Female Political Participation in Women’s Colleges vs. Coeducational Institutions

Sara Maria Estevez Cores

Scripps College

Recommended Citation
Estevez Cores, Sara Maria, "Female Political Participation in Women's Colleges vs. Coeducational Institutions" (2013). Scripps Senior Theses. Paper 238.
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FEMALE POLITICAL PARTICIPATION IN WOMEN’S COLLEGES VS.
COEDUCATIONAL INSTITUTIONS

by

SARA ESTEVEZ CORES

SUBMITTED TO SCRIPPS COLLEGE IN PARTIAL FULFILLMENT
OF THE DEGREE OF BACHELOR OF ARTS

PROFESSOR ANDREWS

PROFESSOR HARTLEY

PROFESSOR MA

APRIL 26TH, 2013
Female Political Participation in Women’s Colleges vs. Coeducational Institutions

Sara Estevez Cores

Scripps College
Abstract

The current study examined the factors that affect female political participation in students at women’s colleges and coeducational institutions. The first part of the study consisted of building a model to explain female political participation based on previous research findings. The second part of the study consisted of examining differences between the model and the levels of participation among the two groups. Results showed that only self-esteem, femininity, feminist identification and knowledge of female political leaders significantly impacted political participation. No structural differences in the model were found between the groups. Students at women’s colleges had significantly higher means in political activity than their counterparts at coeducational institutions but there were no significant mean differences in political participation.

Keywords: women’s colleges, political participation, life satisfaction, structural equation modeling
Acknowledgements

“There is only one thing that all the successful companies in the world have in common. Only one. None were started by one person” – Ernesto Sirolli

To my father, for passing onto me his love of learning. To my mother, for showing me how to be resilient before I even understood the meaning of the word. To my brother, for being my number one support source and the kindest human being on Earth. To David, for reading and proofreading countless drafts of this thesis while experiencing my emotional rollercoaster through the whole process.

To my host dad, Abe, for the late night calls, the outdoor trips and the amazing food. You help me put things in perspective.

To my amazing professors and mentors at Scripps College. You are truly the essence of this college. That includes:

Professor Ma, for relentlessly reading through my drafts (to the comma level), patiently teaching me how to conduct data analysis and providing me extraordinary career guidance.

Professor Groscup, for showing me the fun in statistics, encouraging me to challenge myself and for simply being there.

Professor Neiman, for being my mother-away-from-home and supporting me in the most radical and crazy endeavors.

Professor LeMaster, for being a superb advisor and a great listener.

Professor Alan, for showing me the beautiful world of SEM and helping me through my analytical struggles.
Professor Drake, for forcing me to take Writing 50 as a sophomore-year transfer and letting me be a part of the Crossroads’ workshops.

Professor Andrews, for making my graduation possible as a dual major.

Professor Ou, for letting me explore the gendered world of mathematics and teaching me to question even the most basic assumptions.

Professor Hartley, for being the most lovable professor on campus and making science the most exciting and tasty thing I’ve discovered. I have no doubt, had I met you earlier, I’d probably have graduated as an EA major.

Professor Dillon, for constantly making me laugh and for being such an inspiration.

To my friends, for talking (Shengwei & Bere), listening (Jennifer & Claire), studying (Stefanie), drinking (Rodrigo), shopping (Sweta), eating (Samantha), hiking (Heather), laughing (Evelyn D.), crying (Evelyn W.) and traveling (Daniella) with me.

To Lola, for sharing with me the physical and psychological complexity of the college and accompanying me while I navigated it.

To Jamie, for being such a tolerant, loving and caring person. You’ll always be the best “boss” I’ve ever had!

To Gretchen & Grace, for recurrently and warmly assisting me in my career struggles.

And finally, to you, the reader, because “comunicacion es un proceso en el que participan varios”. Without you, the painful and long process that has been writing this thesis would be meaningless.
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“Gender was not the only thing that mattered, but yes, gender did matter”

(Carroll, 2009, p.18)

During the 2008 United States (U.S.) presidential campaign, gender was believed to be key in impacting Hillary Clinton’s outcomes (Carroll, 2009; Lawless, 2009). Among the main factors that may have influenced the election’s results were gender stereotypes and the sexism displayed by the media. Hillary Clinton was highly criticized for showing her tough side and not enough of her feminine, communal side (Lawless, 2009; Uscinski & Goren, 2011).

Moreover, citizens and other political candidates alike used her gender to diminish her. When John McCain was asked “How do we beat the bitch?”, he answered, “That’s an excellent question” (Carroll, 2009). On another occasion, two men at a Clinton rally in New Hampshire wore t-shirts saying, “Iron my shirts!” (Carlin & Winfrey, 2009; Carroll, 2009). These types of incidents were either underreported or completely ignored by the media, as if sexist comments were socially acceptable in the context of a presidential campaign.

Retrospective analyses also have shown that the coverage of the campaign was extremely biased: Gender stereotypes not only diminished Hillary Clinton’s qualifications but were also used by the national media to harm her public image (Carroll, 2009; Whitt, 2010). The criticisms of her personal relationships, clothes and communication style often overshadowed her political message, her position on domestic and international policies and her promises as a future leader. Redirecting the attention from Hillary the political candidate, to Hillary the poorly-
dressed-badly-hair-styled woman, while continuing to speak of male candidates in a respectful manner and within the political sphere, primed the public to see her more as a celebrity than as a truly serious candidate for the position (Rubin, 2008; Uscinski & Goren, 2010).

