COMPARING FRATERNITY/SORORITY PROFESSIONALS' KNOWLEDGE OF EATING DISORDERS WITH OTHER STUDENT PERSONNEL ADMINISTRATORS

Michelle L. Nicopolis, Ph.D.

This study examined disordered eating behaviors in regard to detection, prevention, intervention, and referral by college student personnel professionals. A survey was used to assess the level of knowledge pertaining to eating disorder among administrators of two of the largest at-risk student groups on campus: fraternity/sorority affiliated students and student athletes. ANOVA and correlation analyses were used to evaluate eating disorder knowledge levels. Recommendations include encouraging college student personnel professionals to seek out educational materials and training to educate themselves about eating disorders to help refer students who may be struggling with this health concern.

Research supports the prevalence of, and epidemic increases in, eating disorders within the college student population (Hoyt & Ross, 2003). Studies have targeted at-risk sub-populations within the college setting, namely women (Schwitzer, Bergholz, & Dore, 1998), student athletes (Johnson, Powers, & Dick, 1999; Sherman & Thompson, 2001), and sorority members (Alexander, 1998; Mehler, Gray, & Schulte, 1997). However, research has not assessed the level of knowledge pertaining to eating disorders among the college student personnel professionals who often work closely with these groups of students.

According to the American Psychiatric Association's (2000) *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision* (DSM-IV-TR), late adolescence/early adulthood is the most diagnosed period of onset among those with an eating disorder. Given the existence of eating disorders across a diverse scope of college students, college student personnel professionals need a familiarity and understanding of eating disorders. Of particular interest in this study are the professionals who work most closely with students considered to be members of high-risk groups for eating disorders.

The focus of this study was to delve beyond the surface knowledge of disordered eating behaviors and to reach toward detection, prevention, intervention, and referral by college student personnel professionals. This study assessed the level of knowledge pertaining to eating disorders among administrators of two of the largest at-risk student groups on campus, fraternity/sorority affiliated students and student-athletes, in addition to psychological services directors.

The following types of professionals were studied in this research project:

Fraternity/Sorority Professional
This professional was identified as the campus advisor for fraternity and sorority life at his/her institution. A fraternity/sorority professional need not have formal education in health, nutrition, or eating-disordered behavior to fulfill job requirements. Professionals in this category have diverse educational backgrounds, and typically at least a master's degree in higher education, college student personnel, or a related field.

Psychological Services Director
This professional was identified as the person in charge of a psychological or counseling services center who oversees student mental health services. A psychological services director may hold licensure in mental health fields, and thus have a more comprehensive educational background for working with students with eating disorders than other student affairs staff. These professionals have typically earned a master's or doctorate degree in psychology, counseling, social work, or a related mental health field.

CHAMPS/Life Skills Coordinator
CHAMPS is an acronym for CHallenging Athletes' Minds for Personal Success; CHAMPS/Life Skills coordinators are typically housed in an institution's intercollegiate athletics area. The National Collegiate Athletic Association (NCAA) developed this program to ensure a well-rounded intercollegiate development experience for member institutions' student athletes. Typically, CHAMPS/Life Skills coordinators are provided information about nutrition and disordered eating by the NCAA. Each coordinator brings his or her diverse educational and professional experiences to the job from the bachelor's to the doctorate degree (NCAA, 2005).

Background

The United States Department of Health and Human Services (USDHHS) estimated that 95% of those diagnosed with eating disorders fall between the ages of 12 and 25 (USDHHS, 2004). Nearly 20% of all women experience some form of eating disorder or disordered eating behavior. The prevalence of eating disorders among American men and women of all ages reaches up to 24 million people, and the number climbs to 70 million worldwide. Beyond those personally affected, half of all Americans know someone struggling with an eating disorder (Anorexia Nervosa and Related Eating Disorders [ANRED], 2006).

Sadly, the death rate of those suffering from anorexia nervosa is up to 20% and is said to be the highest mortality rate of any mental health disorder (ANRED, 2006; Sullivan, 1995). Female anorectics between 15-24 years old have a death rate 12 times greater than all other causes of death among their peers. Typical causes of mortality among anorectics are related complications including starvation, heart ailments, or suicide (Sullivan, 1995).

