Academic dishonesty on the college campus is a problem that has been called “a plague on our profession” (Petress, 2003, p. 625). In the early 1990s, McCabe (1992) surveyed students at 31 selective college and universities and reported that 67% of his respondents participated in one or more forms of academic dishonesty. Jendrek (1992) reported even higher rates of classroom cheating. In his study, 74% of students said they had observed cheating.

Some researchers report that students are willing to report incidents of their classmates’ cheating (Ercegovac & Richardson, 2004) but other authors report the opposite. Aaron and Georgia (1994), for example, found that students were most likely to ignore cheating and avoid any confrontation. They also reported that students might be influenced to cheat if they see their classmates getting away with it. Jendrek (1992) confirmed this view and reported that only 1% of students who observed such academic infractions followed through by reporting the cheating to their professors.

Evidence is mounting that students come to college prepared to cheat (Anderman, Griesinger, & Westerfield, 1998; McCabe, 1999). Researchers at the Josephson Institute of Ethics (2004) reported that 83% of high school students copy someone else’s homework. McCabe (1999) reported that cheating is a commonplace activity for high school students. Further, students in his study commented that “if . . . cheating is going to get you the grade, then that’s the way to do it” (McCabe, 1999, p. 682). Students in high school participate in cheating because of the desire to succeed, the climate created by the school, and pressure from parents (Ercegovac & Richardson, 2004).

High school graduates are likely to bring these attitudes and behaviors with them as they enter college. College students also have incentives to cheat. Most students perceive that getting a college degree is an important element of most careers and that most career fields are becoming increasingly competitive (Anderman et al. 1998). Students also understand the need to have marketable skills and experiences outside of the classroom (McCabe & Trevino, 1997). Many students participate in cocurricular activities to gain these experiences and to form relationships with fellow students.

Greek-letter social organizations provide one avenue to such opportunities for many college students (McCabe & Bowers, 1996). Fraternities and sororities provide students with leadership opportunities, a social unit,
and postcollegiate networks. Participation in these organizations can create strong bonds of friendship and association that can have both positive and negative results (McCabe & Bowers). Students in these organizations place an emphasis on academic achievement and honor but studies have shown these same students participate in academic dishonesty in large numbers (Stannard & Bowers, 1970; Storch & Storch, 2002).

Pressure to succeed in college can come from many sources such as, parents, mentors, and peers (Ercegovac & Richardson, 2004). For example McCabe & Bowers (1996) found that sorority women receive pressure from their sorority sisters to perform well academically and to keep their chapter GPA at an acceptable average. Haines, Diekhoff, LaBeff, and Clark (1986) found a high number of those involved in academic dishonesty were also heavily involved in cocurricular activities. This participation in out-of-class activities may prevent students from giving their academics the time and dedication needed to ensure success (Haines et al., 1986). For many women involved in cocurricular activities, academics can become a low priority (Haines et al.).


One approach that has not been studied thoroughly is to specifically examine sorority women. If academic dishonesty is increasing among women who are actively involved in their undergraduate experience (Hendershott et al., 1999), then this study is important to the understanding of female peer groups and academic dishonesty. Sororities, for example, bond a group of students together and create a close-knit peer culture that can influence students to participate in risky behaviors (Eberhardt, Rice, & Smith, 2003; Whipple & Sullivan, 1998).

**Purpose of the Study**

The purpose of this study was to examine the attitudes and behaviors connected with academic dishonesty among four groups of undergraduate women. These groups were: (a) incoming freshman women expressing an interest in sorority affiliation, (b) incoming freshman women expressing no interest in affiliation, (c) upper-class women who have affiliated for a year or more, and (d) upper-class women who have not affiliated. We compared the levels of academic dishonesty among these four groups at a single research-intensive institution on the East Coast.

**Research Questions**

Specifically, we addressed the following research questions:

1. Do the behaviors related to academic dishonesty differ among incoming women expressing an interest in sorority affiliation, incoming women expressing no interest in affiliation, upper-class women who have affiliated for a year or more, and upper-class women who have not affiliated?