Although Hillary Clinton’s participation in the 2008 presidential race might have served as an inspiration to many women around the country, at the same time, it raised the question: Could a woman ever become President of the U.S.? Even as the women’s movement has changed women’s roles in society so much in the past century, the historical baggage of gender divisions continues to affect women today. Research studies and experiences like the 2008 presidential campaign show us that sexism has not decreased, but has taken a different and more subtle form (Benokraitis & Feagin, 1986; Welson, 2002).

The low numbers of female political participation in the national legislature have placed the U.S. 91st in the world with a 3% point decrease compared to the international average, one of the lowest positions for a developed and democratic country (Lawless & Fox, 2012). As more women continue to get an education, graduate at higher rates than men and enter the workforce, the low numbers in female political participation and elective office remain unexplained. Could Hillary Clinton’s experience and low female participation rates have a common cause? The central question of this thesis is how to increase female political participation in young women, examining the role of individual characteristics and higher education institutions.
Political Participation

The term political participation has been widely used by psychological and political researchers with very different meanings. Some researchers have defined it as voter turnout, engagement in campaign activities and electoral success (Lawless & Fox, 2012). Others have more narrowly defined it as simply running for office (Zaslow & Schoenberg, 2012). And yet others have defined it as participating in political discussions, volunteering for campaigns, being active in community politics and using mass media to obtain political information (Alozie, Simon & Merrill, 2003; Booth-Tobin & Han, 2010).

For the purpose of this research, political participation is defined as the willingness to engage in politically related behaviors and is quantified through three different constructs: political activity, aspirations to run for office and political efficacy. Political activity refers to common pursuits of political behavior such as voting, attempting to influence someone’s vote, attending a public meeting, writing to a public official, etc. Aspirations to run for office refers to the desire to one day become political representatives. Finally, political efficacy refers to the belief that a person can influence the political system.

Female Political Participation in the U.S.

Although women in the U.S. were the first ones in the world to obtain the right to vote in 1920 (Paxton, Kunovich & Hughes, 2007) and they represent 50.8% of the total population (U.S. Census Bureau, 2011), in 2013, only 20% of the seats in the Senate and 17.9% of the seats in the House of Representatives are
being held by women. Similarly, women represent just 23.4% of the statewide elective executive offices and 24.1% of the state legislators (CAWP, 2013). The increase in the representation of women has been slow compared to the increase in other countries, as shown in Figure 1 (Hughes & Paxton, 2008).

Figure 1. Increasing Trajectory of Women's Legislative Representation (Hughes & Paxton, 2008)

Women have not only been continuously underrepresented throughout the past five decades but have also been found to participate politically much less than men. Men have consistently shown to be more interested in politics, to be more likely to volunteer for campaigns, to be active in community politics, to discuss political beliefs with others, to influence someone’s vote, to attend a political meeting, to work for a political campaign, to wear a political button and

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1 These numbers represent a relative increase from the 2012 data.
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The only political activity in which women outperform men is voting; women have been voting at higher rates than men since 1980, as shown in Figure 2 (CAWP, 2009).

<table>
<thead>
<tr>
<th>Ages 20-24</th>
<th>Ages 25-29</th>
<th>All ages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Women</td>
<td>% Men</td>
</tr>
<tr>
<td>2008</td>
<td>49.6</td>
<td>42.4</td>
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<tr>
<td>2006</td>
<td>25.2</td>
<td>23.2</td>
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<td>2004</td>
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<tr>
<td>2002</td>
<td>19.7</td>
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<td>2000</td>
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<td>1998</td>
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<td>1994</td>
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<tr>
<td>1976**</td>
<td>46.4</td>
<td>44.7</td>
</tr>
<tr>
<td>1974**</td>
<td>25.6</td>
<td>27.2</td>
</tr>
</tbody>
</table>

Figure 2. Young Women and Politics: Percentages of Women and Men Voting (CAWP, 2009)

Despite the gender differences in political participation, when women run for office, they perform as well as men (Lawless & Fox, 2012). As a result, it has been suggested that women’s underrepresentation is caused by women’s lack of political ambition. However, studies have shown that women are as politically ambitious as men (Fox, Lawless & Feeley, 2001; Lawless & Fox, 2012). Women seem not run for office as much as men because they examine more considerations before running, perceive the electoral environment to be more discriminatory towards them and consider themselves less qualified to run for office than men, as can be seen in Figure 3 (Fox, Lawless & Feeley, 2001; Lawless & Fox, 2012). These findings show that female political representation could be increased by encouraging women to be more politically active and run...
for office.

Figure 3. Self-Assessments of Qualifications to Run for Public Office (Lawless & Fox, 2012)

**Gender Stereotypes, Sexism and Female Political Participation**

Why do women perceive the electoral environment to be more discriminatory towards them? Although worldwide, attitudes towards women are in general very positive—the “women are wonderful” effect—they also continue to be universally discriminated against through *sexism* and *gender stereotypes* (Glick & Fiske, 2001).

As with political participation, stereotypes have been defined in a variety of ways. A widely used definition conceptualizes stereotypes as a set of convictions about the personal characteristics of a group of individuals (Welson, 2002). Stereotypes help determine other individuals’ statuses and influence the framework used to define group membership (Glick & Fiske, 1999). According to social identity theory, in the presence of out-group members, competition and
negative stereotyping of the out-group members increase (Glick & Fiske, 1999; Tajfel, 1981). As a result, gender stereotyping of women is more likely to occur when a woman is among a group of men (Deaux & LaFrance, 1998; Fiske, 1998; Welson, 2002), like in the 2008 presidential campaign.

