

### **The Effects of Religiosity, Gender, and At-Risk Behaviors On Students' Perceived Leadership Ability**

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#### **Abstract**

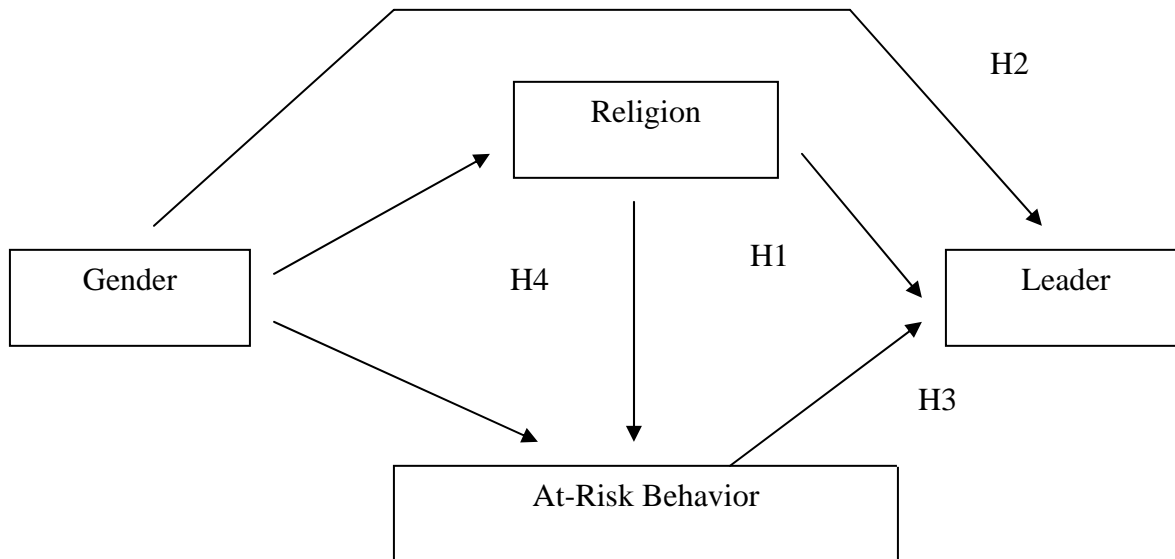
In a sample of 790 college students, we present and test a model that identifies three factors associated with perceived leadership ability: religiosity, gender, and at-risk behavior. Stronger perceptions of self-reported leadership ability were found for those who viewed themselves as more religious compared to those who perceived themselves as less religious. Women tended to score higher in self-reported religiosity, but lower in self-reported leadership ability, than did men. Women also tended to report that they engaged in at-risk behavior less frequently than men. At-risk behavior was not found to be significantly related to either perceived religiosity or to perceived leadership ability. In summary, our model found some support for the influences of religiosity and gender on self-reported leadership ability.

#### **Introduction**

Recent research has examined the impact that effective leaders have on their followers and organizations (Dvir, Eden, Avolio, & Shamir, 2002; Vera & Crossan, 2004). Leaders are believed to be crucial to organizational outcomes due to their decision making and accountability for organizational performance (Vera & Crossan, 2004). Given the significance of effective leadership today, it is important to examine the factors associated with perceptions of leadership.

The main purpose of our study is to present and test a model that identifies several factors associated with perceived leadership ability in a college student sample. Specifically, we expect that gender, religiosity, and at-risk behavior will be related to college students' perceived leadership ability (please see the model of perceived leadership ability presented in Figure 1). The linking of these variables with leadership perceptions is particularly timely. For instance, a recent trade publication recently quoted management scholar Andre Delbecq as stating that "the intersection of spirituality with business leadership is currently the most published new topic in business school literature" (Leigh-Taylor, 2000). In addition, the topic of gender and leadership has received considerable attention in the popular press in recent years. For example, despite the fact that there are more women in the workforce than ever before, a 2004 episode of 60 Minutes highlighted a recent study that found that 85% of successful business women executives leave their full-time jobs to raise their children at home.