2. Do the attitudes related to academic dishonesty differ among incoming women expressing an interest in sorority affiliation, incoming women expressing no interest in affiliation, upper-class women who have affiliated for a year or more, and upper-class women who have not affiliated?
TABLE 1.
Demographic Characteristics of Respondents (N = 473)

<table>
<thead>
<tr>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incoming women</td>
<td>222</td>
<td>46.9</td>
</tr>
<tr>
<td>No interest in sorority</td>
<td>169</td>
<td>35.7</td>
</tr>
<tr>
<td>involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest in sorority</td>
<td>53</td>
<td>11.2</td>
</tr>
<tr>
<td>involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper-class women</td>
<td>251</td>
<td>53.1</td>
</tr>
<tr>
<td>No sorority involvement</td>
<td>83</td>
<td>17.5</td>
</tr>
<tr>
<td>Sorority involvement</td>
<td>161</td>
<td>34.0</td>
</tr>
<tr>
<td>Total</td>
<td>473</td>
<td>100.0</td>
</tr>
</tbody>
</table>

affiliation, upper-class women who have affiliated for a year or more, and upper-class women who have not affiliated?

METHOD
Sample
The sample for upper-class sorority women was drawn by contacting women who belonged to student clubs and organizations that targeted women or had a majority of women members. Nonsorority women were also contacted through the institution’s Women’s Center. Four hundred thirty women were identified and contacted.

Because almost all incoming freshmen women were required to live on campus, the director of residence life was asked to draw a random sample of 860 (roughly 20% of the population) women who had accepted the institution’s admission offer and had paid their security deposit for housing. Once the sample was drawn, email addresses of those students were forwarded to us. These students were sent an invitation and a link to the survey.

The goal was to place about 430 women in each group. Given our previous experience with electronic surveys, we expected that the response rate would be about 35%.

Participants
The survey was sent to 860 incoming women and 860 upper-class women. The total number of potential participants was 1,720. Two hundred twenty-two (26%) incoming women responded and 251 (29%) of the upper-class women responded. A total of 473 surveys were completed by the participants—a 28% response rate. The demographic breakdown of the groups is found in Table 1. Incoming women were all first-year students and were scheduled to live on campus. They had yet to make choices about any part-time employment and had not earned any credits toward a grade point average. We did not collect information about their potential majors or any other demographic data.

By comparison, 11% of upper-class respondents indicated they were still classified as freshmen, 40% indicated they were sophomores, 26% indicated they were juniors, and 23% indicated they were seniors. With regard
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to employment, 53% of these respondents indicated they were not employed, and 47% indicated they were employed part-time. The majors of the upper-class participants were: 20% math or sciences, 18% business, 14% social sciences, 13% undecided or other, 11% communications or journalism, and 8% engineering. No other curriculum area received more than a 6% response. Information on the student body was not available using these metrics so we could not cross-validate the respondents with the population to check for representativeness.

Instrument

We chose Don McCabe’s (1997) Academic Integrity Assessment Guide for this study. The Academic Integrity Assessment Guide is used to elicit data about the environment on a specific campus and specific student behaviors with respect to academic cheating. The instrument contained three sections.

The first section of the questionnaire was titled, Academic Environment. Major questions in this section examined the participants’ knowledge of academic policies and procedures at their institution. This section was not used in the data analysis because it did not address the research questions. The second section was titled, Specific Behaviors. Major questions in this section asked students to respond to statements about academic behaviors. Students responded to these statements in two ways. First, participants were asked to respond to statements regarding their personal behavior. For example, respondents were asked, “In the past year, how often have you engaged in any of the following behaviors?” Survey participants answered using the following scale: 1 = never, 2 = once, 3 = more than once, 9 = not applicable.

To determine their attitudes about specific behaviors, they were asked a second question: “How serious do you consider this form of cheating?” Respondents answered this statement by using the following scale: 1 = not cheating, 2 = trivial cheating, 3 = moderate cheating, and 4 = serious cheating.

The third and final section was titled, Demographics. This section collected data regarding the respondents’ academic standing, academic major, and place of residence. An example of a question in this section was, “What is your primary major?”