One of the consequences of gender stereotyping is that women are placed in two different subgroups: either perceived as competent but disliked, or perceived as likeable but incompetent (Glick & Fiske, 1999). Generally, women playing traditional gender roles are perceived as wonderful in the interpersonal relationship dimension while women competing for men’s jobs are often perceived as being hostile and aggressive (Glick & Fiske, 1999). Perceptions of Hillary during the presidential campaign are in line with previous research findings: She was seen as a competent candidate, but not liked enough by general voters (Carroll, 2009; Whitt, 2010). Based on these results, it is reasonable to assume that it would be extremely challenging for a woman to ever become President, as she would not likely be perceived as having the two characteristics necessary to run a country: competence and likability.

Another consequence of gender stereotyping is that female leaders are judged more harshly than male leaders – being perceived as less competent, hardworking and committed – when performing a task that is considered stereotypically male-dominated or that exhibits a behavior that is assumed to be more masculine (Eagly & Karau, 2002). Since leadership positions are perceived to need masculine traits, women are continuously discouraged from them (Eagly & Karau, 2002). In politics, studies show that voters believe that women are less
qualified to run for office even when they have more experience and stronger credentials than men (Caroll, 2009). Additionally, if women are shown to be too assertive, and not feminine enough, they are disqualified as good leaders (Carroll, 2009; Eagly & Karau, 2002). Perceptions of Hillary during the campaign are examples of such widespread attitudes: She had years of political experience and portrayed herself as a very confident candidate but she was harshly judged by the public.

A final consequence of gender stereotyping is that it perpetuates the current power imbalance between men and women (Fiske; 1993; Fiske & Stevens, 1993; Welson, 2002). A power imbalance occurs when one person is more likely to determine a certain outcome than another person. As a consequence, powerful individuals –those who control the possible outcomes– pay less attention to their subordinates and are more likely to resort to their stereotyping. Through stereotypes, the powerful-powerless dynamic perpetuates (Fiske, 1993). The powerful group –men, in this case– gender stereotype the powerless group –women. By stereotyping women, they must choose between perceiving them as competent or likeable and as a result, only some of their positive aspects become salient.

In a similar way to gender stereotyping, sexism creates a prejudicial environment for women. Sexism refers to negative attitudes towards an individual on the basis of gender, although it is commonly used to describe negative attitudes about women (Welson, 2002). There have been different conceptualizations of sexism, one contemporary and popular perspective is Glick and Fiske’s (2001)
model of ambivalent sexism. Accordingly, sexism can take two different forms: benevolent sexism or hostile sexism. Benevolent sexism refers to a paternalistic type of sexism, characterized by the belief that women are pure and moral, but also weak and in need of protection. Although it is not always recognized as sexism, it actually is as it continues to promote gender inequality. Hostile sexism, the one that is more traditionally thought of as sexism (see Allport, 1954), is a more aggressive and confrontational type of sexism, characterized by anger towards women who violate their gender role (Glick & Fiske, 2001).

While hostile sexism rises out of a need for men to dominate women, benevolent sexism rises from men’s dependence on women. As a result, women who violate their gender role, like Hillary – a strong independent and aggressive woman– encounter strong episodes of hostile sexism. On the contrary, women who remain within their gender role, like Sarah Palin – an attractive feminine devoted mother and wife (Carlin & Winfrey, 2009) – are more likely to encounter subtle episodes of benevolent sexism. Consequently, regardless of whether women fit their gender roles or not, women might be subject to sexist experiences, increasing the perceptions that the political environment is biased against them.

The importance of female political participation extends beyond democratic representation. An increase in the number of female politicians also has the potential to reduce gender stereotyping and sexism in politics. Gender stereotyping and sexism is not only detrimental to women’s psychological well-being, but might also discourage other women from attempting to violate their gender role and involve themselves in politics (Allport, 1954; Glick & Fiske,
2001; Welson, 2002). Therefore, targeting the low female political participation can have two different positive effects: it can help reduce sexism and gender stereotypes and it might encourage more women to become more politically active.

Factors influencing Political Participation

Agency. Among the most important characteristics that affect political participation is agency and agentic characteristics. Agentic traits refer to characteristics such as task orientation, assertion, and striving for success. Communal characteristics encompass traits such as fostering relationships, sensitivity and getting along with others. According to social roles theory, gender differences are explained as a result of the differences in social roles typically occupied by men and women (Eagly, 1987; Welson, 2002). Because historically women have taken on the role of caregivers, they have developed communal characteristics that would enable them to be effective in their roles. On the contrary, men are perceived as agentic, as a consequence of their role as income earners. These differences then form the basis of social perceptions and attitudes.

Differences in agentic and communal stereotypes of men and women help perpetuate the glass-ceiling phenomenon. Women are underrepresented at the highest levels of management and particularly in male-dominated fields (Eagly & Karau, 2002). As companies attempt to feminize their management level positions, women with agentic characteristics are at a disadvantage because they are perceived as more masculine and not feminine enough and females with feminine
and communal characteristics are perceived as better for the position even if they are less competent (Eagly & Karau, 2002). In the long-term, the selection of females who are not competent enough for the position reinforces the stereotype that women are not good leaders and supports people’s notions that male candidates are better for such positions (Rudman & Glick, 1999; Welson, 2002). The stereotype creates a self-perpetuating cycle that is difficult to stop.

