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College Life Styles, Life Stressors and Health Status:

Differences Along Gender Lines

Introduction

The ability of students' social supports, such as friends from high school and family, to effectively lessen stress often wanes during students' transitions to postsecondary institutions (Ensel and Lin, 1991; Moss, 1973; Schutt, Tatjana and Rierdan, 1994; Thoits, 1995). It's easy to intuit why this happens—During this major life change, most students add miles between themselves and people they have relied on for 18 years, break up with their significant others and promise to email the best friends they were used to seeing after school each day. College, most often the best years of a student's life, at its first bloom (choosing a school) carries with it with high anxiety about changing location, routine and study habits; separation from friends; the learning environment; managing finances; and much more.

On the positive side, college marks a period when new systems of social support are being created. People often talk fondly of their college roommates and friends, years and years after graduation. Many will travel for hours with the kids in tow just to catch up and reminisce with a dear college friend. As adults, we look back fondly on our college years and think it odd that this transition to independence, learning and new friends and perspective can, in and of itself, be stressful.

Many of us know the feeling of homesickness and discomfort in new social situations. Adjusting takes time for everyone—some longer than others. At first, students often find socializing in a college setting (talking to classmates, joining clubs, going to parties, etc.) stressful and all too often, the feeling does not dissipate over time. Research shows that these kinds of events, which might otherwise serve to reduce stress, can actually increase feelings of stress (Dill and Henley, 1998).

Accurately predicting which students are likely to experience academic, personal and social difficulties, or leave college before they graduate due to stress, would aid the creation

and implementation of interventions targeted to specific cases (Hicks, 2005). Studying student peer groups and the patterns within is the key to predicting which subgroups will be prone to what behaviors.

New peer groups that form in college influence students' thoughts and behaviors. Researchers have proven that there is substantial change in the performance of health behaviors during the first three years of college and that peers can have a strong impact on the types and magnitude of these changes (Lau, Quadrel and Hartman, 1990). It seems reasonable, then, that peers may also influence the perception of and reaction to stress. College norms that define certain types of behavior as "appropriate" under certain conditions, such as staying up all night to cram for an exam, may be stress-inducing and may lead to less healthy practices. Even more worrisome, stress has been associated with a variety of negative outcomes in the adolescent population, including suicide ideation (Hirsch and Ellis, 1996), smoking (Naquin and Gilbert, 1996) and drinking (Morgan, 1997; McCormack, 1996). The effect of excess stress

on healthy behaviors is less well researched within the college-aged population and may help researchers predict groups at risk; however, many of the studies that have assessed the health status of black college students have been conducted on only a single college campus, using instruments developed by the researchers involved.

In 1994, Ford and Goode surveyed the health behaviors of 224 undergraduate students enrolled in health education classes at one historically black university.* Students reported that the most important health issues facing college students included HIV/AIDS and other sexually transmitted diseases, birth control, date rape, stress management, suicide, and alcohol and other drugs. Ford and Goode (1994) concluded there was "a need for more baseline data to identify the health behaviors of minority populations, particularly first- and second-year African-American college students" (p.209).

*Results indicated that the rate of cigarette smoking was low (four percent), with more men than women reporting this behavior, and 63 percent of the students consumed alcohol, but more women than men reported drinking. Most of the students (90.2 percent) said they did not usually eat breakfast, and 73.6 percent indicated their diets were not nutritionally balanced. More than half (55.4 percent) of the students surveyed were not involved in daily physical activity. The majority (74.1 percent) indicated they were sexually active.

Purpose of the Study

The purpose of this study was to conduct a baseline investigation of African-American university students' health behaviors, self-rated health, mental health and quality of life (QOL). The authors used a quality of life questionnaire that gauged the college student's health status, lifestyle, mental health, and living conditions, which would help identify certain subgroups of students at particular risk for certain types of depression, stress, health behaviors, mental health, and health habits while attending college.

Method

Profile of Participants

The data for this study were obtained from a health behavior, self-rated health and quality of life questionnaire administered to college students (n = 514) enrolled in a spring 2005 course at a four-year public research and doctoral degree granting institution in North Carolina. The majority of the participants (71 percent) were college students between the ages of 18 and 23 years, most of whom were African Americans (77 percent). Sixty-eight percent of the sample was female and comprised of approximately 53 percent of freshmen, 15 percent sophomores, 13 percent juniors, six percent seniors, and 13 percent of the sample being graduate students. Sixty percent of the participants were first-generation college students.