Figure 1: Hypothesized Relationships



The third factor, at-risk behavior, continues to receive attention in recent years on college campuses as the media devotes substantial attention to increases in such behavior and its effects. In addition to our primary purpose, we are interested in the interrelationships among gender, religiosity, and at-risk behavior, and test hypotheses related to these proposed linkages as well.

The first factor we expect to be associated with perceived leadership ability is religiosity. Religion or religiosity refers to “a particular institutionalized or personal system of beliefs, values, and practices related to the divine – a level of reality or power that is regarded as the ‘source’ or ‘ultimate’ transcending yet immanent in the realm of human experience” (Worden, 2005, p. 221). Researchers have recently acknowledged the importance of including religiosity as a variable in the study of organizational behavior (Weaver & Agle, 2002). Studies of religiosity in the workplace are beginning to emerge but most are theoretical or anecdotal and very little quantitative and empirical research exists in this area (e.g., Heaton, Schmidt-Wilk, & Travis, 2004).

Scholars and practitioners who have argued for a positive relationship between religiosity and effective leadership point to traits of effective leaders that are likely associated with religiosity or spirituality (Burack, 1999). For instance, it has been suggested that effective leadership requires nurturing and respecting individuals’ values and that religiosity is likely associated with such characteristics (Strack & Fottler, 2002). Other characteristics of effective leadership thought to be related to religiosity or spirituality include taking the time to listen to followers’ needs and developing a shared vision that reflects the stakeholders being in union with the organization as a whole (Strack & Fottler, 2002). The extent to which leaders use their power to benefit others rather than themselves is also believed to be related to a leader’s religiosity or spirituality (Strack & Fottler, 2002). It has also been suggested that implicit or explicit values stemming from religiosity can be function as leadership values (Worden, 2005).

**Hypothesis 1:** Those students who perceive themselves to be more religious will have stronger perceptions of leadership ability than those who perceive themselves to be less religious.

The second factor we examined with perceived leadership ability is gender. The existing research on gender and perceived leadership ability has been mixed. A recent study by Nadim and Singh (2005) explored followers’ perceptions of the leadership styles of their bosses. Specifically they distributed surveys to middle

and upper level managers to discern their perceptions of their 'best' and 'worst' supervisors. The researchers detected no significant differences in these perceptions by gender (Nadim & Singh, 2005).

Other studies have examined men and women's perceptions of their own leadership abilities. Van Velsor, Taylor, and Leslie (1993) found that women were not more likely than men to underrate their leadership ability. This finding is consistent with a meta-analysis of gender-leadership research that indicated that women judged themselves significantly more competent in leadership roles than men did (Eagly & Johnson, 1990). There has been discussion in the management literature about the so-called "feminization" of leadership, which suggests that the current workplace needs leaders who exhibit higher levels of cooperation, support, employee participation, and other characteristics more often linked to women's leadership styles than men's (Greenberg & Sweeney, 2005; Martell & DeSmet, 2001; Rosener, 1990).

However, McCormick, Tanguma, and Sohn (2003) found that women reported significantly lower self-efficacy for leadership tasks, defined as individuals' confidence in their leadership capabilities. This, in turn, resulted in performance consequences. Given the inconsistent findings regarding the direction of the gender-perceived leadership ability relationship, we postulate the following.

Hypothesis 2: There will be no difference in self-reported leadership ability between male and female students.

The third factor we expect to be associated with perceived leadership ability involves at-risk behavior. Whereas we are not aware of studies in the organizational behavior area that have explicitly examined this link, there appears to be some initial empirical evidence in the psychiatry area. One recent study found that the risk of alcohol dependence and/or misuse was negatively related to individuals' perceptions of self-assertiveness and leadership abilities (Hensing, Spak, Thundal, & Ostlund, 2003).

