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Predictors of Aggression among Adolescent Girls

by

Sarah Joy Park, M.S.

Project submitted in partial satisfaction of
the requirements for the degree of
Doctor of Psychology

August 2012

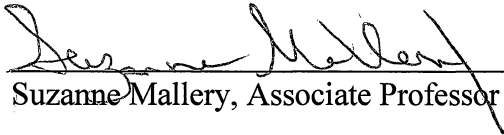
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Each person whose signature appears below certifies that this project in his/her opinion is adequate, in scope and quality, as a project for the degree Doctor of Psychology.

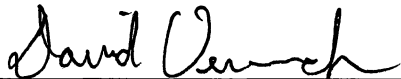


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ABBREVIATIONS

STSS The Silencing the Self Scale

HTG The Hostility Towards Girls Scale

DAIS Direct and Indirect Aggression Scale

ABSTRACT

Predictors of Aggression Among Adolescent Girls

by

Sarah Joy Park, M.S.

Doctor of Psychology, Graduate Program in Psychology

Loma Linda University, August 2012

Dr. Gloria Cowan , Chairperson

Women and girls will often deny what they feel and think to maintain their relationships. Silencing the self can be detrimental to the physical and mental health of teenage girls. This stifling of the self is related to depression, earlier first intercourse, eating disorders, and less relationship satisfaction. Girls who silence their voices are also likely to have difficulty expressing themselves when they feel angry. In this study we explored the relationship between silencing the self and physical, verbal, and indirect aggression. Our sample consisted of 88 teenage girls from two high schools, with a mean age of 16. They were given Silencing the Self, Self-Esteem, Hostility Towards Girls, and Direct and Indirect Aggression scales. We hypothesize that when girls are higher in silencing the self, will express less verbal and physical aggression and more indirect aggression. We found that silencing the self was positively related to indirect aggression but not to verbal and physical aggression. We also found that a subscale of Silencing the Self, Divided Self, was positively related to all forms of aggression. We also found that the subscale Care as Self Sacrifice was negatively related to Physical Aggression. Externalized Self Perception was positively related to Indirect Aggression.

We hypothesized that self-esteem would moderate the relationship between silencing the self and aggression. Contrary to what we predicted, the Silencing the Self subscale was positively related to Indirect Aggression when Self-Esteem was high, not when it was low. We also examined the relationship between hostility and aggression. As expected, hostility was significantly positively related to physical, verbal, and indirect aggression. We replicated findings that silencing the self was related to both self-esteem and hostility. The greater the silencing the self, the more girls experience feelings of hostility and have lower self-esteem. Not only do adolescent girls who are more likely to silence themselves have lower self-esteem and higher hostility towards other girls, they also are more likely to engage in indirect aggression. As clinicians it is important for us to engage with teenage girls to give them the support they need to express themselves honestly.

Introduction

What happens when girls silence themselves? And how is this silence related to their hostility and aggression toward other girls? An objective of this study is to examine the phenomena of silencing the self and some of the negative consequences of silencing the self. The link between silencing the self and self-esteem and hostility is examined. Also, the relations between silencing the self, self-esteem, and hostility toward girls with aggression are examined. This project's overall objective is to discover the relationships among silencing the self, self-esteem, hostility, and different forms of aggression among teenage girls.

Silencing the Self

For over two decades Carol Gilligan (1982) has been assessing some of the differences between men and women, in particular, how men and women may relate to the world. Some of Gilligan's earlier findings suggested that men tended to relate to the world in a more autonomous manner while women appeared to be more relational (Gilligan, 1982). Women were more likely to consider their relationships with others than were men. Brown and Gilligan (1992) conducted interviews with girls in high school and they noticed a trend. As the girls were moving from girlhood to adolescence, their own preferences and ideas started to become less important. Increasingly, the phrase "I don't know" crept into their vocabularies. This denial of opinion is termed silencing the self. When one is silencing the self, there is not only a social component but a personal component as well. The girls did not appear to really know what they were feeling or

thinking (Brown & Gilligan, 1992). This disconnection from the self is often in service of staying connected to others. Since social connection is a central value to girls, they are willing to silence their voices to avoid conflict and to maintain relationships. Silencing the self can be psychologically detrimental. Even in their relationships with women, girls are often disappointed and silenced by the women they so desperately need (Taylor, Gilligan, & Sullivan, 1995). Taylor et al., also found that the transition from middle school to high school proved to be a pivotal point during which girls started to silence themselves more and more.

Chesler (2001) wrote that girls often silence themselves to preserve their relationships with other girls for fear of alienation. According to Chesler (2001), if a girl is rejected she must move on to another group and carry the pain of the previous dismissal, which further promotes silencing her voice in order to stave off another rejection. A qualitative study by Marshall and Aarvay (1999) supported the idea that girls silence their voices to maintain relationships. This dangerous disconnection does not usually self correct by adulthood.

Jack expanded Gilligan's work to silencing the self and depression among adult women. Jack (1991) defined silencing the self as the act of not vocalizing preferences, thoughts, or opinions in order to maintain peace in relationships. For example, if asked where she would like to eat, the girl (or woman) who is silencing the self will claim she has no preference. If the restaurant that is chosen is not to her liking she will not speak up. The reason the girl (or woman) does not speak up is that she holds a belief that in order to maintain relationships, she needs to capitulate to the desires and opinions of others. Relationships are so important to her that she loses herself in the process (Brown

& Gilligan, 1992). Silencing the self not only affects girls' relationships with other girls but romantic pairings as well.

Harper and Welsh (2007) found that in adolescent romantic relationships those who were high in self-silencing had earlier first sexual intercourse experiences because of their discomfort refusing their partner. In the same study, the self-silencers also reported higher levels of depression and dissatisfaction with their relationships. Another study by Widman, Welsh, McNulty, and Little (2006) also found the same connection between girls' dissatisfaction with the relationship and self-silencing. Widman et al. found a link between lack of contraception use and silencing the self. Consistent with other findings, Wisdom (2001) found that girls with more direct means of communication were lower in depression and had higher relationship satisfaction. Wisdom observed a relationship between self-silencing and depression. Thus, girls' self-silencing is related to important aspects of adolescent functioning and choices.

Self-Esteem

According to Murphy, Stosny, and Morrel (2005), self-esteem is, "a global barometer of self-evaluation involving cognitive appraisals about general self-worth and affective experiences of the self that are linked to these global appraisals" (p.201). Lack of self-esteem has been linked to many different pathologies in the psychological literature. MacPhee and Andrews (2006) found that low self-esteem is associated with depression in early adolescence. Repeatedly, low self-esteem has been linked to eating disorders (e.g., Fryer, Waller, & Kroese, 1997; O'Dea, 2004). For adolescents, Wilkinson (2004) found that the relationship between mental health and peer attachment was wholly

mediated by self-esteem. Therefore, if a teen has a healthy or secure attachment with their peers they will have better self-esteem, which means they will be more psychologically healthy. In other words, self-esteem explains the relationship between peer attachment and mental health. Clearly, self-esteem touches on many of the same constructs (depression, eating disorders, and relationships) that self-silencing does.

Silencing the Self and Self-Esteem

Silencing the self is related to self-esteem. In a study conducted by Woods (1999) among abused women, there was a negative correlation between silencing the self and self-esteem. This indicates that the higher the silencing the self, the lower the self-esteem. In a sample of undergraduate students, Page, Stevens, and Galvin (1996) found that self-silencing was related to depression only when low levels of self-esteem were present. As levels of self-esteem went up, the connection did not persist.

Silencing the self has been linked to other variables among adolescents. Self-silencing and low self-esteem have links with higher incidence of eating disorders (Piran & Cormier, 2005; Wechsler, Riggs, Stabb, & Marshall, 2006). Cramer, Gallant, and Langlois (2005) found that depression in women was predicted by high self-silencing and low self-esteem, among other things. Keane (2004) found that girls who participated in school athletics exhibited less self-silencing than girls who did not participate in organized sports. Keane attributes this difference in self-silencing to differential levels of self-esteem between the two groups, with the non-participants possessing lower self-esteem. Clearly levels of self-esteem have a relationship with the amount of silencing the self that takes place in young women.

Self-Esteem and Hostility toward Women

By definition, hostility is a feeling or a pattern of thoughts while aggression is defined by actions. Hostility has been conceptualized as something that is felt or rumination about past wrongs (Check, 1988). This may lead to aggression but it is not a guarantee that these feelings and thoughts will translate to action. Women with low self-esteem are more hostile towards other women (Cowan, Neighbors, DeLaMoreaux, & Behnke, 1998, Cowan & Ullman, 2006). Cowan and Ullman (2006) proposed that women's hostility toward other women is a form of scapegoating. They anticipated that the real issue is that women are dissatisfied with themselves and that they feel personally inadequate. Cowan and Ullman (2006) proposed a projection model. This model predicted that women will feel hostile towards women if they feel poorly about themselves, and they project those negative feelings onto "women," the group as a whole.