Review of Literature

Risk Factors During Adolescence
Many factors contribute to disordered eating behavior on college and university campuses, including transitioning to college life, going through developmental life changes, changing social identity, having more freedom, increasing stress levels, losing close social support, and social

comparison to peers (Compas, Wagner, Slavin, & Vannatta, 1986). Some symptoms arise during earlier adolescence that may predict eating disordered behavior during college, including: poor self-image, high levels of negative emotions, early menarche, body dissatisfaction, and dieting (Leon, Fulkerson, Perry, & Early-Zald, 1995). Familiarity with predictor variables, warning signs, and referral processes can help student personnel staff identify problematic behavior.

The Effects of Sorority Membership

No studies to date have focused on fraternity membership as a predictor of eating disorders among males. However, women who join sororities are at higher risk for developing eating disorders and associated risk factors; also, symptoms increase over time (Alexander, 1998; Allison & Park, 2004; Mehler, Gray, & Schulte, 1997). Sorority members report a more elevated desire to be thin, increased distortions of body size perceptions, greater fear of being overweight, more focus on weight, greater prestige and overemphasis on having a smaller body size, and higher levels of body dissatisfaction than non-affiliated students (Allison & Park, 2004; Cashel, Cunningham, Landeros, Cokley, & Muhammad, 2003; Mehler, Gray, & Schulte, 1997; Schulken, Pinciaro, Sawyer, Jensen, & Hoban, 1997). Further, when compared with groups of residential students involved in a variety of other co-curricular activities, a group of sorority members living together were at the highest risk for developing eating disorders (Hoerr, Bokram, Lugo, Bivins, & Keast, 2002).

Undergraduate sorority members are considered at-risk due to their increasingly persistent attitudes and behaviors toward dieting and attaining thinness, even when there is no physical or health-related need to lose body weight, while their non-affiliated peers focus on dieting was shown to decrease (Allison & Park, 2004; Ash & McClelland, 2001). It has also been found that sorority members prefer peer consulting and support over professional discussion regarding their disordered eating (Martz, Graves, & Sturgis, 1997; Prouty, Protinsky, & Canady, 2002).

Student Personnel Staff Knowledge

Limited research exists that demonstrates student personnel staff knowledge of eating disorders. No research was found that specifically addressed fraternity/sorority advisors' knowledge of eating disorders. The majority of prior studies consist of personnel involved with intercollegiate athletics, specifically coaches (Heffner, Ogles, Gold, Marsden, & Johnson, 2003; Turk, Prentice, Chappell, & Shields, 1999) and athletic trainers (Vaughan, King, & Cottrell, 2004). The results of such knowledge-based studies suggest that though professionals may have frequent contact with students displaying eating disorder pathology, they are not confident in approaching, identifying, or properly referring students. Further, there is limited accurate knowledge among professionals, rarely breaking the 50% accuracy mark on items involving eating disorder signs and symptoms.

Since many students with eating disorders may first approach peers, it is important that all students have someone with whom they are able to consult. The consultants may be campus professionals with whom they have already built a strong relationship. It is the professionals' responsibility to be knowledgeable in as many diverse areas as possible; at minimum, they should know proper referral services to best serve students.

Method

Sample

Participants responded to an email request sent to the Association of Fraternity Advisors, Association for University and College Counseling Center Directors, and CHAMPS/LifeSkills professional listservs. The survey was conducted online, and all responses were anonymous. At the conclusion of the survey, participants were automatically directed to the National Eating Disorder Association's Web site from which numerous supportive documents were accessible. A total of 292 participants responded to the survey. Specific demographic information can be found in Table 1.

Instrumentation

Participants responded to a brief, anonymous demographics questionnaire followed by a self-report instrument, the *Eating Disorders and College Students [Athletes]* survey (Vaughan, King, & Cottrell, 2004). The survey was a mixture of Likert-type and direct response items assessing professionals' levels of perceived and actual knowledge of eating disorders. Also explored were participants' sources of educational and professional experiences related to eating disorders.