Some research examining the relationship between students' involvement in extracurricular activities and at-risk behaviors may provide some theoretical support for the perceived leadership-at-risk behavior relationship. Specifically, studies have shown that the more activities a student is involved in, the less likely he/she is to engage in at-risk behaviors (e.g., Cooley, Henriksen, Van Nelson, & Thompson, 1995). It may be that having the opportunity to engage in these activities allows individuals to develop their interpersonal and leadership skills and engaging in behaviors such as alcohol abuse would be incompatible with such skill development.

Other support for an association between perceived leadership ability and at-risk behaviors may be drawn from the self-confidence literature. Research has identified high self-confidence as one of the traits separating leaders from nonleaders (Kirkpatrick & Locke, 1991). A recent report from the UK's Mental Health foundation (4-18-2006) indicates a key reason people drink is because they believe it makes them feel more self-confident. Because individuals who perceive themselves as leaders already have high self-confidence they may be less likely to drink as a way of gaining self-confidence. Thus, we expect perceived leadership ability to be negatively related to at-risk behaviors such as alcohol abuse.

Hypothesis 3: Those students who report that they engage in less at-risk behavior at school will have stronger perceptions of leadership ability than those who report they engaged in more at-risk behavior at school.

In addition to identifying three factors we expect to be associated with perceived leadership ability, our model presents the proposed linkages among these three factors. First, we address the relationship between gender and at-risk behavior. Recent research has reported that a large number of college students in the United States are heavy users of alcohol (Wilson, Pritchard, & Schaffer, 2004). Some studies have found that male college students consume alcohol more often and in larger quantities than female students (e.g., Capraro, 2000). Other research has found that, due to gender role socialization, men start consuming alcohol at a younger age and maintain a greater involvement with alcohol throughout their lives (McCreary & Newcomb, 1999). The need for social approval has been cited as a key factor explaining this gender difference in at-risk behavior (Wilson, Pritchard, & Schaffer, 2004).

The second proposed linkage among the factors associated with perceived leadership identified in our model involves religiosity and gender. Recent research on religiosity has consistently demonstrated gender differences in religious beliefs and practices (Francis & Wilcox, 1996). Specifically, a higher proportion of females than males report a greater interest in religion, that they believe in God, have a stronger religious commitment, and attend religious services more frequently (e.g., Miller & Hoffmann, 1995; Warburg, Luchau, & Andersen, 1999). Two key explanations have been offered for these findings. The first concerns the different societal roles of men and women. This explanation suggests that lower participation in the labor force and greater responsibility for the upbringing of children lead women toward greater involvement in religion. Women's roles are often viewed as including the transmission of religious values to the next generation (Warburg, Luchau, & Andersen, 1999). In addition, lower participation in the labor force implies that females have more time for religious activities and a greater need for a source of personal identity (Miller & Hoffmann, 1995). However, research on the relationship between labor force participation and religiosity has been mixed (e.g., Cornwall, 1989).

Another possible explanation for the perceived relationship between religiosity and gender involves the different socialization of men and women. It has been argued that females are taught to be more obedient and nurturing than males and that such characteristics are related to higher degrees of religiosity (Miller & Hoffmann, 1995). Interestingly, some research has found that these characteristics lead to religiosity both between and within the sexes. In particular, males with these personality traits appear to be more religious than males without these traits, and the same appears true for women (Thompson, 1991). Accordingly, gender differences in religiosity may stem from the fact that women are more likely to hold these personality traits than men.

The last proposed linkage among the factors associated with perceived leadership identified in our model involves religiosity and at-risk behavior. A growing body of research has detected a negative relationship between religiosity and substance use (Forthun, et al., 1999; Galen & Rogers, 2004; Simons, Simons, & Conger, 2004) and delinquent behavior (Baier & Wright, 2001). Students without a religious affiliation have reported significantly greater degrees of drinking behavior than those with religious affiliations (Patoek-Peckham, et al., 1998). One explanation for this relationship involves social control theory (Weber, 1958). It is thought that because religion serves as a social control, religious individuals are less likely to engage in delinquent behavior. Being affiliated with a religion often involves participating in religious activities that influence individuals by facilitating interaction with those who reinforce church-sanctioned values (Forthun et al., 1999). In addition, social control theory posits that religious individuals whose lives are entrenched in religious social networks will be even more buffered from a delinquent environment. Beyond social control theory, other ways that religiosity can affect at-risk behavior include internalizing attitudes concerning the immorality of such behavior (e.g., Francis, 1997), enhancing family relationships (e.g., Bahr et al., 1998), and participation in prosocial activities (e.g., Buckhalt et al., 1992).