Cowan and Ullman (2006) found that, "a sense of personal inadequacy predicted hostility toward women" (p. 406). Because one measured indicator of personal inadequacy was self-esteem, again we see the relation between lack of self-esteem and hostility. Silencing the Self is moderately correlated with women's hostility towards women (Loya, 1997). The higher the level of self-silencing, the more hostile women are toward other women. So the question remains whether silencing the self, low self-esteem, and hostility toward women, or in this case, girls, are related, what part do they play in types of aggression?

Female Aggression

Buss (1961) defined aggression, a physical behavior, as "a response that delivers noxious stimuli to another organism" (p.1). Later, a more widely used definition by Myers (2005) emphasized intention to harm. Myers defined aggression as, "physical or verbal behavior intended to hurt someone"(p.381). There has been much speculation as to whether there are gender differences in aggression. In the past the general consensus was that girls and women showed very little aggression, which was attributed to gender roles (Buss, 1961). Buss indicated that female aggression occurred so seldom that it was not worth studying. Not only were women shown to be less aggressive, but they also were not studied as frequently as men were for aggression. Between the years of 1967 and 1974, only 8% of studies included only women and 24% included both men and women (Frodi, Macaulay, & Thome, 1977). The vast majority of studies included only men.

In an extensive review of the literature, Maccoby and Jacklin (1974) argued that gender differences in aggression were one of the few substantiated gender differences. They concluded that males participated in much more physical and verbal aggression than females, especially in childhood. This finding held up across cultures. By limiting their definition of aggression to only physical and verbal aggression, it was again confirmed that women aggress less than their male counterparts.

However, the idea of the passive woman and the aggressive man has been challenged. At the time that Maccoby and Jacklin (1974) conducted their review, meta analysis did not exist as a statistical strategy to draw generalizations. In the 1980s Hyde (1981,1984) wrote several articles questioning Maccoby and Jacklin's review of gender differences. Hyde (1984) conducted a meta-analysis exploring Maccoby and Jacklin's

proposed gender differences in aggression. The results showed that gender only accounted for 5% of the population variance in aggression.

White and Kowalski (1994) reviewed the literature on female aggression through a feminist lens. The first portion of the review critiqued the literature for misrepresenting women as being nonaggressive. One of their criticisms concerns the restricted number of behaviors that are categorized as being aggressive. The second portion of their review was dedicated to exploring the ways in which the myth of female passivity helps to maintain differential power between men and women.

Different Types of Aggression

Regarding which behaviors should be considered aggressive; Björkqvist and colleagues (Björkqvist, 1994; Österman et. al., 1998) added a new dimension to the definition of aggression. They categorized direct aggression as verbal and physical attacks, whereas indirect aggression is achieved through covert social tactics such as exclusion and rumors. In the psychological literature the construct of indirect aggression has also been labeled social or relational aggression. This added layer to the definition of aggression has opened the door for a broader and more accurate conceptualization of aggression and the topic of gender differences in aggression. The present study examines the use of both direct and indirect aggression.

Some researchers believe that aggression styles for girls change as they age. A longitudinal study by Cairns, Cairns, Neckerman, Ferguson, and Garipey (1989) found that boys were consistent in using physical aggression, whereas with age girls decreased their use of direct aggression and increased their use of social aggression. Galen and Marion (1997) conducted a cross-sectional study investigating aggression across ages and

sexes. Women and men (girls and boys) were found to use relational aggression equally as often. The exception was in their group of 10th graders: Girls used more relational aggression than did boys.

It has been found that different forms of aggression are related to developmental stages. A cross-cultural study, including participants from Finland, Poland, Italy and Israel, was conducted by Österman et al. (1998) in which they conceptualized aggression to have three different styles, verbal, physical, and indirect. Verbal and physical aggression are considered to be in the category of direct aggression. In this cross-sectional study, Österman et al. (1998) found that as girls aged, they experienced less direct aggression and were most often victims of indirect aggression by the time they were 15. However, for boys the same trend was not observed. When boys were younger, they shared a similar proportion of direct and indirect victimization, but as they aged they experienced more direct aggression.

Another study showed that the relationship between types of aggression, gender and age is somewhat different from what had been hypothesized by Österman et al. (1998). In a meta-analytic review, Archer (2004) reported that sex differences in expression of indirect aggression was highest for 11 to 17 year-olds, with girls being higher than boys in use of indirect aggression. Archer also reported that across studies men were more physically and verbally aggressive than women. When age was considered, as men aged (ages 30 and above), they became less physically aggressive and tended to use more social aggression. Interestingly, men and women did not differ in their experiences of anger.

A possible explanation for Archer's finding that men physically aggressed less with age is the social sanction model. What this model proposes is that the form of aggression that is used will be determined by what is socially acceptable. Therefore, according to the model, girls will use more indirect aggression and boys will use more direct aggression, but as boys turn into men, they will use less direct aggression because

it is not as socially acceptable for older men as it is for younger men to directly aggress (Richardson & Green, 1999).

Regardless of which model or theory we ascribe to, the fact is that women are indeed aggressive. In a review article, Richardson (2005) found that in romantic and familial relationships women did not necessarily directly aggress less than men did. Where there was a difference was in public areas such as work and school in which women did use more indirect aggression than men. In addition, Burbank (1987) conducted a cross-cultural study on aggression and found that women are more often aggressive towards other women than they are toward men. Richardson and Green (1999), in their exploration of the social sanction model, also found that women expressed more indirect aggression towards other women than direct aggression towards men or women. Furthermore, Chesler's review (2001) found that cross-culturally, girls most often participated in indirect aggression towards other girls.

Hostility and Aggression

While some researchers use the terms aggression and hostility interchangeably, a feeling of hostility towards others does not necessarily lead to acts of aggression. DeWall, Buckner, Lambert, Cohen, and Fincham (2010) found that those who were socially anxious experienced hostility towards others and perceived others as hostile; however, they did not aggress. Some researchers have found that hostile cognitions may lead to more aggressive behavior (DeWall, Twenge, Gitter, & Baumeister, 2009).

Self-Esteem and Aggression

There have also been mixed results on adolescents and the relationship between self-esteem and aggression. Donnellan, Trzesniewski, Robins, Moffitt, and Caspi (2005) found that low self-esteem is related to increased aggression whereas Kirkpatrick, Waugh, Valencia, and Webster (2002) found that different facets of high self-esteem were related to aggression but global or low self-esteem did not relate to aggression at all. Bushman and Baumeister (1998) found no relationship between self-esteem and physical aggression. Bushman and Baumeister did find a link between aggression and the personality trait of narcissism, which hints at a high self-regard variable relationship to aggression. In an undergraduate sample, Perez, Vohs, and Joiner (2005) found that self-esteem and physical aggression are involved in a curvilinear relationship. Those who were either extremely high or extremely low in self-esteem tended to physically aggress more than those who were in the midrange for self-esteem. This relationship was not moderated by gender. This finding may explain the conflicting results found by many researchers. Clearly, the findings regarding aggression and self-esteem are inconsistent.

Much of the research cited concerning Silencing the Self, self-esteem, hostility towards women, and aggression has been conducted on college undergraduate populations. This means that some of the conclusions drawn cannot be generalized to an adolescent population. This study aims to provide evidence for adolescent girls specifically.

Silencing the Self and Aggression

Researchers have yet to make a direct connection between silencing the self and aggression. However, they have found that adolescent girls with eating disorders are more likely to indirectly aggress than those without a clinical eating disorder (Miotto, Pollini, Restaneo, Favaretto, & Preti, 2008). Silencing the self has been also been shown to be a common trait in adolescent girls diagnosed with an eating disorder (Buchholz et al., 2007). Silencing the self is unlikely to be related to verbal and physical aggression because these overt behaviors are not conducive to obtaining approval from others. Indirect aggression may be considered a more covert form of aggression, therefore, girls may engage in this type of aggression due to the lower risk of disapproval by others.

Hypotheses

First we hope to replicate some of the findings from previous research on adolescent girls.

1. There will be a negative relationship between silencing the self and self-esteem. Higher levels of silencing the self will predict lower levels of self-esteem.
2. Higher levels of hostility toward other girls will be related to lower levels of self-esteem.

Second, we hope to clarify the relationship between silencing the self, self-esteem, hostility toward other girls and direct and indirect aggression

3. Higher levels of hostility toward other girls will be related to higher levels of direct and indirect aggression.

4. Lower levels of self-esteem are expected to predict higher levels of direct aggression and indirect aggression.

5. Higher levels of silencing the self will predict lower levels of direct aggression and higher levels of indirect aggression.