The *Eating Disorders and College Students [Athletes]* survey is based upon Bandura's (1977) self-efficacy theory (Vaughan, King, & Cottrell, 2004). There were three subscales of the survey, including descriptions quoted below for Efficacy Expectation, Outcome Expectation, and Outcome Value. Efficacy Expectation indicated the professionals' belief that they were able to "effectively take steps to help [students] with eating disorders;" Outcome Expectation noted professionals' "beliefs that performing specific steps will increase chances that the [student] will receive the help that he or she needs;" and Outcome Value pertained to the professionals' "perceived importance in increasing the chances that [students] with eating disorders receive help" (Vaughan et al., 2004, p. 72). In addition, there were three actual knowledge subscales used, which included:

1. Risk factors (e.g., being a perfectionist, involvement in a sorority, participating in sports demanding leanness)
2. Warning signs (e.g., losing menstrual cycles, having brittle/dry hair and/or nails, avoiding eating in public)
3. Long term problems (e.g., osteoporosis, dental problems, death)

Reliability and Validity

The *Eating Disorders and College Students [Athletes]* survey has established content validity through a panel of respected national experts in the eating disorder field (Vaughan, King, & Cottrell, 2004). In the current study's pilot of 10 professionals from each of the three professional groups, fraternity/sorority professionals showed the highest reliability measures across the three subscales of Efficacy Expectation, Outcome Expectation, and Outcome Value.

Results

ANOVA and correlation statistical analyses were conducted to test for significance in perceived and actual knowledge level scores across job affiliation, gender, educational level, and professional development participation. Also assessed was the level of awareness among student

service professionals. Higher scores indicated greater perceived knowledge levels of eating disorders and more accurate actual knowledge levels on their respective scales.

Table 1
Survey Participants' Demographic Information

Demographic Variable	N	Percent
Gender		
Female	198	67.8
Male	94	32.2
Primary job (spend most of work day in this area)		
Fraternity/Sorority Life	100	34.2
CHAMPS/Life Skills (Student-Athlete Services)	99	33.9
Psychological/Counseling Services	93	31.8
Age (in years)		
0-30	100	34.2
31-40	96	32.9
41 and over	93	31.8
Not reported	3	1.0
Ethnicity		
White	252	86.3
African American	22	7.5
Other	18	6.2
Highest educational degree		
Master's	193	66.1
Doctorate	72	24.7
Bachelor's	20	6.8
Not reported	7	2.4
Year most recent degree completed		
2000 and after	138	47.3
1990-1999	91	31.2
Prior to 1990	60	20.5
Not reported	3	1.0
Concentration area of highest degree		
Psychology/Counseling	108	37.0
Education/Physical Education	76	26.0
Other	62	21.2
College Student Personnel	46	15.8
Licensed mental health professional		
No	204	69.9
Yes	85	29.1
Not reported	3	1.0
Institution location		
Suburban	104	35.6
Urban	101	34.6
Rural	85	29.1
Not reported	2	0.7
Institution enrollment		
9000 or more	120	41.1
3000-8999	88	30.1
Fewer than 3000	84	28.8

Psychological services directors scored significantly higher than fraternity/sorority professionals and CHAMPS/Life Skills peers on the Efficacy Expectation and Outcome Expectation subscales

($p \leq .001$). Considering Outcome Value, the psychological services directors scored significantly higher than fraternity/sorority professionals ($p \leq .001$). The scores on the Outcome Value subscale did not differ significantly between psychological services and CHAMPS/Life Skills professionals, though psychological services directors scored higher.

Psychological services directors recorded significantly more accurate scores than peers on the Warning Signs and Long-Term Problems subscales at $p \leq .001$. Scores on the Risk Factors subscale were not significantly different, however, those in the psychological services scored slightly higher than both other groups. Results of the ANOVA analysis of professionals' perceived and actual knowledge levels can be found in Table 2. Further, a Tukey's Post Hoc analysis showed actual subscale scores across jobs on all subscales.

Table 2
ANOVA by Primary Job Responsibility Testing Significance of Perceived and Actual Subscale Scores

	df	Mean Square	*F*
Perceived Knowledge Subscales			
Efficacy Expectation	2	648.40	55.06*
Outcome Expectation	2	195.37	8.74*
Outcome Value	2	69.34	7.38*
Actual Knowledge Subscales			
Risk Factors	2	2.02	1.19
Warning Signs	2	51.68	8.30*
Long-Term Problems	2	118.23	10.03*

* $p \leq .001$

In relation to participants' gender, no significant difference existed between men and women on perceived knowledge subscales. Non-significant differences did exist: men scored higher on Outcome Expectation and Outcome Value areas, and women scored higher on Efficacy Expectation. Findings revealed that women had a greater knowledge level of eating disorders than male counterparts. The female participants knew significantly more than males about warning signs and long-term problems associated with eating disorders ($p \leq .001$). Table 4 displays the ANOVA analysis across gender and knowledge subscale scores. Table 5 shows how male and female participants' mean scores compared across subscales. However, results should be interpreted with caution because of the gender imbalance represented in the overall sample (women = 67.8%) and among job title where women comprised 53.0% of fraternity/sorority life participants, 74.2% of those in psychological services, and 76.8% in CHAMPS/Life Skills. Differences also could have been caused by interaction effects of other variables (e.g., amount of experience on the job, date of degree attainment, job title).