**Hypothesis 4:** Those students who perceived themselves to be more religious will report that they engaged in at-risk behavior less at school than those who perceived themselves as less religious.

## **Method**

### **Subjects**

Participants were 790 freshmen students from a private university on the West Coast of the United States. 58.2% of the participants were female, and the average age of the sample was 18.2 years. 2.9% were "Black/African American," 36.1% were "Asian/Pacific Islander," 42.2% were "White/Caucasian," 10.5% were "Hispanic/Latino," 2.3% were "American Indian/Native American," and 6.1% were "Other." There were no statistically significant differences in any of the variables across demographic groups.

## **Procedure**

During the first week of the fall semester all freshman students at the university were given a pencil-and-paper survey to complete during a large assembly as part of orientation. They were told of the importance of the data to help researchers learn about various aspects of student life. The response rate for the survey was one hundred percent.

## **Measures**

All measures except gender are based on the average response to items using three- to five-point scales and are coded such that a high score indicates a high level of the focal measure. The full questionnaire measures and their unstandardized means and standard deviations appear in Appendix A.

### ***Gender***

One item was used to assess gender on the survey, "Your sex: male female."

### ***Religiosity***

A nine-item scale ( $\alpha=.86$ ) was used to assess the degree to which students described themselves as religious. For example, five of the items were similar to the following: "Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. Religiousness:" The responses for these items were on a 1 to 5 scale with the following anchors: "1" = "Lowest 10%," "2" = "Below Average," "3" = "Average," "4" = "Above Average," and "5" = "Highest 10%."

Additionally, four items were similar to this item: "For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark "frequently." If you engaged in an activity one or more times, but not frequently, mark "occasionally." If you have not performed the activity during the past year, mark "not at all." Two examples of the items that followed this statement were: "attended a religious service" and "prayed." These items were coded as "3" for "frequently," "2" for "occasionally," and "1" for not at all."

Because the questions were on two different scales, all items were standardized (transformed to z-scores) before they were included in the religiosity scale.

### ***Leadership***

A nineteen-item scale ( $\alpha=.83$ ) was used to assess self-reported leadership ability. For example, many of the items were similar to the following: "Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. Leadership Ability:" The responses for these items were on a 1 to 5 scale with the following anchors: "1" = "Lowest 10%," "2" = "Below Average," "3" = "Average," "4" = "Above Average," and "5" = "Highest 10%."

In addition, other items were similar to the following: "Please indicate the importance to you personally of each of the following: Becoming a community leader." The responses for these items were on a 1 to 4 scale with the following anchors: "1" = "not important," "2" = "somewhat important," "3" = "very important," and "4" = "essential."

Each of the items was standardized (transformed to a z-score) in order to include them all in one leadership scale. The mean score for this scale reported in the correlation matrix (please see Table 1) reflects a z-score.

### At-Risk Behavior

A seven-item scale ( $\alpha=.72$ ) was used to assess how much students believed they “partied” during the year. “For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark “frequently.” If you engaged in an activity one or more times, but not frequently, mark “occasionally.” If you have not performed the activity during the past year, mark “not at all.” Two examples of the items that followed this statement were: “drank beer” and “overslept and missed class.” These items were coded as “3” for “frequently,” “2” for “occasionally,” and “1” for not at all.” All of the items for this scale followed the same format, but were also converted to z-scores to be consistent with the other scales.