6. The relationship between silencing the self and aggression will be moderated by self-esteem. Higher levels of silencing the self will predict lower levels of direct aggression and higher levels of indirect aggression at lower levels of self-esteem but not when self-esteem is higher.

7. Similarly, the relationship between hostility and aggression will be moderated by self-esteem. Higher levels of hostility will predict lower levels of direct aggression and higher levels of indirect aggression at lower levels of self-esteem but not when self-esteem is higher.

Method

Participants

We collected data from participants at two different Seventh-Day Adventist Academies in Southern California. Our sample consisted of 35 participants from one Academy and 53 participants from another Academy. The mean age of the participants was 16.01 with a standard deviation of 1.14. A majority of the sample was in the 10th grade at the time of data gathering (47.7 percent); however, there was representation from grades 9 through 12. We obtained an ethnically diverse sample as reported in table 1.

Table 1

Ethnic Distribution

Ethnic Group	Frequency	Percent
African American	6	6.8
Caucasian	11	12.5
Asian	37	42
Latina	29	33
Multiethnic	5	5.7
Total	88	100

Procedure

The prospective participants were given a packet containing an explanation of the study and a consent as well as assent form approximately a week before data collection. On the same day they were given a short presentation on the purpose of the study and their role in the study. They were given a chance to ask any questions they might have. The students were provided with small incentives to encourage them to participate in the study. Those who returned both forms were allowed to participate in the study and they

were entered into a drawing for a \$20 gift card. We hoped to obtain 85 participants as suggested by Cohen (1992) to achieve .80 power at $p < .05$. We were able to collect data from 88 participants, fulfilling the requirements for adequate power.

Four separate scales were used to measure the constructs of silencing the self, self-esteem, aggression, and hostility towards girls, totaling 74 questions. The demographic information obtained was age, grade, ethnicity and birth order and genders of siblings in relation to their birth order.¹

Measures

Silencing the self. The Silencing the Self Scale (STSS; Jack, 1991) was used to measure silencing the self. Jack's model suggests that in order for women to maintain their relationships, they will suppress feelings, thoughts and actions. This construct is collectively known as silencing the self. We made one modification to the scale to make it more appropriate for girls of this age. We replaced the word "partner" with the words "best friend" to better capture the participants experience with what would likely be their female friends (e.g. "I feel I have to act in a certain way to please my best friend"). This survey used a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). A study conducted by Jack and Dill (1992) explored the psychometric properties of the STSS among different populations of women. The population closest to our adolescent population was their sample of undergraduate women with a mean age of 19.1. The total alpha for the STSS was .86 (Jack & Dill) and in this present study it was .77.

¹ We found no relationship with birth order and gender of siblings with any of our other variables.

There are four subscales included in the STSS: Externalized Self Perception, Care as Self Sacrifice, Silencing the Self, and Divided Self. The Externalized Self Perception subscale measures whether women use external standards to judge themselves. The Externalized Self Perception subscale is based on 6 questions. An example is, "I tend to judge myself by how I think other people see me." In past studies the observed alpha for this scale was .75, and in the current study the alpha was .71 (Jack & Dill, 1992).

The Care as Self Sacrifice subscale measures how much the participant ascribes to the idea that she should sacrifice her own happiness for the needs of others. This scale is composed of 9 questions. An example is, "Caring means putting the other person's needs in front of my own." The reverse-scored question number 11 which states "In order to feel good about myself, I need to feel independent and self-sufficient" was dropped after analyzing this scale for reliability. This question did not appear to correlate with the other items (Item-Total Correlation -.01). When this question was removed the alpha for this subscale increased from .59 to .63. Dropping additional items did not improve the reliability of the subscale; therefore, the remaining items were all retained. Our Care as Self Sacrifice subscale was composed of 8 questions with a resulting alpha of .63. In past studies an alpha of .65 was obtained for this scale (Jack & Dill, 1992).

The Silencing the Self subscale measures how much the participant agrees with silencing her own opinion or desires in order to maintain relationships and avoid conflict. This scale consists of 9 questions. An example is, "I don't speak my feelings in an intimate relationship when I know they will cause disagreement." Question number 20 which states, "When it looks as though certain of my needs can't be met in a relationship, I usually realize that they weren't very important any way" was dropped after analyzing

this scale for reliability. This question did not correlate with the other items in the scale (Item-Total Correlation $-.02$). When this question was removed the alpha for this subscale went from $.58$ to $.62$. Dropping additional items did not improve the reliability of the subscale; therefore, the remaining items were all retained. Our Silencing the Self subscale was composed of 8 questions with a resulting alpha of $.62$. In past studies an alpha of $.78$ was obtained for this scale (Jack & Dill, 1992).

The last subscale was the Divided Self, which measures the participants' beliefs about presenting themselves one way externally but feeling differently internally. This subscale consists of 7 questions. An example is, "Often I look happy enough on the outside, but inwardly I feel angry and rebellious." In past studies this scale had an alpha of $.74$ (Jack & Dill, 1992). For this study the resulting alpha was $.64$. In general high scores on this scale indicate higher levels of silencing the self. There have been several articles that have used this scale on adolescent girls with success (Aube, Fichman, Saltaris, & Koestner, 2000; Hart, & Thompson, 1996; Lieberman, Zaitsoff, Geller, & Srikameswaran, 2002; Zaitsoff, Geller, & Srikameswaran, 2002).

Self-esteem. The Rosenberg Self-Esteem Scale (Rosenberg, 1965) has been the standard for measuring self-esteem for many years. This scale originally used a 4-point Likert scale but we modified it and used a 7-point scale (ranging from strongly disagree to strongly agree) in order to capture a more differentiated picture of self worth. This 10-item survey was originally developed for measuring global self-esteem in adolescents. The internal consistency of this scale ranges from $.72$ through $.87$ (Wylie, 1989) and was $.89$ in the present study. A sample question from this scale is: "I feel that I am a person of

worth, at least on an equal basis with others.” A higher score on this scale indicates higher levels of self-esteem.

Hostility towards girls. The Hostility Towards Girls Scale (HTG) originated as a scale to measure men’s hostility towards women (Check, Malamuth, Elias, and Barton, 1985). Lonsway and Fitzgerald (1995) modified and shortened the scale to include women’s hostility towards women. For our purposes we modified some of the language of the scale by substituting the word “girls” for “women.” The scale consists of 10-items with a 7-point Likert scale (ranging from strongly disagree to strongly agree). Higher scores indicate higher levels of hostility toward girls. In a study by Cowan and Ullman (2006), the Cronbach’s alpha was found to be .84 and was .80 in the present study. A sample item from this scale is: “I think that most girls would lie just to get ahead.”

Aggression. The Direct and Indirect Aggression Scale (DAIS) (Österman, et al., 1998) was used to measure aggression. This scale has three subscales: direct physical aggression, direct verbal aggression, and indirect aggression. Direct physical aggression is anything that is violent such as hitting, kicking or throwing something at someone else. Verbal aggression is also considered direct aggression when one person directly expresses their aggression through yelling, insulting, and teasing. Indirect aggression is characterized by social manipulation and covert attacks on another such as note passing, exclusion, or gossip (Österman, et al., 1998). This scale was developed for children and adolescents. The mostly widely used version of this scale is a peer-report scale but we will be using it as a self-report scale, which is a modification that has been approved by the author of the original scale. We also modified the scale to indicate that the aggression is against another girl. The DAIS consists of 24 questions with a 5-point Likert scale of

0 (never) through 4 (very often). Internal consistency for the total scale ranges from .92 to .93 (Björkqvist, Österman, & Kaukiainen, 1992). A sample item from the 12-item indirect aggression scale is: "I write small notes where the others are criticized." In past studies the alpha for this subscale was .93, and in the present study the obtained alpha was .87. An item from the 7-item physical aggression scale is: "I hit others." In past studies the alpha for this subscale was .93, and the alpha obtained in the present study was .77. Lastly, an item from the 5-item verbal aggression scale is: "I call others names." In past studies the alpha for this subscale was .92, and in the present study the obtained alpha for this scale was .77. High scores on this scale indicates more frequent aggression.

For our original hypotheses about aggression, we separated aggression into direct and indirect aggression. With the term direct aggression, we were referring both to physical and verbal aggression. We conducted analyses to determine if it was appropriate to combine the two subscales. Physical and verbal aggression were related ($r = .49, p < .001$). Although indirect aggression was not correlated with physical aggression ($r = .19, p = .09$), indirect aggression was correlated with verbal aggression ($r = .70, p = .001$). Since verbal aggression was correlated with both physical and indirect aggression, we treated verbal and physical as a separate forms of aggression.