However, agentic characteristics not only affect others’ perceptions of women’s leadership abilities but are also related to women’s self-reported ability to become more politically active. Research studies have shown that political activists have higher levels of agency than apolitical individuals (Fedi, Greganti & Tartaglia, 2001). Similarly, feelings of agency have been found to predict political efficacy and increase voting behavior (Cohen, Vigoda & Samorly, 2001; Littvay, Weith & Dawes, 2011). Therefore, it is expected that feelings of agency and political participation will be positively related.

**Self-esteem.** A widely researched variable, self-esteem seems to be one of the strongest factors in affecting political participation. Higher levels of self-esteem have been found to lead to higher levels of political efficacy (Cohen, Vigoda & Samorly, 2001). Moreover, gender and race also seem to interact with self-esteem in impacting political participation; higher levels of self-esteem were found to lead to higher levels of women’s leadership aspiration and to be a strong predictor of presidential voting among Black communities (Boatwright & Egidio, 2003; Ellison & London, 1992). Nevertheless, the directionality between self-
esteem and political participation is still unclear. In a study examining women’s mental health recovery in postconflict Peru, researchers found that women were using political activism as a way to recover their mental well-being and increase their self-esteem (Laplante, 2007). In another study, researchers found that political activists had higher levels of self-esteem than apolitical individuals (Fedi, Greganti & Tartaglia, 2001). All of the above-mentioned studies show a strong relationship between self-esteem and political participation. Consequently, it is expected that higher self-esteem will lead to higher levels of political participation.

**Feminist Identification.** Feminist identification is another characteristic that has been shown to be related to female political participation. A study conducted by Cole, Zucker and Ostrove (1998) comparing women who took part in the student movement of the 1960s and women who did not found that politically active female students scored higher in feminist consciousness and identity. Therefore, it is expected that women who self-identify as feminists would have higher levels of political participation.

**Femininity.** A different characteristic that has been studied in relation to female political participation is femininity. However, femininity has been defined differently by different researchers and therefore, the effect is not clear yet. On one hand, a study conducted by Romer (1990) with high school students found that female political activists showed a tendency to self-identify as more masculine and less feminine on the Bem Sex Role Inventory than non-political
activists. On the other hand, a study by Cole and Sabik (2010) examining the
effect of desirable and undesirable feminine characteristics on women’s political
orientation, efficacy and participation found that femininity was positively related
to political participation. Cole and Sabik divided femininity into two different
subscales, the desirable characteristics of femininity scale (Feminine Interpersonal
Relations) and the undesirable characteristics of femininity scale (Feminine Self-
Doubt scale). The study showed that nurturing, caring women with low levels of
anxiety, self-doubt and submissiveness believe that they can have an influence on
the political system and participate more as a result. These two studies likely
found different results because they conceptualize femininity in different ways.
Cole and Sabik divided the general conceptualization of femininity into two
different constructs, a positive and a negative one. High positive femininity with
low negative femininity yields the highest political participation. Because this
new scale is uncommonly used, in the current study, femininity is measured in the
most conventional way (following the BSRI). As a result, it is expected that
participants with higher ratings in the feminine items of the BSRI will have lower
political participation.

Knowledge of Female Political Leaders. According to the Role Model
Theory (Campbell & Wolbrecht, 2006), the presence of women in the political
sphere encourages other women to become more politically active. Two different
studies have supported this theory previously. The first one, conducted by
Banwart and Winfrey (2009), examined whether having a female candidate run
for office—Hillary Clinton—impacted female college students’ perceptual capability of the election. Perceptual capability refers to an individual’s perception of how informed and prepared they feel they are to discuss and participate in the election. To do so, they surveyed female college students during the 2006 midterm election cycle—before Hillary Clinton announced her candidacy—and the 2008 presidential primary election—during her candidacy. Their results showed a significant difference between the two samples in their perceptual capability of the election, such that females in the 2008 election cycle felt more capable than females in the 2006 sample of being informed, interested and qualified in the presidential election. The second study conducted by Booth-Tobin and Han (2010) surveyed 295 members of College Democrats of America group around Boston after the 2008 election and examined the impact of the 2008 presidential campaign on female students’ activism. The researchers found that female supporters of Clinton were more likely than men to cite “making change”, “the candidate gives me hope”, and the “historic nature of the campaign” as main reasons to join a political campaign. These two studies show that the campaign had positive impacts on young females and their political participation. Therefore, it is expected that knowledge of female political leaders will be positively related to political participation.

Women’s Colleges vs. Coeducational Institutions. Women’s colleges have been shown to be beneficial for female students in a vast array of aspects. Graduates from women’s colleges have been found to be more productive and
successful than graduates from coeducational institutions, more likely to report higher levels of satisfaction with their educational experience, more likely to have higher self-esteem, more leadership abilities, higher expectations of themselves and earn higher incomes (Riordan, 1994; Stevens, 2005; Tidball, 1973, 1974, 1980; U.S. Department of Education, 1997). They have also been found to be more academically engaged than women at coeducational institutions, to have a higher desire to contribute to their communities and to pursue non-traditional careers (Kinzie, Thomas, Palmer, Umbach & Kuh, 2007; Stevens, 2005; U.S. Department of Education, 1997).

However, the socialization process that takes place at women’s colleges might not be the cause of the above-mentioned benefits, since students attending women’s colleges have been found to be more likely to have mothers in non-traditional careers and more likely to report becoming cultured as a major reason to attend college (U.S. Department of Education, 1997). Therefore, it is possible that the benefits of attending a women’s college are derived from pre-existing characteristics of the students (such as being high-achieving) who self-select to attend women’s colleges instead of coeducational institutions. Consequently, graduates from women’s colleges would be more successful because they enter college with more pre-disposed characteristics to succeed than graduates from coeducational institutions.