Next, groups were divided by job affiliation to identify whether any group knew proper responses when finding out a student had an eating disorder. There were significantly different scores on two of the five possible responses.

Table 3
Mean and Standard Deviation Tables Across Participants' Primary Job by Scores on Perceived and Actual Knowledge Subscales

	N	Mean	SD
Perceived Knowledge Subscales			
Efficacy Expectation			
Fraternity/Sorority Life	100	27.46	3.49
Psychological Services	92	31.96*	2.84
CHAMPS/Life Skills	99	27.37	3.85
Outcome Expectation			
Fraternity/Sorority Life	100	25.81	5.22
Psychological Services	93	28.59*	4.41
CHAMPS/Life Skills	99	26.62	4.49
Outcome Value			
Fraternity/Sorority Life	100	20.50*	3.29
Psychological Services	93	22.18	3.09
CHAMPS/Life Skills	99	21.49	2.80
Actual Knowledge Subscales			
Risk Factors			
Fraternity/Sorority Life	100	10.15	1.44
Psychological Services	93	10.22	1.17
CHAMPS/Life Skills	99	9.94	1.27
Warning Signs			
Fraternity/Sorority Life	100	12.48	2.63
Psychological Services	93	13.92*	2.32
CHAMPS/Life Skills	99	12.97	2.51
Long-Term Problems			
Fraternity/Sorority Life	100	12.51	3.85
Psychological Services	93	14.62*	2.60
CHAMPS/Life Skills	99	12.96	3.67

* Area where the mean was significantly different than the others according to a Tukey's Post Hoc analysis, where □= .05

Table 4
ANOVA by Gender to Show Any Significance in Perceived and Actual Knowledge Subscale Scores

	df	Mean Square	*F*
Perceived Knowledge Subscales			
Efficacy Expectation	1	29.21	1.81
Outcome Expectation	1	46.73	1.99
Outcome Value	1	0.98	0.10
Actual Knowledge Subscales			
Risk Factors	1	0.45	0.26
Warning Signs	1	179.55	30.20*
Long-Term Problems	1	161.78	13.48*

* $p \leq .001$

Table 5
Mean and Standard Deviation Across Gender by Perceived and Actual Knowledge Subscale Scores

Subscale	N	Mean	SD
Perceived Knowledge Subscales			
Efficacy Expectation			
Female	197	29.07	4.12
Male	94	28.39	3.79
Outcome Expectation			
Female	198	26.70	4.99
Male	94	27.55	4.53
Outcome Value			
Female	198	21.33	3.24
Male	94	21.45	2.89
Actual Knowledge Subscales			
Risk Factors			
Female	198	10.13	1.27
Male	94	10.04	1.36
Warning Signs			
Female	198	13.65*	2.22
Male	94	11.97	2.85
Long-Term Problems			
Female	198	13.85*	3.28
Male	94	12.26	3.82

* Area where the mean was significantly different than the other, where □= .05.

The CHAMPS/Life Skills coordinators indicated that they were more likely than the psychological services directors to, "be caring and tell him/her that I will get them help" ($p \leq .05$) and agreed more with one inaccurate response, "talk with his/her parent, coach, advisor, or like figure" ($p \leq .001$). The CHAMPS/Life Skills professionals were also in more agreement with the "talk with his/her parent, coach, advisor, or like figure" item ($p \leq .01$) when compared to directors of fraternity/sorority life.

Psychological services professionals scored the lowest on the "be caring and tell him/her that I will get them help" item and in the middle on the "refer him/her to a psychologist or nutritionist" point. This may be because they may have already been introduced to the student in a therapeutic setting. In this case, the mental health professional already was the person helping the student, thus the student had already been referred to a professional.

There was a significant difference supported at the $p \leq .001$ level on one dimension where the CHAMPS/Life skills directors scored higher than the fraternity/sorority life and psychological services directors on an improper response: "talk with his/her parent, coach, advisor, or like figure". This result was likely influenced by the fact that mental health professionals are bound ethically to keep the client-clinician relationship confidential unless the client is personally in imminent danger or is threatening to harm someone else.