Results

Data Screening

No participants were fully excluded due to the fact that no one participant had more than two answers missing on a scale. For those with omitted responses, we used the mode of the specific scale or subscale to substitute for the missing data. However, several individual outlying scale scores were deleted. We examined the distributions of each scale and examined which people appeared to be outliers on bar graphs; this process helped us determine outliers. One outlier was determined to be on the Divided Self subscale of the Silencing the Self scale, and we deleted that individual's score. In addition, one outlying response was deleted from the Direct Verbal Aggression subscale and two from the Indirect Aggression subscale.

After dropping outlier scores, we analyzed the skewness and kurtosis statistic available on SPSS by dividing it by the standard error, which gave us the z score. We used 2 as the cut off for significance. The three aggression measures were significantly skewed in a positive direction (Physical $z = 9.84, p < .01$; Verbal $z = 2.91, p < .01$; and Indirect $z = 3.28, p < .01$). The skewness indicates that the girls in this sample report little aggression and notably very little physical aggression. No other scores were significantly skewed. For kurtosis, Divided Self was significantly platykurtic with scores higher in the tails than the middle, $z = -2.43, p < .05$ (see Figure 1). Physical Aggression was significantly leptokurtic; many girls (69.3%) reported no physical aggression figure 2, $z = 11.46, p < .01$ (see Figure 2).

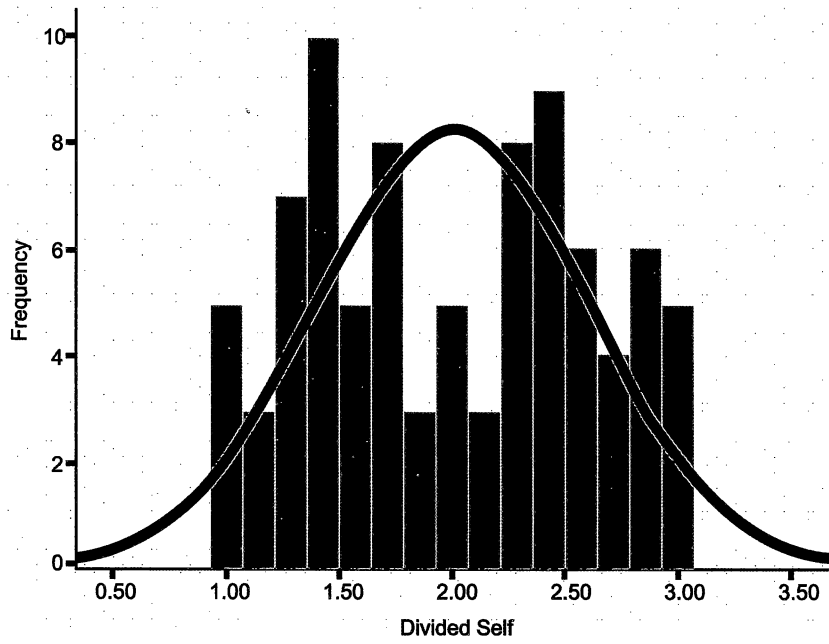


Figure 1. Divided Self Platykurtic

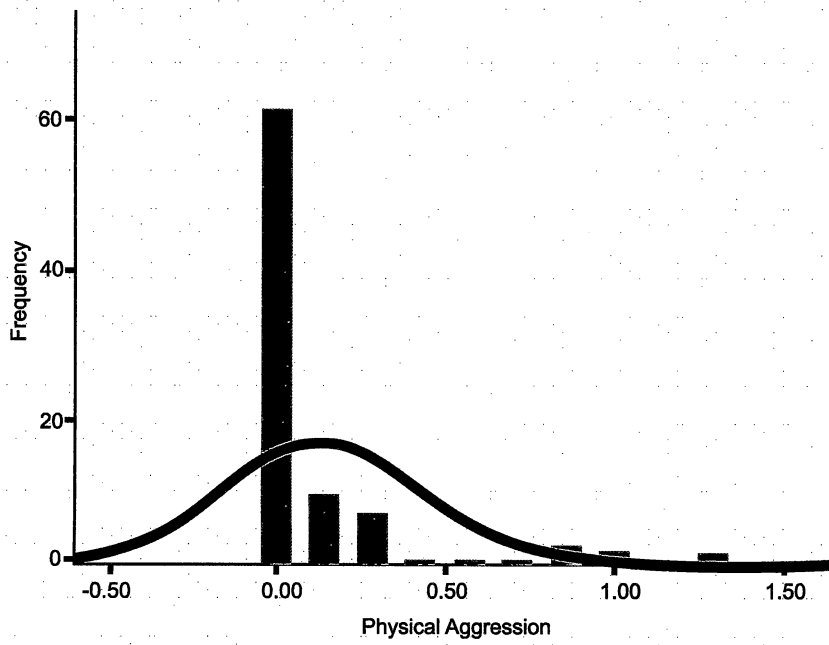


Figure 2. Physical Aggression Leptokurtic

Variable Descriptives

Table 2 contains the number of participants included for each scale, means, and standard deviations for each of the measures used in the study, and possible scores for each scale. The Silencing the Self subscales were close to the absolute total mean of 3 except for the Divided Self scale which was noticeably lower. In addition it is important to note that for each of the aggression scales, the mean was very low. This is an indicator that on the whole the girls did not report much aggression at all, regardless of type.

Table 2

Variable Descriptives

Scales	n	Means	Standard Deviation	Possible Score Range
Silencing the Self Total Scale	87	2.71	0.41	1-5
Externalize Self Perception	88	2.90	0.79	1-5
Care as Self Sacrifice	88	3.38	0.62	1-5
Silencing the Self	88	2.57	0.60	1-5
Divided Self	87	2.00	0.61	1-5
Direct Physical Aggression	88	0.14	0.30	0-4
Direct Verbal Aggression	87	0.75	0.57	0-4
Indirect Aggression	86	0.71	0.49	0-4
Hostility Towards Girls	88	4.07	1.05	1-7
Self-Esteem	88	4.76	1.09	1-7

Note. Each of the scales was averaged.

We examined the data for possible differences in patterns of reporting between the two schools. There was only one significant difference, for the subscale Indirect Aggression, $t(84) = -2.83, p < .006$ (School 1 mean = .60, SD = .34, School 2 mean = .89, SD = .63).

Findings

Table 3 presents the entire set of correlations. Our first few findings were replications of results found with other populations.

Hypothesis one. We hypothesized that higher levels of silencing the self would predict lower levels of self-esteem. The total Silencing the Self Scale significantly predicted the level of Self-Esteem. Those who were higher in silencing the self had lower self-esteem ($r = -.57, p < .001$). When we examined the subscales of Silencing the Self, three of the four subscales significantly predicted Self-Esteem. Eternalized Self Perception, Silencing the Self, and Divided Self were all negatively correlated with Self-Esteem. One subscale was not significantly related to Self-Esteem, which was the Care as Self Sacrifice subscale ($r = -.15, p < .17$).

Hypothesis two. Our next replication hypothesis was that higher levels of hostility towards other girls would be related to lower levels of self-esteem. As predicted, lower levels of Hostility were related to higher levels of Self-Esteem ($r = -.37, p < .001$). Girls who were higher in self-esteem were less likely to report feelings of hostility towards other girls.

Hypothesis three. Regarding the non-replication findings that focused on aggression, we hypothesized that higher levels of hostility towards other girls would be related to higher levels of aggression. Girls who had higher hostility towards other girls reported more frequent aggression towards other girls for all three forms of aggression. Hostility Towards Girls was positively correlated with Physical ($r = .22, p < .04$), Verbal ($r = .49, p < .001$), and Indirect Aggression ($r = .57, p < .001$).

Hypothesis four. For our next hypothesis, we expected that lower levels of self-esteem would predict higher levels of aggression. We found that lower levels of Self-Esteem were related to more frequent Indirect Aggression ($r = -.27, p < .01$); however, Self-Esteem was not significantly related to Physical ($r = -.11, p < .30$) or Verbal Aggression ($r = -.18, p < .09$).

Hypothesis five. We had expected that silencing the self would be positively related to indirect aggression and negatively related to verbal and physical aggression. The total Silencing the Self scale was significantly positively correlated with Indirect Aggression ($r = .27, p < .01$), whereas Silencing the Self was not significantly related to Physical ($r = .08, p < .46$) or Verbal ($r = .18, p < .10$) Aggression. The subscales for Silencing the Self differentially predicted aggression; therefore, we decided to examine each subscale in relation to this hypothesis. Consistent with the hypothesis, Externalized Self Perception ($r = .30, p < .01$) and Divided Self ($r = .46, p < .001$) were positively related to Indirect Aggression. In terms of direct aggression, as predicted Care as Self Sacrifice ($r = -.27, p < .01$) was negatively related to Physical Aggression. Contrary to the hypotheses regarding direct forms of aggression, Divided Self was positively related to Verbal ($r = .43, p < .001$) and Physical ($r = .30, p < .004$) Aggression. The Silencing the Self subscale was not significantly related to Physical ($r = .08, p < .48$), Verbal ($r = -.03, p < .79$), or Indirect Aggression ($r = .11, p < .31$). As noted above, the Divided Self subscale significantly predicted all three forms of Aggression.