"The Health Behaviors, Self-Rated Health and Quality of Life (QOL) questionnaire included 30 questions, which included socio-demographic characteristics such as age, sex, race, marital status, living conditions, residency in North Carolina, classification, parental educational achievement, and source of income."

Instrument

A 30-item, author-generated questionnaire was administered. The majority of the questions on the instrument were derived from an instrument used in a previously published study on Sweden college students (Vaez and Laflamme, 2004). The Health Behaviors, Self-Rated Health and Quality of Life (QOL) questionnaire included 30 questions, which included socio-demographic characteristics such as age, sex, race, marital status, living conditions, residency in North Carolina, classification, parental educational achievement, and source of income.

There were four major sections of the questionnaire; those sections consist of socio-demographic characteristics, life-style, student life stressors, and health status. Variables assessed on the questionnaire measured alcohol consumption that asked respondents about the frequency of their drinking and the usual amount of alcohol they consume on each occasion. To measure tobacco use, the researcher asked the participants whether they used cigarettes or snuff. The researcher assessed physical activity with a single question concerning the frequency of exercise on a five-point scale. To gauge student life stressors, the researcher asked questions concerning the participants' potential sources of stress over the preceding academic year; those responses were based on a four-point scale. To assess students' health status and quality of life, the researcher used the participants' self-evaluations in the following manner: For health status, the students were requested to rate their physical, psychological and overall health respectively on a five-point scale. (See tables for scale details).

To measure the participants' psychological or psychosomatic problems, the researcher based those responses on a four-point scale. To measure self-perceived QOL, the researcher used the ladder scale method. According to Vaez and Laflamme (2004) the ladder scale is a widely recognized measure that has shown good validity. The researcher introduced the ladder question in the following way: "Here is a picture of a ladder. At the bottom of the ladder, one is the worst life you might reasonably expect to have, and 10 at the top is the best life you might reasonably expect to have. Indicate where on the ladder your life is right now."

Procedures

Students enrolled in spring 2005 courses were invited to complete the Quality of Life Questionnaire (QOL). The researchers reviewed the university spring 2005 course schedule and randomly selected courses (upper and lower level) from each discipline on campus to administer the questionnaires. The sample of college students included a sample of freshmen, sophomores, juniors, seniors, and graduate students. After contacting and gaining permission from the professors of the selected courses, the researchers hand delivered the questionnaires to the chosen classrooms. The researchers briefly described the purpose of the research and provided the students with a consent form for participation. During this time the researchers discussed confidentiality, risk and benefits of the study. There were no foreseen risks of any kind that exist for students who completed the survey. Possible benefits include that educators will more fully understand college students' attitudes about health behaviors, mental health and quality of life. After completion of the questionnaire (approximately 20 minutes), the researchers collected the consent forms, questionnaires and answer sheets. Students' names appear nowhere on the survey. Once their answer sheets were completed, each sheet was assigned a number and entered into SPSS (Statistical Package for the Social Sciences).

Statistical Analysis

A chi-square test was conducted on all data using SPSS. The data was analyzed question by question to determine the number and percent of responses for each choice by gender status. All comparisons were made assuming an alpha = 0.05 significance level.

Results

As seen in Table 1, the "Life-Style" section of the questionnaire, a significant difference between male and female college students were found for question 11, "If you drink, what is the usual amount consumed on each occasion?" When consuming alcohol, more female college students (21.3 percent) reported that one or two glasses were consumed on each occasion. Only eight percent of the male college students indicated that just one or two glasses were consumed. Significant differences were also found on question 13,

Table 1
Summary of Life-Style Characteristics by Gender

Question	Male	Female
11. If you do drink, what is the usual amount consumed on each occasion?		
**1. 1-2 glasses	8.0%	21.3%
2. 3-4 glasses	5.4%	7.8%
3. 5-6 glasses	2.8%	3.6%
4. 7-9 glasses	1.2%	.4%
5. 10 glasses or more	.8%	.2%
6. Not applicable	14.3%	34.2%
13. Do you use illegal drugs?		
1. yes, daily	2.2%	1.9%
2. yes, sometimes	2.4%	6.5%
**3. no	27.4%	59.6%
14. How often do you exercise?		
**1. never	2.8%	15.6%
2. once a month	3.4%	10.3%
3. 2-4 times a month	5.7%	12.5%
4. 2-3 times a week	11.9%	20.4%
5. 4 times a week or more	8.3%	9.1%
Note: chi-square significant at **p<.001		
11. (1) 1-2 glasses $X^2(5) = 18.361, p < .001$		
13. (3) no $(X^2(4) = 14.619, p < .001)$		
14. (1) never $(X^2(4) = 25.927, p < .001)$		