Despite the fact that the relationship between attending a women’s college and becoming more politically active has not been examined before and the difficulty of claiming a causality effect, there is reason to believe students at
women’s colleges obtain “extra” benefits from their education that affect their political participation. For instance, even though students at women’s colleges come from lower socioeconomic backgrounds (U.S. Department of Education, 1997), they end up having higher incomes than their counterparts at coeducational institutions and higher income has been related to higher political participation (Welch, 1977). Moreover, since graduates of women’s colleges are more likely to reject traditional gender roles and go on to male-dominated fields (Kinzie, Thomas, Palmer, Umbach & Kuh, 2007; Riordan, 1994), it is expected that graduates from women’s colleges will be more politically active than their counterparts at coeducational institutions, because traditional gender roles compel women to become stay-at-home mothers and politics is still considered a highly masculine dominated field.

Despite all of these findings, it is important to note that some research studies show that sex-segregated institutions increase gender stereotypes and sexism (Halpern et al., 2011). The differences in the results might be due to differences in important characteristics of the institutions, such as size, selectivity, geographical location, etc. Therefore, to examine the effect of women’s colleges vs. coeducational institutions, higher education colleges with similar demographics were chosen.

**Year in College.** In order to explore possible socialization differences taking place at the two different types of institutions, year in college will be examined. Because college students have a weak sense of self-definition and they
are unsure about their attitudes, values and abilities, they are easily influenced and predisposed to obedience (Sears, 1986). Therefore, if it is the case that the socialization process taking place at women’s colleges is driving the benefits of a single-sex education, then it is expected that seniors would have higher levels of political participation than first years because they have been “socialized” for a longer period of time.

**Life Satisfaction.** Democracy is based on the idea that the elected officials represent the needs and desires of the people. The lack of gender balance in the Senate and House of Representatives may have led to the underrepresentation of women’s needs and desires in the political sphere, such as the current “war on women” in U.S. politics. Studies have shown that women who engage in socially active political participation are more likely to encourage women’s liberation and prioritize women’s issues (Fox, Lawless & Feeley, 2001; Hansen, Franz & Netemeyer-Mays, 1976). Other studies have shown that women, more than men, endorse socially compassionate policies and more integrative policies (Eagly, Diekman, Johannesen-Schmidt & Koenig, 2004). Not only that, but research shows that politically active women are more satisfied with life than apolitical women (Flavin & Keane, 2012; Owen, Videras & Willemsen, 2008). Welzel and Inglehart (2010) constructed a model for human development linking feelings of agency to well-being. Using data from the European and World Values Survey, as well as data from Gerring’s *Democracy Stock* and the World Banks’ *Knowledge Index*, they found that universally, there is a link between the maximization of
agentic strategies (like becoming politically active) and high levels of life satisfaction. A similar study also found that the ability to participate in politics leads to higher life satisfaction in individuals (Owen, Videras & Willemsen, 2008). Therefore, the representation of women in politics is not only beneficial for society as a whole, but for women individually. Based on previous findings, it is expected that women who are more politically active would also be more satisfied with their lives.

**Design**

The current study attempted to examine the factors that affect female political participation in young college-educated women, at women’s colleges and coeducational institutions. The first part of the study consisted of building a model to explain female political participation based on previous research findings. Based on previous research on adult women, it was expected that there would be an effect of feminist identification, knowledge about female political leaders, femininity, self-esteem and feelings of agency on political participation. Moreover, a relationship between political participation and life satisfaction was also predicted. The hypothesized model can be seen in Figure 4.
Figure 4. Hypothesized Model for Female Political Participation

The second part of the study consisted of examining differences between the model for participants at women’s colleges versus those at coeducational institutions. Differences in the levels of participation between students at women’s colleges and students at coeducational institutions were also examined.

Hypotheses: The first hypothesis was that as year in college, feminist identification, knowledge about female leaders, self-esteem and feelings of agency increase political participation would increase as well. On the contrary, as femininity increases, female political participation would decrease.
The second hypothesis was that as political participation increases so would life satisfaction.

The final hypothesis was that female political participation would be higher for students at women’s colleges than at coeducational institutions.

Method

Participants

The sample of this study consisted of college-educated women 18 years old and above living in the U.S. Three hundred seventeen responses to the survey were collected. Participants who did not complete more than half of the survey questions were eliminated from the dataset. After elimination, 241 responses remained.

The sample comprised of 241 females recruited from coeducational (48.5%) and women’s private liberal arts colleges (51.5%). Out of the 241 participants, 32% were first year students, 15.8% were sophomores, 21.1% juniors, 26.6% seniors and 4.6% fifth years. The institutions with the highest representation were Wellesley College (27.4%), Scripps College (22.8%), Occidental College (16.2%) and Pomona College (7.9%). Two hundred and three participants were registered to vote (84.2%), while 20 participants were not (8.3%). The remainder of the participants marked that they were not eligible to vote (7.5%). All participants were entered into a lottery to win one of two Barnes & Noble Nooks as compensation for their participation.
Materials

**Political Participation.** This variable was examined through a combination of three different measures. The first measure was used to determine the frequency with which participants engaged in political activity. Seven individual questions previously employed by Ondercin and Jhones-White (2011) were used asking participants to rate the frequency with which they engaged in voting, attempted to influence someone’s vote, attended a public meeting, wrote to a public official, worked on a political campaign, wore a campaign button, and made a campaign contribution. Responses were measured on a 6-point Likert type scale (1= never to 6= every time). The authors of this measure failed to conduct a reliability analysis. The second measure was used to determine participants’ aspirations to run for office. This was done through a previously used question: “Do you think one day you would run for office?” Responses were measured on a 5-point Likert type scale (1= extremely unlikely to 5= extremely likely) (Lawless & Fox, 2012). The final measure was Craig and Maggiotto’s (1982) five-item scale of political efficacy, the sense that one can influence the political system. Participants reported how strongly they agreed with statements such as “I feel like I could do as good a job in public office as most of the politicians we elect” on a 7-point Likert type scale (1= strongly disagree to 7= strongly agree). The scale has been shown to be reliable (α=.72, Craig & Maggiotto, 1982).