Hypotheses six and seven. Lastly, we hypothesized that self-esteem would moderate the effects of both silencing the self and hostility on forms of aggression. In particular, we proposed that when self-esteem was low, higher levels of silencing the self

and hostility would predict lower levels of direct aggression and higher levels of indirect aggression. We did not expect silencing the self and hostility to be related to aggression when self-esteem was high. We examined this hypothesis by entering all of our predictors in the first step of a regression equation and interaction variables in the second step. Our interactions consisted of Self-Esteem multiplied by the variable Hostility as well as multiplying Self-Esteem by all four of the Silencing the Self subscales. We found only one instance in which self-esteem moderated the relationship between silencing the self or hostility and aggression. Self-Esteem interacted with the subscale Silencing the Self in predicting Indirect Aggression, $\beta = .24$, $t(84) = 2.40$, $p < .02$. Contrary to what we predicted, the Silencing the Self subscale was positively related to Indirect Aggression when Self-Esteem was high ($r = .27$, $p < .07$) but not when Self-Esteem was low ($r = -.12$, $p < .39$). This finding was not robust as the interaction was no longer significant when we ceased to control for the other interaction variables in the same equation.

For the other Silencing the Self and Hostility variables, Self-Esteem did not appear to moderate the relationship between our predictors and Aggression. Table 4 contains a summary of three regression analyses that examined the total variance for each form of aggression, without including the interaction findings. The first regression analysis was for Physical Aggression with the total model reported with all the predictors, including all the Silencing the Self subscales, the Self-Esteem scale, and the Hostility scale. We found the model to be significant, and Care as Self Sacrifice individually was significant when the other predictors were controlled.

Table 3

Correlations Between Variables

	Silencing the Self Total	Exter. Self Perception	Care as Self Sacrifice	Silencing the Self	Divided Self	Hostility	Self- Esteem	Physical Aggres.	Verbal Aggres.	Indirect Aggres.
Silencing the Self Total	1	-	-	-	-	-	-	-	-	-
Exter. Self Perception	0.75**	1	-	-	-	-	-	-	-	-
Care as Self Sacrifice	0.54**	0.13	1	-	-	-	-	-	-	-
Silencing the Self	0.67**	0.38**	0.19	1	-	-	-	-	-	-
Divided Self	0.62**	0.48**	0.01	0.19	1	-	-	-	-	-
Hostility	0.35**	0.39**	0.05	0.08	0.48**	1	-	-	-	-
Self- Esteem	-0.57**	-0.52**	-0.15	-0.44**	-0.44**	-0.37**	1	-	-	-
Physical Aggres.	0.08	0.11	-0.27*	0.08	0.30**	.22*	-0.11	1	-	-
Verbal Aggres.	0.18	0.17	-0.07	-0.03	0.43**	0.49**	-0.18	0.49**	1	-
Indirect Aggres.	0.27*	0.30**	-0.03	0.11	0.46**	0.57**	-0.27*	0.19	0.71**	1

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

The two regressions that follow are for Verbal and Indirect Aggression (see Table 4). For each, the total model was significant. Verbal and Indirect Aggression had a similar pattern of significant predictors. Both Divided Self and Hostility were significant predictors for both Verbal and Indirect Aggression. The regressions indicated that the variables predicted more variance for Verbal and Indirect Aggression than for Physical Aggression.

Table 4

Regression Analyses of Silencing the Self, Hostility, and Self-Esteem on Aggression

	β	R^2	F	Significant F
Physical Aggression (N = 86)		.18	3.01	.01**
Externalized Self Perception	-.01 <i>ns</i>			
Care as Self Sacrifice	-.14**			
Silencing the Self	.06 <i>ns</i>			
Divided Self	.12 <i>ns</i>			
Hostility	.04 <i>ns</i>			
Self-Esteem	.01 <i>ns</i>			
Verbal Aggression (N = 85)		.32	6.13	.001***
Externalized Self Perception	-.05 <i>ns</i>			
Care as Self Sacrifice	-.07 <i>ns</i>			
Silencing the Self	-.08 <i>ns</i>			
Divided Self	.29**			
Hostility	.21***			
Self-Esteem	.01 <i>ns</i>			
Indirect Aggression (N = 84)		.37	7.53	.001***
Externalized Self Perception	-.01 <i>ns</i>			
Care as Self Sacrifice	-.06 <i>ns</i>			
Silencing the Self	.01 <i>ns</i>			
Divided Self	.21*			
Hostility	.21***			
Self-Esteem	.01 <i>ns</i>			

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Exploratory analysis. We conducted an exploratory analysis of the Silencing the Self subscales to better examine the moderator hypotheses. We divided Self-Esteem into three separate groups that represented low, middle, and high scores. Self-Esteem generally tests high. That means that when we divided self-esteem into two groups of high and low, there were participants in the low group who had moderate levels of self-esteem. Splitting Self-Esteem into three groups allows us to examine those with truly low self-esteem. We then examined the correlations between the Silencing the Self subscales and Aggression for each of the three levels of Self-Esteem. We found that when girls had low Self-Esteem, there was a positive relationship between Divided Self and Indirect Aggression ($r = .53, p < .01$). At the midrange of Self-Esteem there was also a positive relationship between Divided Self and Indirect Aggression ($r = .37, p < .05$). The highest level of Self-Esteem revealed no relationship between Divided Self and Indirect Aggression ($r = .21, p > .05$). However, when Self-Esteem was high, Divided Self and Verbal Aggression were strongly positively related ($r = .56, p < .01$). At the midrange and low levels of Self-Esteem, Divided Self and Verbal Aggression were not significantly related (low self-esteem $r = .37, p > .05$ and midrange Self-Esteem $r = .24, p > .05$).

Another finding was that when Self-Esteem was low, the subscale Externalized Self Perception and Indirect Aggression were positively related ($r = .40, p < .05$). There was no significant relationship between Externalized Self Perception and Indirect Aggression when Self-Esteem was high or midrange (high Self-Esteem $r = .28, p > .05$ and midrange Self-Esteem $r = .01, p > .05$). For girls with low Self-Esteem, higher levels

of Divided Self were related to more Indirect Aggression, whereas for girls with high levels of Self-Esteem higher levels of Divided Self-were related to more direct Verbal Aggression. For the variable Hostility and the other Silencing the Self subscales correlations with Aggression, there were no significant differential correlations for the three levels of Self-Esteem.

In other exploratory analyses, due to the fact that Asian participants composed nearly half of our population, we assessed the differences in response patterns between Asian respondents and all others (excluding multiethnic participants). Comparisons of means revealed that the total means of these two groups for the total Silencing the Self scale and Verbal Aggression scale were significantly different (Silencing the Self scale $F(1,81) = 5.14, p < .026$ and Verbal Aggression $F(1,81) = 5.46, p < .022$).

The Asian group obtained a higher mean for both the total Silencing the Self scale ($M = 2.82$) and for Verbal Aggression ($M = .92$) when compared to the non Asian participants (Silencing the Self scale $M = 2.62$ and Verbal Aggression $M = .62$). This pattern indicates that Asian participants endorsed more over all silencing the self and reported more verbal aggression than non Asian participants.

Discussion

We replicated the results of several studies that have examined relational patterns as do women. Generally, we found that girls have similar relational patterns as women. In particular, Wood's (1999) study indicated women who were in abusive relationship and silenced the self had lower self-esteem. We found a similar pattern in which silencing the self and self-esteem were negatively related among teenage girls. A failure for girls to express themselves was related to low self-esteem. Studies have found that girls who silence themselves report higher levels of depression, feel less satisfied with relationships, have earlier first intercourse and are less likely to use contraception (Harper & Welsh, 2007; Widman, Welsh, McNulty, & Little, 2006). Therefore, focusing on building an adolescent girl's self-esteem may be a protective factor for both their mental and physical health. Brown and Gilligan (1992) asserted that as girls become adolescents, they lose touch with themselves and tend to question the validity of their feelings. Conversely, encouraging young girls to say what they think and feel may foster the development of their self-esteem in the adolescent years.

To further understand this relationship, we examined the Silencing the Self subscales and their separate relationships with Self-Esteem. The subscales consist of measures of Externalized Self Perception, Care as Self Sacrifice, Silencing the Self, and Divided Self. Externalized Self Perception measures the extent to which a girl uses external standards to judge herself (e.g. I tend to judge myself by how I think other people see me.).