"Do you use illegal drugs?" A higher number of female college students indicated that they did not use illegal drugs at (59.6 percent) than the male college students (27.4 percent). These findings on alcohol and drug use among male and female college students were consistent with a study conducted by (Fennell, 1997). In Fennell's study on students at eight Historically Black Colleges and Universities, the author noted that three-quarters of all students surveyed had consumed alcohol during their lifetimes. For the majority, first-time alcohol consumption occurred before the students had reached the legal drinking age of 21. It was interesting to note that in the Fennell study, when it came to heavy (binge) drinking in the past 30 days (five or more drinks of alcohol in one sitting), men were significantly more likely than women to report heavy drinking (.001). Also in the Fennell study, men were significantly ($p < .001$) more likely than women to be current users of an illegal drug. It is interesting to note that in this current study, more female college students reported that they did not smoke cigarettes or use illegal drugs than the male college students at 57.6 percent vs. 27.4 percent, and 59.6 percent vs. 27.4 percent respectively. This finding is also consistent with the Fennell study on eight other HBCU schools; more men were significantly likely ($p < .001$) to be current smokers.

“When asked to rate the following potential sources of stress over the preceding academic year, more female college students indicated that they were slightly stressed due to not being able to cope academically, poor finances and family problems as opposed to the male college students.”

A significant difference was found on question 14, “How often do you exercise?” As far as physical activity, a larger percent of female college students indicated that they never exercised (15.6 percent) as opposed to the male college students (2.8 percent). In the study with eight HBCU schools, chi-square analyses indicated that men were significantly more likely to have exercised or done stretching routines or strengthening exercises in the past seven days ($p < .001$).

In Table 2, “Student Life Stressors,” section three, three significant differences were found between male and female college students. A significant difference was found for questions 15a, 15d and 15f. When asked to rate the following potential sources of stress during the preceding academic year, more female college students indicated that they were slightly stressed due trouble coping academically, poor finances and family problems as opposed to the male college students. A larger percentage of female college students than male college students indicated that they were slightly stressed due to: trouble coping academically, poor finances and family problems. In a study conducted by Hudd, et al. (2000), these researchers found that the majority of females (63.8 percent) in their study expressed feelings of higher levels of stress. In addition, Hudd et al. noted that the vast majority (80 percent) of the students who did not participate in sports regularly reported high levels of stress. These findings on gender, levels of stress and exercising are consistent with the current study and quite consistent with the medical literature that suggests exercise serves to reduce stress.

For “Health Status,” section four of the questionnaire, a significant difference was found between male and female college students, for question 16, “circle any physical or psychological health issues that you have exhibited during the preceding academic year,” more female college students indicated that they used prescription medicine during the academic year as opposed

to male college students. Significant differences were found for question 18, “rate your overall self-rated psychological health status”; question 19, “rate your general state of health”; and question 20, “what do you think about your own health condition compared with that of other people of your age?” Table 3, question 18 showed more female college students self-rated their psychological health status as being very good or good, as opposed to the male college students. For question 19, a larger percentage of female college students indicated that their general state of health was very good or good. For question 20, a larger percentage of female college students indicated that they felt that their own health condition was better than that of other people of their own age. In contrast, Fennell (1997) indicated that 29.5 percent of women viewed themselves as either “slightly overweight” or “very overweight,” and 34.3 percent of the women said they were trying to lose weight. Chi-square analyses indicated that differences between men and women were statistically significant on this measure ($p < .001$). The men viewed themselves as “about right” or “underweight” and were not trying to lose weight. Compared with men, women were significantly

Table 2
Summary of Student Life Stressors Characteristics by Gender

Question	Male	Female
15. Please rate the following potential sources of stress.		
My stress over the preceding academic year have been based on the following issues:		
a. Not coping academically		
1. not at all stressed	9.8%	9.7%
**2. slightly stressed	14.6%	36.7%
3. rather stressed	4.4%	14.8%
4. highly stressed	3.0%	7.0%
d. Poor finances		
1. not at all stressed	12.4%	17.1%
**2. slightly stressed	10.4%	27.7%
3. rather stressed	3.7%	14.5%
4. highly stressed	5.5%	8.7%
f. Family problems		
1. not at all stressed	17.2%	27.8%
**2. slightly stressed	8.2%	27.0%
3. rather stressed	4.6%	7.4%
4. highly stressed	2.0%	5.8%
Note: chi-square significant at ** $p < .001$		
15a. (2) slightly stressed ($X^2 (4) = 23.256, p < .001$)		
15d. (2) slightly stressed ($X^2 (4) = 18.024, p < .001$)		
15f. (2) slightly stressed ($X^2 (4) = 13.872, p < .001$)		