Psychological services directors responded appropriately to their profession's ethical codes, namely, they disagreed the most with both "ignoring the eating disorder" and "telling others" (e.g., parent, advisor, like figure). These professionals then agreed most with agreeing to keep

the disorder a secret (i.e., not break confidentiality). Table 6 details the ANOVA analysis results of responses by job type, while Table 7 shows how the professional groups compared with one another across responses.

Table 6
ANOVA by Primary Job to Show Any Significance in Participants' Responses to What They Would Do if They Found Out a Student Had an Eating Disorder

If I found out a student had an eating disorder, I would…	*df*	Mean Square	*F*
Promise him/her I would keep it a secret	2	0.32	0.68
Be caring and tell him/her I will get help	2	0.95	3.94*
Talk with his/her parent, coach, advisor, or like figure	2	8.36	4.76**
Ignore it	2	0.07	0.91
Refer him/her to a psychologist or nutritionist	2	0.02	0.32

* $p \leq .05$, ** $p \leq .001$

Table 7
Mean and Standard Deviation Tables of Primary Job Participants' Responses to What They Would Do if They Found Out a Student Had an Eating Disorder

If I found out a student had an eating disorder, I would…	N	Mean	SD
Promise him/her I would keep it a secret			
Fraternity/Sorority Life	100	2.69	0.65
Psychological Services	93	2.58	0.74
CHAMPS/Life Skills	99	2.67	0.66
Be caring and tell him/her I will get help			
Fraternity/Sorority Life	100	2.82	0.52
Psychological Services	93	2.73	0.59
CHAMPS/Life Skills	99	2.93*	0.33
Talk with his/her parent, coach, advisor, or like figure			
Fraternity/Sorority Life	100	3.01	1.39
Psychological Services	93	2.87	1.09
CHAMPS/Life Skills	99	3.43*	1.46
Ignore it			
Fraternity/Sorority Life	100	2.94	0.34
Psychological Services	93	2.96	0.25
CHAMPS/Life Skills	99	2.95	0.22
Refer him/her to a psychologist or nutritionist			
Fraternity/Sorority Life	100	2.96	0.24
Psychological Services	93	2.95	0.27
CHAMPS/Life Skills	99	2.93	0.30

* Area where the mean was significantly different than the others according to a Tukey's Post Hoc analysis, where □ = .05

When considering knowledge differences related to educational level, an ANOVA test supported that those with a doctoral degree scored higher than others at $p \leq .001$ on the Efficacy Expectation and Outcome Expectation subscales, while Outcome Value was supported at $p \leq .05$. It is important to note that 86.1% of those with a doctorate degree were from the psychological services field. Table 8 provides results of the ANOVA testing effects of educational degree attained with eating disorder knowledge scores. Results of the Tukey's Post Hoc analysis, found in Table 9, note where significance existed across educational level and knowledge level subscale scores.

Table 8
ANOVA by Highest Educational Degree to Show Any Significance in Perceived and Actual Knowledge Subscale Scores

	df	Mean Square	*F*
Perceived Knowledge Subscales			
Efficacy Expectation	2	476.05	36.86**
Outcome Expectation	2	261.18	11.72**
Outcome Value	2	46.25	4.86**
Actual Knowledge Subscales			
Risk Factors	2	0.83	0.49
Warning Signs	2	24.31	3.78*
Long-Term Problems	2	39.98	3.19*

* $p \leq .01$ ** $p \leq .001$

Table 9
Mean and Standard Deviation Tables Across Participants' Highest Educational Degree Obtained by Scores on Perceived and Actual Knowledge Subscales

	N	Mean	SD
Perceived Knowledge Subscales			
Efficacy Expectation			
Doctorate	72	31.94*	2.78
Master's	192	27.84	3.82
Bachelor's	20	27.00	3.95
Outcome Expectation			
Doctorate	72	29.22*	4.26
Master's	193	26.27	4.87
Bachelor's	20	25.20	4.86
Outcome Value			
Doctorate	72	22.21*	3.04
Master's	193	20.93	3.11
Bachelor's	20	21.90	3.01
Actual Knowledge Subscales			
Risk Factors			
Doctorate	72	10.24	1.30
Master's	193	10.07	1.30
Bachelor's	20	10.00	1.34
Warning Signs			
Doctorate	72	13.75*	2.40
Master's	193	12.93	2.59
Bachelor's	20	12.30	2.45
Long-Term Problems			
Doctorate	72	14.22*	2.74
Master's	193	12.99	3.79
Bachelor's	20	13.10	3.64

* Area where the mean was significantly different than the others according to a Tukey's Post Hoc analysis, where □= .05.