**Table 1: Descriptive Statistics**

	Mean	SD	1	2	3	4
1 Religion	.002	0.49	(.86)			
2 At-risk behavior	.001	0.61	-.06	(.72)		
3 Gender	1.58	0.49	.14**	-.10**	----	
4 Leadership	.003	0.88	.26**	.03	-.12*	(.83)

$n = 790$ , \* $p < .05$ , \*\* $p < .01$ . Coefficient alphas appear on the diagonal. Means and standard deviation scores are reported as z-scores, except for gender.

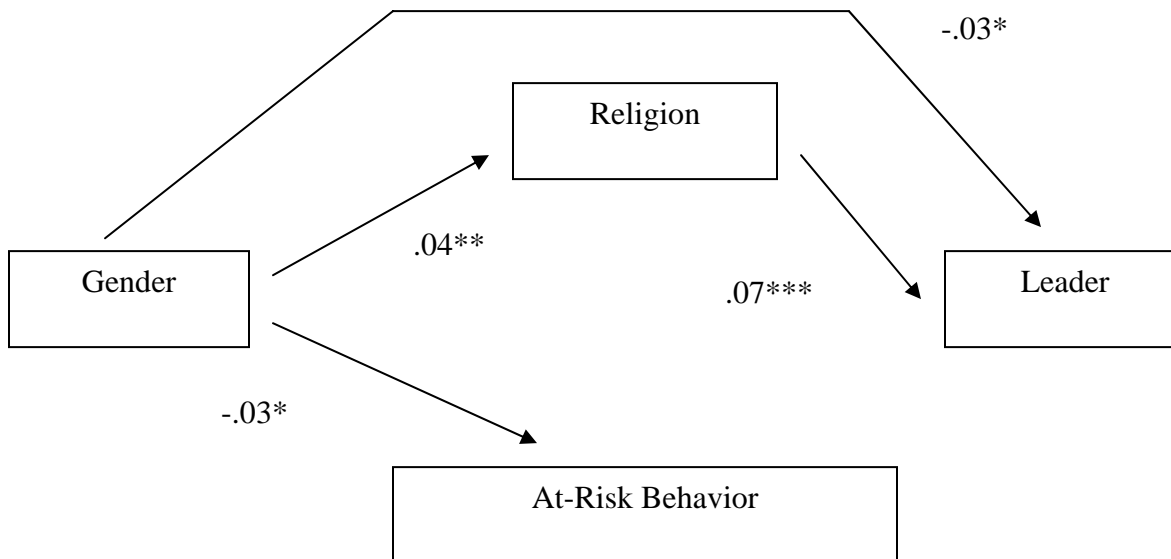
### Results

Means, standard deviations, reliability estimates, and zero-order correlations appear in Table 1. The hypotheses were tested using structural equations modeling in LISREL 8.71 (Joreskog & Sorbom, 2004). Structural equations modeling involves two steps: validating the measurement model through a confirmatory factor analysis and fitting the structural model through path analysis.

First, we conducted a confirmatory factor analysis on the religiosity, leadership, and at-risk behavior scale items in order to demonstrate that they empirically define three latent factors. Goodness-of-fit indices suggested by Gerbing and Anderson (1993) suggested that the three factor model provided a superior fit to the data over a measurement model where all items were set to load on one factor. Specifically, the comparative fit index (CFI) of the three factor model was .80, compared to .42 for the one factor measurement model. The incremental fit index (IFI) of the three factor model was .80, compared to .42 for the one factor measurement model.

The second part of structural equations modeling involves path analysis. The chi-square (chi-square = 6.73;  $p = 0.91$ ) and goodness of fit index (GFI; .99) suggested by Gerbing and Anderson (1993) indicated that the overall model fit the data well. A discussion of our observed relationships follows (please see Figure 2). Hypothesis 1 examined the relationship between self-reported religiosity and leadership ability. This hypothesis was supported. The path between the religion and leadership variables was significant (.07,  $p < .001$ ).

