


The primary purpose of this study was to investigate the relationship between the decline of self-esteem and perceived academic competence among fifteen year old high school females in the Bay Area. This study looked at the relationship between adolescent males and females in a coeducational classroom setting and investigated how the male presence may affect female self-esteem development. In addition, this study explored how the lack of male presence at an all female institution may affect female self-esteem development.

This study employed a mixed methodology approach. A survey design was used with follow up face-to-face interviews to add richness to the researcher's findings. The

results showed that girls from the single gender schools were much more academically focused while the girls attending the coeducational schools were more socially focused. All the girls in this study felt they could do better academically and claimed having low to moderate levels of self-esteem, yet they maintained strong GPAs. In addition, the girls attending the coeducational high schools placed major importance on having males in the classroom, while the girls attending the single gender schools did not see the males as adding to their learning experience or their self-esteem, but rather providing more of a social outlet. The results presented indicate clearly that self-esteem perception among 15-year-old girls is low regardless of school type.



Carol Langlois, Author



Sister Mary Peter Traviss,
Chairperson, Dissertation Committee