Regarding the effect of professional development participation on professionals' eating disorder knowledge levels, a correlation analysis yielded significant relationships at $p \leq .01$ between the frequency of professional development experiences and scores on both the Efficacy Expectation and Outcome Expectation subscales. The more professionally involved (related to eating

disorders) the participants were, the greater their scores on the Efficacy Expectation and Outcome Expectation subscales. Table 10 outlines the correlations across professional development participation and perceived eating disorder knowledge subscale scores.

Table 10
Correlation Table Showing Relationship Between Frequency of Participants' Professional Development (PD) and Scores on Perceived Knowledge Subscales

	Efficacy Expectation	Outcome Expectation	Outcome Value
Efficacy Expectation			
Outcome Expectation	.382**		
Outcome Value	.273**	.474**	
Frequency of PD	.158**	.172**	.089

* $p \leq .01$ (2-tailed)

When testing the actual knowledge subscales, results yielded no significant relationships between frequency of professional development and actual knowledge levels, suggesting that information sought by participants could either be misleading or inaccurate. Table 11 shows the correlations across professional development participation and actual eating disorder knowledge subscale scores.

Table 11
Correlation Table Showing Relationship Between Frequency Level of Participants' Professional Development (PD) and Scores on Actual Knowledge Subscales

	Risk Factors	Warning Signs	Long-Term Problems
Risk Factors			
Warning Signs	.161*		
Long-Term Problems	.026	.454*	
Frequency of PD	.038	-.031	.031

* $p \leq .01$ (2-tailed)

Summary and Conclusion

Overall, the group of participants in this study appeared very interested in the topic of eating disorders, likely because of personal vestment noted in the following results. The majority (61.9%) of those completing the survey noted that someone close to them had suffered from an eating disorder. Forty-five participants (14.3%) reported that they personally have struggled with an eating disorder. The results of these two items, along with professionals' high engagement levels in professional development related to eating disorders and their great desire to learn more to better assist students in need, indicated great promise.

The desire to learn more may help increase professionals' confidence in approaching students who display risk factors suggesting possible disordered eating or eating disorder pathology. One hundred and five professionals (36%) reported that they had never asked a student if he/she had an eating disorder. The remaining group had approached at least one student about a suspected eating disorder.

The sample of professionals also proved to be proactive in nature by affirming in great numbers (77%) the importance for colleges and universities to establish an eating disorder treatment policy. Those who agreed may need help formulating an effective policy or benefit from receiving sample policies to best protect their students' health. A team of physicians, mental health professionals, nurses, nutritionists, athletic trainers, and student affairs professionals would be most effective in considering all students' needs.

Only when student personnel professionals take action to learn more about eating disorders and how to most effectively identify, approach, and refer students suspected to have eating disorders can progress be made and lives saved. The professionals in this study were promisingly aware (*n* = 253; 86.6%) that their professional organizations provided educational materials on eating disorders. Upon completion of the study, the participants were directed to downloadable and reproducible educational information from the National Eating Disorders Association's Web site (www.nationaleatingdisorders.org). With further awareness comes hope for action, and with action comes change.

References

Alexander, L. A. (1998). The prevalence of eating disorders and eating disordered behaviors in sororities. *College Student Journal, 32,* 66-75.

Allison, K. C., & Park, C. L. (2004). A prospective study of disordered eating among sorority and non-sorority women. *International Journal of Eating Disorders, 35,* 354-358.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Anorexia Nervosa and Related Eating Disorders, Inc. (2006). *Athletes with eating disorders.* Retrieved August 30, 2006, from http://www.anred.com/ath.html

Ash, S. L., & McClelland, J. W. (2001). Exploring attitudes towards body weight and eating behaviors of women in college. *The Forum for Family and Consumer Issues,* 6. Retrieved October 7, 2006, from http://www.ces.ncsu.edu/depts/fcs/pub/2001sp/ash.html

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191-215.