Reliability and Validity. Reliability establishes confidence in the instrument’s ability to measure the same phenomenon over time and population (Schutt, 1999). The reliability of the Academic Integrity Assessment Guide was determined by calculating the internal consistency of each section of the instrument. The Specific Behaviors scale displayed a Cronbach’s alpha in excess of .80. The author of the instrument did not provide any information on the validity of the instrument when requested. (Don McCabe, personal communication, February 25, 2005).

Data Collection Procedures

We sought and received approval to conduct our study from the Institution Review Board at the institution where the study was conducted. Once we received approval, we contacted Don McCabe and requested permission to use the Academic Integrity Assessment Guide. Don McCabe created two surveys for the current study. Each version had the same Specific Behaviors section, but differed in the demographic information that was collected. Upper-class women who were already enrolled were asked to indicate whether they actively participated in the following activities: paid employment, intercollegiate sports, or social sorority. Incoming women, who received the second version of the questionnaire, were asked to indicate which groups they would most likely join once on campus. Answers to these questions allowed us to place each respondent in a single group. Don McCabe sent us a link.
to the surveys he designed for our review. After reviewing the surveys, he sent the final survey instruments to us via email. The questionnaires were posted as electronic surveys. Upper-class women received their invitations to participate in the project during the Spring semester. We forwarded the link to the current student questionnaire and an introduction email to members in individual National Panhellenic sorority chapters. The same material was sent to various electronic mailing lists through Residence Life, to upper-class women involved in the Women’s Center, judicial affairs, and student activities. After a week, reminder emails were sent out through all of the electronic mailing lists. The survey was made available for 2 weeks.

Incoming women, who were selected at random, were invited to participate during the summer after they were admitted but before they arrived on campus. The survey was available for 2 weeks. After a week, reminder emails were sent to all these women.

Potential participants received no further contacts beyond this single reminder. No incentives were offered for participation.

Data Analysis Procedures
Don McCabe managed the online survey. Responses to the questionnaires were placed in a statistical software package commonly known as SPSS. After receiving the SPSS file, we ran an analysis of variance on the behavior and attitudes scales to determine significance differences between groups. The Tukey post hoc test was completed to determine which groups differed when statistical significance was found. The level used to test for significance was .05.

RESULTS
Behaviors
To address the first research question, whether behaviors related to academic dishonesty differed among the four groups, we calculated the mean score for the behaviors scale by group. Students responded to 20 statements indicating their level of involvement in academic dishonesty. When calculating the

<table>
<thead>
<tr>
<th>Category</th>
<th>n</th>
<th>SD</th>
<th>SS</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>+* Incoming women with no interest in sorority involvement</td>
<td>117</td>
<td>6.19</td>
<td>186.64</td>
<td>3</td>
<td>5.27</td>
<td>.002</td>
</tr>
<tr>
<td>* Incoming women with an interest in sorority involvement</td>
<td>34</td>
<td>7.83</td>
<td>32.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+* Upper-class women with no sorority involvement</td>
<td>47</td>
<td>5.37</td>
<td>28.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+ Upper-class women with involvement in sorority</td>
<td>80</td>
<td>4.90</td>
<td>32.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The mean score for incoming women with an interest was significantly higher than incoming women with no interest and undergraduate women with no involvement at p < .05.
+ The mean score for undergraduate women with sorority involvement was higher than incoming women with no interest and undergraduate women with no involvement at p < .05.
results, the response *not applicable* was treated as missing data. Records containing missing data were removed from the analysis so they did not skew the calculation of mean scale scores.

Incoming women with an interest in sorority involvement \((n = 47, \ SD = 13.3, \ M = 39.8)\) and upper-class women with involvement in sororities \((n = 136, \ SD = 15.1, \ M = 42.2)\) had the highest mean scores for the behaviors scale. These scores indicated that these groups participated in academically dishonest behavior more frequently than the other two groups. Incoming women with no interest in sorority involvement \((n = 149, \ SD = 11.0, \ M = 36.0)\) and upper-class women with no sorority involvement \((n = 76, \ SD = 13.3, \ M = 38.5)\) had lower mean scores. None of the differences in mean scores were significant \((F = 2.37, \ SS = 256.8, \ df = 3, \ p = 0.08)\).