**Feminist Identification.** FI was measured through the Active Commitment and Revelation subscales of the Feminist Identity Development Scale (Bargad & Hyde, 1991). This scale measures the development of women’s
self-identification as feminists. In particular, the Active Commitment subscale examines the consolidation of feminist identity while the Revelation subscale examines the questioning of self and gender roles. In total, the scale consisted of 15 items (e.g., “I have a lifelong commitment to working for social, economic, and political equality for women”; “I am angry that I’ve let men take advantage of me”). Respondents chose how strongly they identified with the statements using a 5-point Likert type scale (1 = strongly disagree to 5 = strongly agree). Previous studies have shown that both subscales are reliable (active commitment α = .80 and revelation α = .75, Bargad & Hyde, 1991).

**Femininity.** Femininity was measured through the female gender characteristics of the Bem Sex Role Inventory (Bem, 1974). This scale measures participants’ masculine, feminine and gender-neutral characteristics. Only the 20 items that related to feminine characteristics of the scale were used (e.g., “affectionate”). Responses were measured using a 7-point Likert type scale (1 = never true of me to 7 = always true of me). The femininity score has been found to be reliable (α > .80, Bem, 1974).

**Knowledge of female political leaders.** It was measured with one question: “How many female political leaders do you know of?”. Responses ranged from 0 to more than 5.

**Self-esteem.** It was measured with a revised version of Rosenberg’s Self-Esteem Scale that turns all the negative items into positively phrased items so that they do not have to be reverse coded (Greenberger, Chen, Dmitrieva & Farruggia, 2003). The 10-item scale includes statements such as “On the whole, I am
satisfied with myself” and “I feel that I’m a person of worth, at least on an equal plane with others”, which are responded to using a 6-point Likert type scale (1= *strongly disagree* to 6= *strongly agree*). The scale has shown high reliability (α= 0.92, Greenberger, et al., 2003).

**Agency.** It was measured with one statement from the European and World Values Surveys (Welzel & Inglehart, 2010): “Some people feel they have complete free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them”. Using a 10-point Likert type scale, participants indicated how much freedom of choice and control they felt they have over the way their life turns out (1= *no choice at all* to 10= *a great deal of choice*). The authors failed to conduct a reliability analysis.

**Life Satisfaction.** It was measured with the Satisfaction with Life Scale (Rederstoff, Buchanan & Settles, 2007). The scale consisted of five items, (e.g., “If I could live my life over, I would change almost nothing, I am satisfied with my life”) rated on a 7-point Likert type scale (1=*strongly disagree* to 7=*strongly agree*). The scale has shown to be reliable (α= .87, Rederstoff, Buchanan & Settles, 2007).

**Demographics.** The survey also included a few demographic questions. Age was asked with the close-ended question “How old are you?”. Responses range from 18 to 25+. Registration to vote was asked with the question “Are you registered to vote?”. Response options included *yes, no, NA*. Year in college was asked with the question “What year are you in college”. Response choices range from *first year* to *fifth year*. Type of institution attending was requested through
two different questions. The first one was a close-ended question: “What type of educational institution are you currently attending”. Response options were women’s college or coeducational institution. Based on participants’ responses, a second question appeared that asked them to choose their institution from a list or to type in the name of their institution if it was not in the list. Any random missing data values were replaced with series mean.

Procedure

The study was conducted online through the online survey tool company Survey Monkey. Participants were encouraged to participate through their colleges’ mailing lists, LinkedIn groups and Facebook. The message posted directed participants to an online survey in Survey Monkey. Upon providing consent, participants completed the survey. Participants were first asked their year in college and type of institution attending. Then, they were presented with the measures assessing life satisfaction and political participation. Subsequently, participants were asked to complete the remaining scales in the following order: femininity scale, self-esteem scale, agency, feminist identification scale, age, voter registration and knowledge of female leaders. Completing the survey took approximately 12 minutes. At the end of the survey, participants were debriefed, thanked, and compensated.

LinkedIn is a professional networking site that has interest groups.
Results

Descriptives

First, descriptive statistics for the whole sample were examined. Since there were no significant differences between the two, the overall means are presented: life satisfaction scale ($M = 5.10, SD = 1.20$), self esteem scale ($M = 5.69, SD = .97$), agency feelings ($M = 5.80, SD = 1.23$), knowledge of female political leaders ($M = 6.05, SD = 1.41$), feminist identification scale ($M = 3.60, SD = .62$), femininity scale ($M = 4.89, SD = .65$) and likelihood to run for office ($M = 1.88, SD = 1.01$).