Figure 2: Observed Relationships



Hypothesis 2 predicted that there would be no difference in self-reported leadership ability for men compared to women. This hypothesis was not supported. The path between the gender and leadership variables was significant ( $-.03$ ,  $p < .05$ ). Women had significantly lower perceptions of their own leadership ability.

Hypothesis 3 stated that those students who reported that they engaged in at-risk behavior less at school will have a higher self-reported leadership ability. The hypothesis was not supported. The path between the at-risk behavior and leadership ability variables was not significant.

As expected, the path between the gender and at-risk behavior variables was significant ( $-.03$ ,  $p < .05$ ). Female students reported that they engaged in significantly less at-risk behavior than male students. Also as expected, the path between the gender and religion variables was significant ( $.04$ ,  $p < .01$ ).

Hypothesis 4 examined the relationship between self-reported religiosity and self-reported level of at-risk behavior. This hypothesis was not supported; the path between the religion and at-risk behavior variables was not significant.

## Discussion

In summary, our results indicate some support for our proposed model. Specifically, our study demonstrated empirical evidence of two factors associated with self-reported perceptions of leadership ability: religiosity and gender. Stronger perceptions of self-reported leadership ability were found for those who viewed themselves as more religious compared to those who perceived themselves as less religious. Additionally, the men in our sample displayed stronger perceptions of self-reported leadership ability than the women in our sample. At-risk behavior was not, however, significantly related to self-reported perceptions of leadership ability. In addition to examining the relationship of the factors of gender, religiosity, and at-risk behavior with leadership ability perceptions, we also explored the interrelationships among the three factors. We found that women tended to score higher in self-reported religiosity. Women also tended to report that they engaged in at-risk behavior less than men. Interestingly, at-risk behavior was not found to be significantly related to religiosity. We discuss each of our findings below.

First, individuals who viewed themselves as religious had stronger perceptions of self-reported leadership ability than those who viewed themselves as less religious. As noted earlier, it has been suggested that effective leadership requires nurturing and respecting individuals' values and religiosity is likely associated with such characteristics (Strack & Fottler, 2002). This finding is consistent with the attention being given to the idea of leadership as a calling in a religious sense in current business ethics literature (e.g., Sauser, 2005). Similarly, this finding fits well with the leadership paradigm of "servant leadership" that has received increasing attention from business leaders, educators, and theologians (Autry, 2002/03; Magoni, 2002/2003). The traditional leadership paradigm considers leadership as a pyramid where the CEO is at the top and decision-making tends to flow from the top down. In contrast, in the inverted paradigm of servant leadership, leadership is seen as a resource for followers, not a way to control people. The results of the current study suggest that individuals with strong religious beliefs may seek behavior (i.e., leadership) that conforms to these beliefs if they view leadership as "going beyond themselves." Future research should further examine the link between religiosity and perceived leadership ability.

Second, our paper offers empirical support that college women have significantly lower levels of perceived leadership ability. This may in part contribute to the fact that significantly fewer women occupy leadership positions at the top levels of today's organizations. In a study of the different perceptions of the obstacles facing managers, Nelson (2000) found a gender difference related to perceptions of leadership abilities. Specifically, Nelson reported that the barrier to advancement in an organization cited most often by women was male stereotyping and preconceptions. Nelson's (2000) findings, taken together with those of the current study, suggest it is not just male preconceptions of women's leadership abilities but also women's own lower perceptions of leadership ability that are of consequence.

Third, our results point to an interesting finding that religion was not related to the at-risk behavior of college students and that at-risk behavior was not related to leadership ability. Since both religion and leadership espouse the value of good behavior, future research should address why college students often do not exhibit a strong link between their beliefs and their behaviors in this area. Studies of high school students have detected a strong negative relationship between religiosity and at-risk behavior. However, college students are often thought to be at a considerably different stage in their lives where they are no longer in close proximity to their parents; thus, some college students may be actively attempting to distance themselves from their upbringing by engaging in at-risk behavior in spite of their religious beliefs. Taken together, the mixed results of this study and others examining religiosity and at-risk behavior indicate that the association is not a straightforward one and more research is warranted to identify potential moderators of this relationship.