Table 3
Summary of Health Status by Gender

more likely ($p < .001$) to have dieted and engaged in activities to lose or keep from gaining weight during the past seven days. Men were significantly more likely ($p < .001$) to have had one or more servings of high-fat foods on the previous day.

Table 3 shows the significant differences found between male and female college students. For question 21, "when asked during the preceding academic year, did you experience any of the following psychological or psychosomatic problems," there was a significant difference found on 21a, "experienced difficulty in concentrating during the preceding academic year." More female college students indicated that they experienced little difficulty in concentrating during the preceding academic year. On question 21b, "experienced irritation during the preceding academic year," more female college students indicated that they felt irritated. Similarly on question 21c, "experienced anxiety during the preceding year"; question 21e, "experienced depression during the preceding academic year"; question 21f, "experienced tiredness during the preceding academic year"; question 21h, "experienced headaches during the preceding academic year," more female college students felt this to be true than did the males. (See tables for details.)

A significant difference was also found for question 24, "during the academic year, did you seek health care due to physical or psychological problems," 23 percent of female college students indicated that they did, as opposed to only seven percent of the males.

Discussion

The use and examination of the Health Behaviors, Self-Rated Health and Quality of Life data can be helpful in identifying health behavior patterns of African-American college students that attend HBCU institutions in the south. Most specific, the overall analysis of the questions provide the authors with a snapshot of findings on male and female college students' life styles, health behaviors and quality of life.

Note: chi-square significant at $*p < .05$
 21a. (2) a little $X^2(3) = 11.286, p < .05$
 21b. (2) a little $X^2(3) = 17.060, p < .05$
 21c. (2) a little $X^2(3) = 17.069, p < .05$
 21e. (2) a little $X^2(3) = 22.868, p < .05$
 21f. (2) a little $X^2(3) = 10.961, p < .05$
 21h. (2) a little $X^2(3) = 18.209, p < .05$

Question	Male	Female
18. Please rate your overall self-rated psychological health status		
1. very good	17.4%	26.4%
2. good	11.8%	31.6%
3. neither good or poor	2.8%	7.9%
4. poor	.2%	1.7%
5. very poor	.4%	.0%
19. How do you rate your general state of health?		
1. very good	13.2%	19.9%
2. good	16.6%	38.7%
3. neither good or poor	2.8%	7.1%
4. poor	.0%	1.6%
5. very poor	0%	.1%
21. During the preceding academic year, did you experience any of the following psychological or psychosomatic problems?		
a. difficulty in concentrating		
1. not at all	11.4%	15.2%
*2. a little	14.8%	38.0%
3. quite a lot	4.8%	9.0%
4. a lot	1.4%	5.4%
b. irritation		
1. not at all	11.4%	13.2%
*2. a little	16.6%	38.7%
3. quite a lot	3.4%	11.4%
4. a lot	1.0%	4.3%
c. anxiety		
1. not at all	18.2%	25.4%
*2. a little	11.4%	30.4%
3. quite a lot	1.8%	8.0%
4. a lot	1.0%	3.8%
e. depression		
1. not at all	22.0%	31.3%
*2. a little	7.4%	26.9%
3. quite a lot	1.4%	6.2%
4. a lot	1.2%	3.6%
f. tiredness		
1. not at all	7.0%	8.0%
*2. a little	14.4%	28.5%
3. quite a lot	7.2%	20.4%
4. a lot	3.8%	10.7%
h. headache		
1. not at all	15.5%	20.5%
*2. a little	13.3%	32.7%
3. quite a lot	2.0%	8.4%
4. a lot	1.4%	6.2%

The results of this study indicated that gender is an important determinant of the level of health risk behaviors for African-American students. When we compared male and female differences in alcohol consumption and illegal drug use, it appeared that the male students were more frequent users of drugs and alcohol, and engaged in binge drinking in larger proportions than their female peers. It is interesting to note that according to Fennell (1997) these gender findings are consistent with gender differences noted in other research studies of primarily white student samples. The findings indicate that men were twice as likely to die as a result of unintentional injuries, and blacks have higher death rates from such injuries than whites do (*Healthy People*, 2000). Fennell (1997) notes that the interrelatedness of risky behaviors and injuries—driving under the influence of alcohol, failing to use seat belts, being involved in motor vehicle and cycling accidents, and failing to use protective headgear while cycling—indicates the need for multidimensional prevention efforts.