We noticed, however, that 41% of respondents answered “not applicable” to one behavior: “In a course requiring computer work, I have copied another student’s program rather than writing my own.” When respondents answered “not applicable,” none of their answers were included in the analysis. We conducted a one-way ANOVA on behaviors with a post hoc test after removing this single question. The results proved to be significant \((F = 5.25, \ SS = 186.64, \ df = 3, \ p = 0.002)\). The findings are shown in Table 2.

In this second analysis, incoming women with interest in sorority involvement and upper-class sorority women reported significantly higher levels of participation in cheating behaviors than the groups with no interests. Incoming women with an interest in sororities reported the highest level of cheating among the four groups.

**Attitudes**

To answer the second research question, whether the attitudes related to academic dishonesty differed among the four groups, we calculated the mean score for attitude by group. Students responded to 20 statements indicating their attitude toward a variety of academically dishonest behaviors. They responded on a 4-point scale: 1 = *not cheating*, 2 = *trivial cheating*, 3 = *moderate cheating*, and 4 = *serious cheating*. Higher mean scores indicated the group believed that behaviors identified on the questionnaire constituted moderate to serious cheating. Lower mean scores indicated the group believed that behaviors identified on the questionnaire did not constitute cheating or were perceived as trivial cheating.

The mean scores for attitude by group

<table>
<thead>
<tr>
<th>Category</th>
<th>(n)</th>
<th>(SD)</th>
<th>(\chi)</th>
<th>(SS)</th>
<th>(df)</th>
<th>(F)</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incoming women with no interest in sorority involvement</td>
<td>111</td>
<td>8.2</td>
<td>65.4</td>
<td>216</td>
<td>3</td>
<td>.858</td>
<td>.463</td>
</tr>
<tr>
<td>Incoming women with an interest in sorority involvement</td>
<td>31</td>
<td>6.9</td>
<td>64.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper-class women with no sorority involvement</td>
<td>58</td>
<td>12.1</td>
<td>66.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper-class women with involvement in sorority</td>
<td>106</td>
<td>8.7</td>
<td>64.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
were fairly close. None of the differences in scores were significant. Incoming women with an interest in sorority involvement \((n = 31, SD = 6.9, M = 64.6)\) and upper-class women with involvement in sorority \((n = 106, SD = 8.7, M = 64.4)\) had the lowest mean scores. Women in these two groups were more likely to believe that the behaviors listed on the inventory did not constitute cheating or were more trivial forms of cheating. Incoming women with no interest in sorority involvement \((n = 111, SD = 8.2, M = 65.4)\) and upper-class women with no sorority involvement \((n = 58, SD = 12.1, M = 66.7)\) had higher scores, indicating that they believed the behaviors to be moderate to serious cheating. The results are shown in Table 3.

DISCUSSION

The results related to behaviors proved to be significant when the item having to do with computer programming was removed from the analysis. In this analysis, the group of incoming women with an interest in sorority involvement had a significantly higher score than the other three groups with regard to their academic dishonesty.

This finding supported current literature that suggests one of the problems with academic dishonesty in the college settings is that students come to college with previous cheating experience (Anderman et al., 1998; McCabe, 1999). Current literature indicated one reason for cheating in high school is the pressure from family to get good grades and to get into a good college (McCabe, 1999). Competition among peers is also another cause for pressure to cheat in high school (McCabe, 1999). Students’ involvement in other activities may take away from their time to devote to academic study. Academics may become a lower priority when participation in other activities is necessary to gain acceptance to the colleges of their choice (Haines et al., 1986).

Upper-class women in sororities engaged in academically dishonest behaviors at significantly higher rates than upper-class women with no sorority involvement and incoming women with no interest in sorority involvement. The college setting is still one of pressures and stress (McCabe & Trevino, 1997). High school students who give into pressures from others and devote more time to cocurricular activities may continue their dishonest behaviors in college (McCabe, 1999). If high school cheating is increasing, college cheating is likely to increase among those who have similar desires as well.