Finally, our study provides empirical support that women scored higher in self-reported religiosity and reported lower levels of at-risk behavior. This is consistent with earlier research that has found that male college students consume alcohol more often and in larger quantities than female students (e.g., Capraro, 2000). In addition, it has been argued that females are socialized to be more nurturing and rule-abiding than males and that such characteristics are related to higher degrees of religiosity (Miller & Hoffmann, 1995).

Several caveats should be considered in the interpretation of the results of our study. First, the surveys were collected at a single point in time. The use of cross-sectional data diminishes the ability to make causal inferences. Second, our study employed a student sample which makes generalizability to organizational contexts uncertain. Future research using field samples should help to clarify the relationships tested here. Despite these important caveats, because the model was based on theory, more confidence can be placed in the findings. In conclusion, the results reported here point to two key factors associated with perceived leadership ability: gender and religiosity.

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## Appendix A: Questionnaire Items with Unstandardized Means and Standard Deviations

### Religiosity

For the activities below, indicate which ones you did during the past year (scored as 3 for frequently, 2 for occasionally, and 1 for not at all):

1. Attended a religious service (2.1, .79)
2. Discussed religion (2.1, .68)
3. Prayer/meditation (1.9, 1.1)

For the activities below, during the next year, what is your best guess as to the chance that you will (scored as: 4 for "very good chance," 3 for "some chance," 2 for "very little chance," and 1 for "no chance"):

1. Engage in self-reflection (2.1, .60)
2. Strengthen religious beliefs/convictions (2.5, 1.01 )
3. Integrate spirituality into my life (2.3, 1.03)

Rate yourself on each of the following traits as compared with the average person your age (scored as 5 for "highest 10%", 4 for "above average," 3 for "average," 2 for "below average," and 1 for "lowest 10%"):

1. Religious Affiliation/Orientation (3.1, .37)
2. Religiousness (2.8, 1.22)
3. Spirituality (3.1, 1.07)

### Leadership

Rate yourself on each of the following traits as compared with the average person your age (scored as 5 for "highest 10%", 4 for "above average," 3 for "average," 2 for "below average," and 1 for "lowest 10%"):

1. Drive to Achieve (4.0, .82 )
2. Leadership Ability (3.6, .93)
3. Persistence (3.8, .80)
4. Political Orientation (3.1, .78)
5. Public Speaking Ability (3.0, 1.01)
6. Self-confidence (intellectual) (3.6, .82 )
7. Self-confidence (social) (3.4, .92)
8. Self-understanding (3.6, .82)

Please indicate the importance to you personally of each of the following (scored as: 4 for "essential," 3 for "very important," 2 for "somewhat important," and 1 for "not important"):

1. Obtaining recognition from my colleagues for contributing to my special field (2.5, .88)
2. Keeping up to date with political affairs (2.2, .91)

3. Having administrative responsibility for the work of others (2.4, .90)
4. Becoming an authority in my own field (2.7, .88)
5. Influencing the political structure (1.8, .89)
6. Influencing social values (2.2, .87)
7. Becoming successful in a business of my own (2.5, 1.01)
8. Becoming a community leader (2.1, .92)
9. Participating in a community action program (2.1, .86)

For the activities below, during the next year, what is your best guess as to the chance that you will (scored as: 4 for "very good chance," 3 for "some chance," 2 for "very little chance," and 1 for "no chance"):

1. Participate in student government (2.1, .89)
2. Take part in student protests (2.1, .86)

### **At-Risk Behavior**

For the activities below, indicate which ones you did during the past year (scored as 3 for "frequently," 2 for "occasionally," or 1 for "not at all"):

1. Partied (1.7, 1.6)
2. Came late to class (1.7, .61)
3. Overslept and missed class (2.3, .52)
4. Drank wine or liquor (2.5, .60)
5. Drank beer (2.4, .60)
6. Smoked cigarettes (2.1, .45)