A larger percentage of female participants (15.6 percent) in this study reported that they did not participate in any physical activities over the academic year as opposed to the male college students (2.8 percent). The physical inactivity patterns of female students attending this university and other HBCUs merit attention. Physical activity must become a priority in the lives of African Americans. There is clear evidence that physical activity at least three times a week is associated with better health outcomes and lowers the risk of some cancers and cardiovascular disease (Lewis et al., 1993).

Also, the female college students who completed the survey reported more psychological problems than the male college students. This finding is an indication that more health wellness programs that encourage physical exercising and relaxation are needed in the academic setting. Research also indicated that the relationship between gender and stress among college-aged females is well-documented. It suggests that programs to address traditionally “female” psychological issues such as eating disorders and self-esteem issues are found on college campuses nationwide. Hudd et al. (2000) findings suggest that it may be useful to develop gender-specific programs targeted at reducing the general level of stress among college females.

Other psychological and psychosomatic issues were also documented among the female college students in this study. The study findings indicated that female college students experienced more stress due to not being able to cope academically, poor finances and family problems. In addition, female college students in this study reported that they experienced more psychological and psychosomatic problems, such as irritation, depression, anxiety, headaches, and tiredness, than the male college students in this study, yet more female college students were willing to seek or ask for help than the male college students.

“Future research could look at how well the self-reported health behaviors of African-American and other groups are meeting the health objectives for the nation...

University officials and administrators, along with health prevention specialists, could help in addressing health issues among African-American male and female college students by meeting national health goals and eliminating the health status disparities by implementing effective programs.”

According to Hudd et al. (2000), the findings on high levels of stress being associated with other poor health habits is not startling when considered in the context of the literature on stress within the adult population. Hudd et al. note that in the population at large, higher levels of stress have been related to poor diet, erratic sleep patterns and increased levels of stress-related illness, such as heart attacks. High levels of stress have also been linked to a variety of psychological ailments in the college-aged population, such as suicide ideation (Hirsch and Ellis, 1996). To combat this issue, the authors recommend that further research with college students might document the extent to which “stressed” students experience other sorts of physical illnesses more frequently. In addition, Hudd et al. indicate that it may be useful to understand the long-term effects of stress on students’ stamina. It is likely that students experience a series of non-acute ailments, perhaps both physical and psychological, before they seek health care interventions.

Summary

The results of this questionnaire provided an important snapshot of the current life styles, college life stressors and health behaviors among male and female college students at an HBCU institution in North Carolina. Moreover, the findings contributed to the identification of subgroups of students at particular risk for certain types of health issues that can university officials can address by implementing the appropriate interventions that are tailor-made for such groups. Special care should be taken not to generalize the findings of this study to other student populations. The findings may hold true only if the populations are similar in nature. Therefore, it is advisable to carry out a similar longitudinal study in other HBCU institutions. Future research could look at how well the self-reported health behaviors of African-American and other groups are meeting the health objectives for the nation that are outlined in the *Healthy People 2010* publication. University officials and administrators, along with health prevention specialists, could help in addressing health issues among African-American male and female college students by meeting national health goals and eliminating the health status disparities by implementing effective programs.

Until more accurate methods are developed to identify which students are at risk of failing and leaving college, little can be done to intervene and avoid the undesired consequences of poor academic performance and attrition that affect both students and institutions due to health issues.

Furthermore, no information available is about which health intervention programs are most effective for African-American college students that attend HBCUs. Thus, such information is needed to assess more fully the at risk potential of these students for not completing college due to health behaviors, health habits, depression, and stress. Most importantly, responses to the questionnaires from students at HBCU could help determine how the health status of students attending other HBCUs compares with some of the national objectives outlined in *Healthy People 2010*.

As the population of college-bound students grows and competition increases, to help students, professionals on both sides of the desk should keep in mind common stress patterns and at-risk demographics. As advocates for students, those in the education field must conduct further research so they can accurately prevent future and more complex behavior problems. College should be an exciting time in students' lives. Researching and implementing effective intervention and counseling programs will help improve the quality of life for all on campus.

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