With regard to specific attitudes towards academic dishonesty there were no significant findings among the four groups. It was interesting to note that the two groups that reported higher rates of cheating behaviors were the same two groups that were more likely to believe that behaviors listed on the inventory did not constitute cheating or were trivial forms of cheating. These results reinforce one another.

Responses to individual items also supported the current literature that suggests students view ethical behavior contextually on a scale of good to bad behavior (Hall & Kuh, 1998). Some cheating behaviors are viewed as acceptable academic behavior (Hall & Kuh; Thorpe, Pittenger, & Reed, 1999).

The results related to attitudes suggest that the groups’ overall view of cheating behaviors in this study is moderate. Respondents’ viewed some cheating behaviors such as “turning in a paper obtained in large part from a term paper ‘mill’ or website” as serious cheating. Other behavior such as “fabricating or falsifying lab data” was scored as trivial cheating. “Getting questions or answers from someone who had already taken a test” was viewed as moderate cheating. College administrators may find some value in discovering the prevailing
attitude about specific cheating behaviors on their own campuses. Once identified, classroom faculty members and administrators who advise student groups might address these issues directly in an effort to change how students view these behaviors.

Implications for Student Affairs

Authors and researchers have recommended a variety of proactive measures that may reduce academic dishonesty. Developing and enforcing an honor code can be a successful tool in establishing a culture of honor on a campus (McCabe & Trevino, 1996). Encouraging students to assume responsibility and ownership for the integrity of their academic work and that of their peers can reduce academic dishonesty (McCabe, Trevino, & Butterfield, 2001). Cheating may be reduced by faculty members who reinforce a commitment to ethical behavior and academic honesty in their classrooms, create meaningful assignments, and communicate reasonable standards for student success (Aaron & Georgia, 1994).

Most of these recommendations, however, are based on studies of college student behaviors and attitudes that may paint too broad a picture of the student culture. These recommendations may not be specific enough to alter the attitudes and behaviors of sorority women or those who are interested in joining. College officials who study academic dishonesty in a more systematic way may be able to develop specific strategies designed to address specific problems. Student groups with higher self-reported cheating rates could be targeted with specific programs.

In this study, we found differential rates of academic dishonesty among women at a single institution who had an interest in or who joined a sorority and those who did not. Developing organizational award programs for sororities that emphasize personal honor and moderate cocurricular involvement may reduce the temptation to behave in academically dishonest ways. Using the percentage of members with grade point averages of 3.0 or higher as a competitive measure instead of a chapter grade point average may be one way to deemphasize the need to earn the highest grade at all costs. Similarly, calculating the percentage of members who are involved in two activities beyond their involvement in the sorority as a competitive measure may decrease the need to be excessively involved in cocurricular activities. Such strategies might decrease the pressure to cheat when not enough time is devoted to academics.

Communicating policy in clear concise language is also important (Roth & McCabe, 1995). Stipulating that the sharing of tests and the use of test files are considered cheating may be another way to more clearly communicate institutional expectations and reduce academic dishonesty. Defining and illustrating plagiarism through the use of examples or case studies may increase awareness. Finally, developing educational programs that could be part of a mandatory orientation program on areas of confusion or on behaviors that students tend to view as trivial cheating might increase student understanding of these expectations.

Implications for Future Research

In this study, only the incoming student respondents were selected at random. The upper-class women’s group with no sorority affiliation was identified by convenience. Except for group affiliation, we do not know if these women differed in any important way from the upper-class sorority women in this study. In addition, we could not cross-validate the characteristics of the respondent group with the student population. These shortcomings in our research methods jeopardize the generalizability of our findings. Unequal respondent groups and self-reported data
about a sensitive topic are not ideal methodologies. However, the results of this study should be of interest to those who are concerned about academic integrity and Greek life in particular.

It would be interesting to see if men with similar interests in fraternities would report similar findings. Other studies could be completed by academic major or academic standing. Finally, qualitative studies need to be completed to understand more about why students cheat. The results would provide college administrators with greater insight into the problem of academic dishonesty and may allow more effective and specific interventions to be developed.

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REFERENCES