Model Development

A principal component analysis with oblique rotation was carried out with responses to the likelihood to run for office and the scales of political activity and political efficacy. One, two and three factor solutions were explored based on the scree plot; the two factor solution was deemed more interpretable. The factor loadings from the factor structure matrix are shown in Table 1. The first factor, which was labeled Political activity, accounted for 33.93% of the variance. The second factor was Political efficacy and accounted for 11.95% of the variance. The factors were moderately correlated, with a correlation of .55. The likelihood to run for office variable did not load strongly in either factor. In the factor model, a second order factor was hypothesized with loadings on political activity, political efficacy and likelihood to run for office (see Figure 5).
### Table 1

**Factor Structure Matrix for Political Participation**

<table>
<thead>
<tr>
<th></th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working on a political campaign</td>
<td>.757</td>
<td>.347</td>
</tr>
<tr>
<td>Wearing a campaign button</td>
<td>.752</td>
<td>.276</td>
</tr>
<tr>
<td>Making a campaign contribution</td>
<td>.700</td>
<td>.285</td>
</tr>
<tr>
<td>Attending a public meeting</td>
<td>.666</td>
<td>.367</td>
</tr>
<tr>
<td>Writing to a public official</td>
<td>.626</td>
<td>.268</td>
</tr>
<tr>
<td>Attempting to influence someone’s vote</td>
<td>.606</td>
<td>.440</td>
</tr>
<tr>
<td>Do you think one day you would run for office?</td>
<td>.527</td>
<td>.488</td>
</tr>
<tr>
<td>Voting</td>
<td>.508</td>
<td>.384</td>
</tr>
<tr>
<td>People like me are generally well qualified to participate in the political activity and decision-making in our country.</td>
<td>.368</td>
<td>.771</td>
</tr>
<tr>
<td>I feel like I have a pretty good understanding of the important political issues which confront our society.</td>
<td>.484</td>
<td>.740</td>
</tr>
<tr>
<td>Today’s problems are so difficult I feel I could not know enough to come up with any ideas that might solve them.</td>
<td>.325</td>
<td>.675</td>
</tr>
<tr>
<td>Sometimes politics and government seem so complicated that a person like me can’t really understand what’s going on.</td>
<td>.140</td>
<td>.641</td>
</tr>
<tr>
<td>I feel like I could do as good a job in public office as most of the politicians we elect.</td>
<td>.451</td>
<td>.581</td>
</tr>
</tbody>
</table>

A confirmatory factor analysis was carried out on the second-order factor structure using maximum likelihood with AMOS (Arbuckle, 2006). The a priori model provided a moderately acceptable fit to the data, $\chi^2 (63) = 156.623, p < .001$, $\chi^2 / df = 2.486$, $CFI = .883$, $RMSEA = .079$. The model with standardized path coefficients is shown in Figure 5. All factors loadings were significant and the factor loadings on each latent variable were moderate and relatively uniform. Modification indices provided by AMOS were examined to determine whether the fit could be improved. There were no indications of measured variables that
should load on different latent variables. Fit was improved by allowing
correlations of error variances for measured variables loading on the same factor,
\[ \chi^2(59) = 95.029, p < .001, \chi^2/df = 1.611, CFI = .955, RMSEA = .050. \] The final
model is shown in Figure 6 with standardized path coefficients.

\[ \text{Figure 5. Initial Factor Model} \]
Figure 6. Final Factor Model

Group Comparison

Then, a multigroup analysis was used to examine the hypothesized model and possible differences in the model between respondents at women’s colleges (n = 124) and respondents at coeducational institutions (n = 117). The initial model for each group is shown in Figures 7 and 9, \( \chi^2(361) = 568.832, p < .001, \chi^2 \)
$/df = 1.576, CFI = .808, RMSEA = .049$. A family of models was fit ranging from complete equivalence in the paths fit for the two groups to complete independence of the path coefficients across groups. The akaike information criterion (AIC) showed that the best fit was given by the model with structural weights fixed equal. The parsimony of the hypothesized model was improved by removing nonsignificant structural paths from the model. These included paths from year in college to political participation, from agency to political participation and from political participation to life satisfaction. Modifications indices were used to add correlations between self-esteem and year in college, agency and self-esteem, as well as between self-esteem and life satisfaction. These modifications were made in both groups. The final model for each group, shown in Figures 8 and 10, provided an acceptable fit to the data, $\chi^2 (357) = 478.977, p < .001, \chi^2 / df = 1.342, CFI = .887, RMSEA = .038$. There are no major differences among the groups in the structure of the models.
Figure 7. Initial Model for Women's Colleges

Figure 8. Final Model for Women's Colleges
Figure 9. Initial Model for Coeducational Colleges

Figure 10. Final Model for Coeducational Colleges
Following the multigroup analysis, a latent means analysis was conducted to examine differences in political participation levels. Measurement weights and intercepts were constrained to be equal across the two groups. In order to estimate the latent mean for political participation in the coeducational colleges model and compare it to the women’s colleges model, all predictors were removed. Contrary to hypothesis, the means between the two groups were not significantly different from each other. The mean for the latent variable political participation in the coeducational college model had an estimate of -.154 and a critical ratio of -1.705 and was not significantly different from zero, $p = .088$.