Care as Self Sacrifice evaluates the degree to which a girl believes that she should sacrifice her own happiness for the needs of others (e.g. Caring means putting the other person's needs in front of my own.). The Silencing the Self subscale measures how much the participant agrees with silencing her own opinion or desires in order to maintain relationships and avoid conflict (e.g. I don't speak my feelings in an intimate relationship when I know they will cause disagreement.). Divided Self measures the participants' beliefs about presenting themselves one way externally but feeling differently internally (e.g. Often I look happy enough on the outside, but inwardly I feel angry and rebellious.). This subscale is unique because it is the only scale that elicits expressions of dissatisfaction and internal conflict.

We found that each subscale was negatively correlated with Self-Esteem with the exception of Care as Self Sacrifice. Girls who had lower self-esteem were more likely to base their self-perception on how they believed others saw them (Externalize Self Perception). They reported that they would also be less likely to express emotions that would cause disagreement (Silencing the Self), and they would misrepresent how they were feeling internally (Divided Self). This pattern would be reversed if girls had high self-esteem. They would be more likely to derive their self-perception from how they saw themselves, they would express themselves even if that might cause conflict, and they would accurately state how they were feeling.

However, self-esteem did not appear to have a relationship with believing that they should sacrifice their own happiness for that of others (Care as Self Sacrifice). The idea of sacrificing one's own happiness for the benefit of others may not be related to self-esteem because it is more socially normative than the other components of silencing

the self in this population. Consistent with this interpretation, Care as Self Sacrifice had the highest mean of any of the Silencing the Self subscales. Brown and Gilligan (1992) suggest girls in adolescence struggle with the idea of feminine selflessness and the maturity demands of independence. In a bid for approval, they may endorse the ideal of being a selfless woman. Another consideration for this difference is that the sample was obtained from Seventh-Day Adventist schools which promote missionary work and sacrificing for others.

Regarding a model of self-esteem and hostility toward other women or girls, Cowan and Ullman (2006) theorized that women who feel poorly about themselves project their negative self-perceptions on others. The projection model posits that women's hostility toward women is a manifestation of dissatisfaction with themselves and that women project these negative self-beliefs on other women (Cowan & Ullman, 2006). Based on structural equation modeling, with a college women sample, low self-esteem leads to hostility towards women. We supported that finding with our adolescent sample. The proposed projection model by Cowan and Ullman is likely applicable to adolescent girls as well as to adult women. If a girl feels poorly about herself, she may be prone to devalue girls and feel hostile towards them. In the Cowan and Ullman study, self-esteem was one indicator of a sense of personal inadequacy. Other negative beliefs, such as a lack of a sense optimism and control, also were indicators of a sense of personal inadequacy. These varied self-attitudes were not measured in the present study but would be the next step for confirmation of the relationship of negative attitudes toward the self and hostility toward other girls.

Predicting Aggression

Björkqvist (1994) asserted that there are direct and indirect forms of aggression. He identified direct aggression as verbal and physical attacks, whereas indirect aggression was defined as being carried out through covert social tactics such as exclusion. Based on this, we expected that the direct forms of aggression would be highly correlated with each other. Instead, we found that the strongest correlation was between Indirect and Verbal Aggression and stronger than the relationship between the two direct forms of aggression (Verbal and Physical). Physical and Indirect Aggression were unrelated. There was a significant relationship between Physical and Verbal Aggression, but it was not as strong as the relationship between Indirect and Verbal Aggression. Therefore, the relationships between Direct and Indirect forms of Aggression are not independent. In addition, Physical and Verbal Aggression appears to be distinct forms of direct expression. Letendre (2007) discussed the fact that in recent research on gender differences in aggression, we are seeing a trend where girls are as verbally aggressive as boys. However, girls exhibit less physical aggression than boys (Chesney-Lind, 2001). Past research on aggression among adolescent girls (Galen & Marion, 1997) indicates that girls in high school use indirect aggression more than do their male counterparts. Based on our findings, we suggest that future research on teenage girls should assess all three forms of aggression and analyze them separately.

An important finding of this research was that Silencing the Self was positively related to Indirect Aggression but not to Physical or Verbal Aggression. This finding indicates that when girls are higher in silencing the self, they are more likely to aggress indirectly. When we examined this relationship closely, we found that in particular

Externalized Self Perception and Divided Self were positively related to Indirect Aggression. Girls who rely on what others think of them to inform their self-perception and girls who do not state their true feelings tended to be more likely to aggress indirectly. Brown and Gilligan (1992) hypothesized that this disconnection from the self is often in service of staying connected to others. To stay connected, girls hide their true feelings because it is important for them to remain connected to their peers. However, these girls may still feel angry. Measures clearly indicate that the respondents participate in covert forms of aggression such as talking behind another girl's back.

Again, focusing on the Silencing the Self subscales and aggression, we found that those higher on Care as Self-Sacrifice tended to be less verbally aggressive. It is possible that due to their belief that caring for others is important, they may find other ways to express their anger than to express it directly in words. If a girl believes she should care for others, personal confrontation and the possibility of hurt feelings may seem cruel and uncaring.

Higher levels of Divided Self were related to all forms of aggression. We found that when girls are higher on Divided Self, they are more likely to verbally and physically aggress, as well as to express more indirect aggression; i.e., when girls present themselves one way externally when they are feeling differently internally that they are more likely to indirectly, verbally, and physically aggress. One possible explanation for this is that girls who are not honestly sharing their emotions reach a point in which they are unable to deny their frustration any longer. The Divided Self measure clearly indicates that the respondents know that they are not expressing their true feelings.

This conscious form of silencing the self appears to be the most active manifestation of voice silencing. Potentially, the act of routinely misrepresenting their internal disharmonious experience makes them more prone to aggressing in whatever way is possible. The act of purposefully denying their own experience is likely stressful and physiologically damaging. The conflict builds within them and they finally aggress. It is also possible that over time and with practice, girls lose touch with the inconsistent and incongruous messages that they are sending.

Hostility toward other girls, another predictor that was also associated with silencing the self, was related to aggression. When girls expressed feeling hostile towards other girls, they reported more aggression. As expected, Hostility was strongly related to both Indirect and Verbal Aggression. In comparison, the relationship between Hostility and Physical Aggression was weaker. In general, girls who reported higher levels of feelings of hostility were more likely to indirectly, verbally, and physically aggress.

One explanation for the weaker correlation between Hostility and Physical Aggression was the fact that little physical aggression was reported, and there was little variability in physical aggression. A majority of girls in this study (69.3%) reported no physical aggression. However, it is important to note that despite the lack of variability (kurtosis and skewness), there was still a significant relationship between hostility and physical aggression. One explanation for the lack of reporting of physical aggression may be social desirability. Another hypothesis is that girls truly physically aggress very little. Another factor to consider is that the sample was taken from a private Christian school in which girls may have different coping skills than girls in another setting and are unlikely to be reinforced for aggression. Letendre (2007) reported that girls who are exposed to

However, interestingly, at the highest levels of Self-Esteem, Divided Self and Verbal Aggression were related. Therefore, when girls have high Self-Esteem, they are also able to express their Aggression more directly in words. Perhaps, when girls experience themselves as divided and they have low self-esteem, they are more comfortable aggressing indirectly. This may be related to a discomfort with expressing negative feelings. However, as their self-esteem rises, they are more directly aggressive. These findings are tentative because they were not based on the statistical interactions of Self-

Esteem with the Silencing the Self Subscales

To better understand aggression among adolescent girls, it would be helpful to summarize our findings about indirect aggression here. The total Silencing the Self scale was related to Indirect Aggression. In particular, the constructs Externalized Self Perception and Divided Self were related to Indirect Aggression. Brown and Gilligan's (1992) work on silencing the self suggests that girls lose connection with themselves as they transition into their teenage years. This disconnection from the self is often in service of staying connected to others. If girls are silencing themselves to maintain their relationships, perhaps they feel that they can only aggress indirectly. Also, this sort of covert aggression may be in service of maintaining their relationships when they experience hostility toward other girls. Perhaps they feel that if they were to express their anger and disagreements directly, they might lose their connection with other girls. Additionally, girls who expressed hostility toward other girls and girls with low self-esteem were more likely to aggress indirectly.

A significant proportion of our population was Asian. We explored possible differences between this subset of our population versus the others. We found that the

Asian participants reported using more overall silencing the self and more verbal aggression than did non Asian participants. The higher silencing the self may be expected due to the stereotype of the quiet and submissive Asian woman. However, the higher verbal aggression does not fit this stereotype. Quiet and submissive women and girls would not likely be verbally aggressive. Dunn and Cowan (1993) explored social influence strategies among Japanese and American college women. They found that the Asian females (in Japan) were more direct and less indirect and manipulative in their strategies to influence others than were American women. This same pattern of Asian women using more direct forms of influence provides support that Asian women may not be as submissive as the stereotype suggests.