Cashel, M. L., Cunningham, D., Landeros, C., Cokley, K. O., & Muhammad, G. (2003). Sociocultural attitudes and symptoms of bulimia: Evaluating the SATAQ with diverse college groups. *Journal of Counseling Psychology, 50*, 287-296.

Compas, B. E., Wagner, B. M., Slavin, L. A., & Vannatta, K. (1986). A prospective study of life events, social support, and psychological symptomatology during the transition from high school to college. *American Journal of Community Psychology, 14,* 241–257.

Heffner, J. L., Ogles, B. M., Gold, E., Marsden, K., & Johnson, M. (2003). Nutrition and eating in female college athletes: A survey of coaches. *Eating Disorders, 11,* 209-220.

Hoerr, S. L., Bokram, R., Lugo, B., Bivins, T., & Keast, D. R., (2002). Risk for disordered eating relates to both gender and ethnicity for college students. *Journal of the American College of Nutrition, 21,* 307-314.

Hoyt, W. D., & Ross, S. D. (2003). Clinical and subclinical eating disorders in counseling center clients: A prevalence study. *Journal of College Student Psychotherapy, 17*(4), 39-54.

Johnson, C., Powers, P., & Dick, R. (1999). Athletes and eating disorders: The National Collegiate Athletic Association study. *International Journal of Eating Disorders, 26,* 179-188.

Leon, G. R., Fulkerson, J. A., Perry, C. L., & Early-Zald, M. B. (1995). Prospective analysis of personality and behavioral vulnerabilities and gender influences in the later development of disordered eating. *Journal of Abnormal Psychology, 104,*140–149.

Martz, D. M., Graves, K. D., & Sturgis, E. T. (1997). A pilot peer-leader eating disorders prevention program for sororities. *Eating Disorders: The Journal of Treatment and Prevention, 5,* 294-308.

Mehler, P.S., Gray, M.C., & Schulte, M. (1997). Medical complications of anorexia nervosa. *Journal of Women's Health, 6*, 533-541.

National Collegiate Athletic Association. *CHAMPS Life/Skills program history.* Retrieved May 27, 2005, from http://www1.ncaa.org/membership/ed_outreach/champs-life_skills/index.html

Prouty, A. M., Protinsky, H. O., & Canady, D. (2002). College women: Eating behaviors and help seeking preferences. *Adolescence, 37,* 353-362.

Schulken, E. D., Pinciaro, P. J., Sawyer, R. G., Jensen, J. G., & Hoban, M. T. (1997). Sorority women's body size perceptions and their weight-related attitudes and behaviors. *Journal of American College Health, 46,* 69-74.

Schwitzer, A. M., Bergholz, K., & Dore, T. (1998). Eating disorders among college women: Prevention, education, and treatment responses. *Journal of American College Health, 46,* 199-207.

Sherman, R., & Thompson, R. (2001). Athletes and disordered eating: Four major issues for the professional psychologist. *Professional Psychology: Research and Practice, 32,* 27-33.

Sullivan, P. F. (1995). Mortality in anorexia nervosa. *American Journal of Psychiatry, 152,* 1073-1074.

Turk, J. C., Prentice, W. E., Chappell, S., & Shields, E. W. (1999). Collegiate coaches' knowledge of eating disorders. *Journal of Athletic Training, 34,* 19-24.

United States Department of Health and Human Services. (2004). *National health information center's center for mental health services: Eating disorders.* Retrieved April 4, 2003, from http://www.mentalhealth.samhsa.gov/publications/allpubs/KEN98-0047/default.asp

Vaughan, J. L., King, K. A., & Cottrell, R. R. (2004). Collegiate athletic trainers' confidence in helping female athletes with eating disorders. *Journal of Athletic Training, 39,* 71-76.

Michelle Nicopolis, Ph.D., PC, NCC, is a Counselor/Instructor at Cuyahoga Community College in Parma, Ohio. She has worked as a professional for over 10 years in a variety of higher education settings and student affairs positions including: directing student-athlete services, coordinating counseling outreach services, heading fraternity/sorority life leadership events, creating and restructuring orientation programs, teaching numerous workshops and classes, and advising student organizations. Dr. Nicopolis earned her Ph.D. in Urban Education/Counseling from Cleveland State University, her M.A. in Counseling/Social Psychology from Ball State University, and her B.A. from Hiram College in Communication, Exercise/Sport Science, and Psychology. Her research interests include: transition to college life, eating disorder education, and sports psychology applications.