**Follow-up Analysis**

Because the latent mean analysis approached significance, a MANOVA was conducted to test the effect of type on institution on the composite scores of political activity and political efficacy. There was a significant multivariate main effect of type of institution on these variables, $\lambda = .964$, $F(2,238) = 4.40$, $p = .013$, $\eta^2 = .036$. Univariate ANOVAs were conducted on each of the dependent variables. There was a significant main effect of type of institution on political activity $F(1,239) = 7.233$, $Mse = .878$, $p = .008$, such that respondents at women’s colleges were significantly higher in political activity ($M = 2.97$, $SD = .98$) than respondents at coeducational institutions ($M = 2.66$, $SD = .90$). There was no significant effect of type of institution on political efficacy, $F(1,239) = .012$, $Mse = 1.011$, $p = .912$. 
Discussion

This study examined factors that affect female political participation in young college-educated women at women’s colleges and coeducational institutions. The first part of the study consisted of building a model to explain female political participation based on previous research findings. It was hypothesized that there would be a positive effect of feminist identification, knowledge about female political leaders, self-esteem and feelings of agency on political participation and a negative effect of femininity on political participation. It was also hypothesized that political participation would have a positive effect on life satisfaction. Contrary to the hypothesized model, feelings of agency and year in college were not significant predictors of political participation. However, consistent with the hypothesized model, identifying as a feminist, knowing about female leaders and having a high self-esteem led to greater political participation while being feminine led to lower political participation. The results of this study are in line with previous studies (Cole, Zucker and Ostrove, 1998; Rios, Stewart & Winter, 2010; Fedi, Greganti & Tartaglia, 2001; Laplante, 2007). The results also illustrated that having higher self-esteem was related to being more satisfied with life and having higher feelings of agency. Similarly, year in college was related to having higher self-esteem.

The second part of the study consisted of examining differences between the models for participants at women’s colleges and those at coeducational institutions, and whether the level of participation significantly differed. Consistent with the model, the female political participation model did not differ
between respondents at women’s colleges and respondents at coeducational institutions. However, contrary to hypothesis 3, respondents’ means for the latent variable political participation did not differ between the two groups. Although significant latent mean differences were not found for the latent construct of political participation, a follow-up analysis showed that respondents at women’s colleges were significantly higher in political activity. No significant differences were found between the two groups in political efficacy.

Although this study had significant and relevant findings, it is important to mention some of its limitations. These include the generalizability of the results, the sample size and the effect of the 2012 presidential election. The women’s college sample was highly dominated by students at Scripps College (44% of the sample) and Wellesley College (52.8%). Although both of these schools are well-known single-sex institutions, in order to generalize the results to all women’s colleges, a more diverse sample, with women from multiple women’s colleges is needed. Similarly, the educational environment of Scripps College is quite different from that at Wellesley. While women at Wellesley spend most of their time interacting with other women on campus, the consortium of the Claremont Colleges allows for women at Scripps to interact with men as well women. Therefore, Scripps is not a good example of a women’s college for the purposes of comparison with coeducational schools and their participation could have attenuated possible differences between the two types of institutions.

Another limitation of this study was its sample size. Unfortunately, a large number of participants did not complete the survey, despite the fact that it took on
average less than 15 minutes. Two hundred responses is the ideal sample size for each group for a multigroup analysis, while two hundred responses is the minimum number required to use Structural Equation Modeling (SEM) for data analysis. The overall sample consisted of 241 responses, just above the minimum for SEM data analysis. A larger sample size would have been more sensitive to possible institutional differences.

The small sample size was particularly detrimental when examining the effect of year in college in political participation. This variable was used to examine whether the socialization process that takes place at women’s colleges was crucial in creating differences between the two groups. The evidence did not support the notion that the socialization differences between the two types of institutions are the driving forces in political activity differences. However, this finding might be a result of the small sample size, instead of the absence of such effect.

Finally, it is important to mention the 2012 presidential election and its possible impact on the survey respondents. This presidential election was highly contentious and the political cycle strongly focused on women and gender equality issues (Abdullah, 2012). It is reasonable to assume that students have been highly influenced by these events and have become either more apolitical or more political. Women in particular, whose lives might have been personally affected by the two possible presidential candidates given their political agendas – with the discussions on abortion, the “binders full of women” and rape– might have become more politically involved than is usually the case. Therefore, this
year’s respondents might not be representative of all college women through a certain period of time, but instead, representative of college women right out of a presidential election cycle that significantly involved them. As a result, the lack of differences between the two types of institutions might be driven by the small variability in participation among women.

The relevance of these findings becomes important as more people continue to question the value of women’s colleges. The results show that students at women’s colleges do not politically participate more than their counterparts at coeducational institutions. However, one potential benefit of obtaining a single-sex education is that students at women’s college have higher levels of political activity (e.g. voting, influencing someone’s vote, writing to a public official, etc.). This finding, along with previous findings on increased success, productivity and self-esteem (U.S. Department of Education, 1999) demonstrate that there is a value in obtaining an education at a women’s college.

Future research should continue to examine the institutional effect of single-sex education for women related to political participation. To do so, future studies must obtain a large and representative sample of female students at women’s colleges and coeducational institutions, while controlling for other possible variables that could affect institutional differences, such as quality of education or size of the school. Likewise, future research should be mindful of the political events taking place at the time of the research. Presidential election years are important years to examine political participation but they might not be representative of non-election years, given the national debates that take place and
how much media coverage some of them receive. A longitudinal study, for instance, would be an appropriate way of examining how external events affect female political participation. Finally, it is important to note that this was an extremely young sample for whom the past presidential elections might have been the first ones they were able to vote on. As people get older, it is expected that they will become more politically active.

Clearly defining political participation and building a model to show the individual variables influencing political participation are the first steps towards increasing female political participation. With the findings of this study, intervention programs at colleges and universities around the nation can be designed to increase female political participation. Women will continue to perceive the political environment to be discriminatory towards them as long as sexism and gender stereotyping remains. However, encouraging women to become more politically active is key in eliminating gender discrimination and making female political participation the norm and not the exception.
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