Limitations and Future Research

Our sample was composed of girls from Seventh-Day Adventist (SDA) private schools. In the SDA subculture there are certain expectations of serving others and non-aggressive behavior. This middle-class population may not condone physically violent behaviors, whereas those girls who have low socio-economic-status may (Letendre, 2007). These factors may limit the generalizability of the results. The next step in the research would be to obtain data from a more diverse sample of adolescent girls. A larger sample size would also be advantageous. Our relatively small sample size hindered our ability to draw conclusions from breaking down self-esteem into three categories.

The field needs further exploration regarding verbal, physical, and indirect aggression among girls. We found that verbal and indirect aggression are related, and this unexpected outcome indicates that more theorizing in this area is required.

Additionally, clarification is needed regarding what drives girls to use one form of aggression and not another.

Another step in the research would be to examine a structural equation model for the relationship between hostility towards girls, self-esteem, silencing the self, and aggression. Elements of this causal relationship have already been found for women (Cowan & Ullman, 2006) but this relationship should be confirmed for girls. Lastly, more research needs to be done regarding the Silencing the Self subscales and teenage girls. In this study, the alphas for the Silencing the Self subscales were in the low .60s. These low alphas made it difficult to draw significant conclusions from these scales. A Silencing the Self scale needs to be developed specifically for teenage girls. The Silencing the Self subscales should also be examined for how they contribute uniquely to outcomes such as depression, aggression, and relationship satisfaction among girls. In addition, we obtained low alphas for some of the Silencing the Self subscales. This should be considered when examining the results of this research.

We found that Asian girls had a different response pattern than other participants. This may suggest a cultural component. However, we must not confuse the variable ethnicity with culture. Therefore, further research on the role culture plays with both silencing the self and aggression is needed.

Clinical Implications

Girls who lose themselves through voice silencing are suffering quietly. They are in fear of losing their relationships but at the same time they are not able to make a real connection because they are not being themselves (Brown & Gilligan, 1992). Wisdom (2001) found that girls with more direct means of communication were lower in depression and had higher relationship satisfaction. Research has indicated that girls start silencing themselves as they reach puberty. One possible avenue would be to educate young girls about the importance of direct honest communication. Teaching girls assertive honest communication skills may allow them to continue the trend of talking more directly to their peers.

In addition, silencing the self is related to self-esteem. Keane (2004) found that girls who participated in school athletics exhibited less self-silencing than girls who did not participate in organized sports. Keane attributes this difference in self-silencing to differential levels of self-esteem between the two groups, with the non-participants possessing lower self-esteem. Encouraging girls to participate in activities in which they can feel a sense of accomplishment may be another important factor.

Letendre (2007) suggests that girls who are high in aggression need more mentoring from older females in their lives. In these mentoring relationships, girls should talk about specific situations they may face and problem solve about how they might assertively address their problems rather than through aggression (Letendre, 2007). These mentors may help the girls think about how they are really feeling versus how they are presenting themselves to others. Brown and Gilligan (1992) also found that girls who had an adult woman to talk to functioned better than those who did not. This relationship

would be ideal with a parent but a therapist or teacher would also be beneficial. These mentoring relationships will likely benefit those girls who are high in both silencing the self and aggression. Engaging with someone who is able to express themselves when the content is both positive and negative, will help the girls learn to directly and appropriately address others in the same way when they are dissatisfied.

Therapists can play an important role in a girl's development of her sense of self. As psychology professionals, clinicians are uniquely qualified to honestly engage with teens. Psychologists' training in rapport building and attention to behavioral patterns can lend important insights regarding adolescent girls. Additionally, unlike coaches, teachers, or parents a psychologist does not have a vested interest in the teen achieving a specific goal. This may allow the teen to interact and explore more freely.

Conclusion

Overall, silencing the self appears to possibly have a detrimental impact on adolescent girls. When girls silence themselves, they may believe that they are preserving their relationships. In this study, we found that girls who silence themselves aggress towards other girls indirectly; they also have lower self-esteem and are hostile towards other girls. Identifying girls who tend to silence their voices and involving them in mentorship programs may be a step towards supporting them to communicate honestly.

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Appendices

Appendix A

Informed Consent

Teen Girl's Relationships

Dear Parents or Guardians,

My name is Sarah Park. I am a graduate student in psychology at Loma Linda University. I am conducting a study about young women. I'm sure as a parent you are mystified by the behavior of your daughter and her friends. This study aims to better understand teenage girls' relationships. In particular we are interested in the factors that are involved in conflicts between teenage girls as well as how and why they respond the way they do. How this would be accomplished is by your daughter completing a questionnaire. The first page asks about background information, such as age and grade. The first measure asks about how comfortable she is voicing her thoughts and desires to others. The next measure is a self-worth measure, and the third is a measure of how she feels about other girls. The last measure asks she acts out towards other girls. Her name will not be attached to the data. After she fills out the information there will be no way to connect her to the information she has given.

If your teen takes part in the study the surveys will be administered on December 11, 2009. The total estimated time to complete the surveys is 30 minutes. The questionnaires will be completed during class time in another classroom, however she will not miss out on any educational instruction. If she brings back her signed consent form she will be offered some candy and will be entered into a drawing for a Target gift card. If she chooses not to participate she will remain in the classroom with the other students and participate in optional study time, movie watching or game playing depending on the teacher. Please see the attached information sheet for additional information.

If you have any questions regarding this process or the purposes of this project please feel free to contact my supervisor and adjunct faculty at Loma Linda University, Dr. Gloria Cowan or myself.

Sarah Park
sapark@llu.edu
626-806-2009

Gloria Cowan, Ph.D.
Glorandbil@aol.com or Gcowan@csusb.edu
310-823-6421

Signature

Date

Appendix B

Informed Assent

Teen Girl's Relationships

This study aims to better understand teenage girls' relationships. In particular we are interested in the factors that are involved in conflicts between teenage girls as well as how and why they respond the way they do. How this would be accomplished is by your daughter completing a questionnaire. The first page asks about background information, such as age and grade. The first measure asks about how comfortable you are voicing your thoughts and desires to others. The next measure is a self-worth measure, and the third is a measure of how you feel about other girls. The last measure asks how you act out towards other girls. Your name will not be attached to the data. After you fill out the information there will be no way to connect you to the information you have given. Please see the attached information sheet that explains more about the study.

If you take part in the study the surveys will be administered on Friday December 11, 2009. The total estimated time to complete the surveys is 30 minutes. The questionnaires will be completed during class time in another classroom, however you will not miss out on any educational instruction. If you brings back your signed consent form you will be offered some candy and will be entered into a drawing for a Target gift card. If you choose not to participate you will remain in the classroom with the other students and participate in optional study time, movie watching or game playing depending on the teacher.

If you have any questions regarding this process or the purposes of this project please feel free to contact my supervisor and adjunct faculty at Loma Linda University, Dr. Gloria Cowan or myself.

Sarah Park
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310-823-6421

Signature

Date

Appendix C

Information Sheet

Information About the Study

This study aims to better understand teenage girls' relationships. In particular we are interested in the factors that are involved in conflicts between teenage girls as well as how and why they respond the way they do. How this would be accomplished is by your daughter completing a questionnaire. The first page asks about background information, such as age and grade. The first measure asks about how comfortable she is voicing her thoughts and desires to others. The next measure is a self-worth measure, and the third is a measure of how she feels about other girls. The last measure asks she acts out towards other girls. Her name will not be attached to the data. After she fills out the information there will be no way to connect her to the information she has given.

If your teen takes part in the study the surveys will be administered on Friday December 11, 2009. The total estimated time to complete the surveys is 30 minutes. The questionnaires will be completed during class time in another classroom, however she will not miss out on any educational instruction. If she brings back her signed consent form she will be offered some candy and will be entered into a drawing for a Target gift card. If she chooses not to participate she will remain in the classroom with the other students and participate in optional study time, movie watching or game playing depending on the teacher.

Risks and Benefits

The potential risks your teen may face while taking the survey is the possibility of another participant seeing their answer to a question and the discomfort associated with completing the questionnaire. To insure your child's privacy, seating will be spread out and the surveys will have a coversheet to decrease the likelihood of other participants observing your teen's answers. Your child or your family will not benefit personally from this study. Your child may feel some discomfort when reporting information on relationships. If this occurs she is free to discontinue her participation at any time.

Confidentiality

Your teen's anonymity is important to the investigators. Therefore their names will not be connected to the information they provide. A participant number will be connected with their answers and this will not be connected to their names. While she is filling the survey out every attempt will be made to ensure that her answers remain private.

Investigators

Dr. Gloria Cowan is an adjunct faculty at Loma Linda University and is the primary investigator for this project and has retired from a 30-year position as professor of

psychology at California State University, San Bernardino. Dr. Cowan's role is to oversee the project. Sarah Park is a doctoral student at Loma Linda University. Sarah will collect the consent forms as well as administer the surveys. Together, Dr. Cowan and Sarah will analyze the information collected. The information collected will be used as part of a doctoral project.

Alternatives to Participation

If your teen chooses not to participate in the study she will not be penalized. She will remain in the classroom with the other students and participate in optional study time, movie watching or game playing depending on the teacher.

Additional Information

If at any time additional information is desired please feel free to contact Sarah Park at 626-806-2009 or via e-mail at sapark@llu.edu or Dr. Gloria Cowan at 310-823-6421 or via e-mail at glorandbil@aol.com. There is also a third party that you can confidentially contact via e-mail patientrelations@llu.edu.

Please detach this sheet from the consent and have your daughter return the form on Friday December 11, 2009.

Appendix D

Demographic Questionnaire

1. Age _____

2. Grade _____

3. Ethnicity (Please Circle One)

African American

Caucasian

Chinese

Hispanic

Korean

Pacific Islander

Other (Please Specify): _____

5. Do you have any siblings (brothers or sisters)? Yes No

5a. If yes how many? _____

5b. What is the birth order and genders of you and your sibling(s)? (ex. brother oldest, me middle, sister youngest)

Appendix E

The Silencing the Self Scale By Dana Crowley Jack

Please circle the number that best describes how you feel about each of the statements listed below. If you are not currently in an intimate relationship, please indicate how you felt and acted in your previous intimate relationships.

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	
10. Caring means choosing to do what the other person wants, even when I want to do something different.	1	2	3	4	5
11. In order to feel good about myself, I need to feel independent and self-sufficient.	1	2	3	4	5
12. One of the worst things I can do is to be selfish.	1	2	3	4	5
13. I feel I have to act in a certain way to please my best friend.	1	2	3	4	5
14. Instead of risking confrontations in close relationships, I would rather not rock the boat.	1	2	3	4	5
15. I speak my feelings with my close friends, even when it leads to problems or disagreements.	1	2	3	4	5
16. Often I look happy enough on the outside, but inwardly I feel angry and rebellious.	1	2	3	4	5
17. In order for my close friends to love me, I cannot reveal certain things about myself to him/her.	1	2	3	4	5
18. When my close friend's needs or opinions conflict with mine, rather than asserting my own point of view I usually end up agreeing with him/her.	1	2	3	4	5
19. When I am in a close relationship I lose my sense of who I am.	1	2	3	4	5

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
20. When it looks as though certain of my needs can't be met in a relationship, I usually realize that they weren't very important anyway.	1	2	3	4	5
21. My close friend loves and appreciates me for who I am.	1	2	3	4	5
22. Doing things just for myself is selfish.	1	2	3	4	5
23. When I make decisions, other people's thoughts and opinions influence me more than my own thoughts and opinions.	1	2	3	4	5
24. I rarely express my anger at those close to me.	1	2	3	4	5
25. I feel that my close friends do not know my real self.	1	2	3	4	5
26. I think it's better to keep my feelings to myself when they do conflict with my close friends feelings.	1	2	3	4	5
27. I often feel responsible for other people's feelings.	1	2	3	4	5
28. I find it hard to know what I think and feel because I spend a lot of time thinking about how other people are feeling.	1	2	3	4	5
29. In a close relationship I don't usually care what we do, as long as the other person is happy.	1	2	3	4	5

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
<hr/>				
30. I try to bury my feelings when I think they will cause trouble in my close relationship(s).				
1	2	3	4	5
31. I never seem to measure up to the standards I set for myself.				
1	2	3	4	5

Appendix F

Rosenberg Self-Esteem Scale

Feelings of Worth

Pleas circle the number that best describes YOU.

Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1. I feel that I am a person of worth, at least on an equal basis with others.						
1	2	3	4	5	6	7
2. I feel that I have a number of good qualities.						
1	2	3	4	5	6	7
3. I am inclined to feel that I am a failure.						
1	2	3	4	5	6	7
4. I am able to do things as well as most other people.						
1	2	3	4	5	6	7
5. I feel I do not have much to be proud of.						
1	2	3	4	5	6	7
6. I take a positive attitude toward myself.						
1	2	3	4	5	6	7
7. On the whole, I am satisfied with myself.						
1	2	3	4	5	6	7
8. I wish I could have more respect for myself.						
1	2	3	4	5	6	7
9. I certainly feel useless at times.						
1	2	3	4	5	6	7
10. At times I think I am not good at all.						
1	2	3	4	5	6	7

Appendix G

Girls Hostility Towards Girls Scale

Attitudes Toward Girls

Pleas circle the number that best describes YOU.

Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1. I feel that many times girls flirt with boys just to tease them or hurt them.						
1	2	3	4	5	6	7
2. I believe that most girls tell the truth.						
1	2	3	4	5	6	7
3. I usually find myself agreeing with other girls.						
1	2	3	4	5	6	7
4. I think that most girls would lie just to get ahead.						
1	2	3	4	5	6	7
5. It is generally safer not to trust girls too much.						
1	2	3	4	5	6	7
6. When it really comes down to it, a lot of girls are deceitful.						
1	2	3	4	5	6	7
7. I am easily angered by other girls.						
1	2	3	4	5	6	7
8. I am sure I get a raw deal from the other girls in my life.						
1	2	3	4	5	6	7
9. Sometimes other girls bother me by just being around.						
1	2	3	4	5	6	7
10. Other girls are responsible for most of my troubles.						
1	2	3	4	5	6	7

Appendix H

Direct & Indirect Aggression Scales By: Bjorkqvist, Lagerspetz & Osterman

Tell us how you act when you have with a problem with or you become angry with another classmate. Answer the questions by circling the number, which seems to tell about your behavior in the closest way.

Never	Seldom	Sometimes	Quite Often	Very Often	
1. I hit other girls.	0	1	2	3	4
2. I shut other girls out of the group.	0	1	2	3	4
3. I yell at or argue with other girls.	0	1	2	3	4
4. I have become friends with another girl as a kind of revenge.	0	1	2	3	4
5. I kick other girls.	0	1	2	3	4
6. I ignore other girls.	0	1	2	3	4
7. I insult other girls.	0	1	2	3	4
8. I gossip about a girl I am angry with.	0	1	2	3	4
9. I have tripped other girls.	0	1	2	3	4
10. I tell bad or false stories about other girls.	0	1	2	3	4
11. I say I am going to hurt other girls.	0	1	2	3	4

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Never	Seldom	Sometimes	Quite Often	Very Often
12. I plan secretly to bother other girls.				
0	1	2	3	4
13. I shove other girls.				
0	1	2	3	4
14. I say bad things behind another girls back.				
0	1	2	3	4
15. I call other girls names.				
0	1	2	3	4
16. I say to other girls "Let's not be with her!"				
0	1	2	3	4
17. I take things from other girls.				
0	1	2	3	4
18. I tell other girls secrets to others.				
0	1	2	3	4
19. I tease the other girls.				
0	1	2	3	4
20. I write small notes where other girls are criticized.				
0	1	2	3	4
21. I push other girls down to the ground.				
0	1	2	3	4
22. I criticize other girls hair or clothing?				
0	1	2	3	4
23. I pull at girls.				
0	1	2	3	4
24. I try to get other girls to dislike the girl I am angry with				
0	1	2	3	4

multiple stressors, such as lower socio economic status and minority racial and ethnic status, are more likely to be physically aggressive. For our sample, which was taken from a middle-class population, there may be less reinforcement for physical aggression. In addition, it should be noted that hostility is a feeling and it does not necessarily lead to any sort of aggressive action. Adolescents and adults can experience hostility without a display of aggression.

We expected that the relationships between Silencing the Self and Hostility with aggression would be moderated by Self-Esteem. More specifically, we expected that higher levels of silencing the self and hostility would predict lower levels of direct aggression and higher levels of indirect aggression at lower levels of self-esteem but not when self-esteem is higher. We were not able to support this relationship. Based on the regression interaction of the Silencing the Self subscale and hostility, we did find that when self-esteem was higher, those who were higher on the Silencing the Self subscale reported more frequent indirect aggression. This was opposite to what we had hypothesized.

A possible explanation for our lack of support for the moderation hypothesis is that the variable Self-Esteem tends to be negatively skewed. When we split the sample into a low and high Self-Esteem group, participants with relatively high Self-Esteem fell into the low Self-Esteem group. This is evidenced by our obtained mean of nearly 5 on a 7-point scale on the Self-Esteem scale. Breaking Self-Esteem down into three levels allowed us to better capture low Self-Esteem. Divided Self and Externalized Self Perception were both more strongly related to Indirect Aggression for girls in the lowest third of the range of Self-Esteem than for girls in the mid or high range of Self-Esteem.