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Greek Life Membership As A Predictor Of Exercise Dependency

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GREEK LIFE MEMBERSHIP AS A PREDICTOR OF EXERCISE DEPENDENCY

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To my wonderful husband, Ty.

ABSTRACT

Exercise is often regarded as a staple of a healthy lifestyle. Working out in excess, though, can easily become detrimental to an individual's mental and physical wellbeing. Physical activity that is carried out in a compulsive and regimented manner, even when it may interfere with daily life or physical health, is referred to as exercise dependency. While not it's own mental disorder, it has often been described as a secondary disorder in tandem with an eating disorder, and can be identified using the same criteria as one would use to diagnose Substance Use Disorder. The paradoxical nature of an addiction to a positive activity has led to many gaps in research on the topic. The gap addressed in the current study is that of the effect that a college student's participation in a Fraternity or Sorority, collectively referred to as Greek Life, on one's development of exercise dependence. Previous studies of Greek Life members has suggested higher occurrence of eating disorders and distorted body image than non-involved college students, both of which are associated with development of exercise dependence. The current study examined the relationship between Greek Life Membership and exercise dependency using scores from the Exercise Dependence Scale (ESD-21), Reasons for Exercise Inventory (REI), And Eating Attitudes Test (EAT). It was hypothesized that members of fraternities and sororities will score higher on measure of exercise dependency and disordered eating than those who do not participate in Greek life, and there would be a significant interaction between exercise dependence and disordered eating. It was also hypothesized that members of Greek life would score higher on the weight/appearance management and social factors of the Reasons for Exercise Inventory than non-members.

An analysis of hypothesis 1 showed that while there were significant main effects of Greek life and gender on measures of exercise dependency and disordered eating, there was no significant reaction. Males had significantly higher scores on the tolerance, lack of control, reduction in other activities, and time subscales of the of the Exercise Dependence Scale, as well as overall EDS scores. Females had significantly higher scores on the Eating Attitudes Test. Greek life members had significantly higher scores on the overall score of the EDS, as well as all seven subscales: withdrawal effects, continuance, tolerance, lack of control, reduction in other activities, time, and intention effects.

Analysis of hypothesis 2 revealed that there were insignificant results analyzing the effect of Greek life membership on the Reasons for exercise Inventory.Follow-up ANOVAs showed that Greek life members had significantly higher scores on the overall Reasons for Exercise Inventory, as well as the Fitness and Health Management and Stress and Mood Management subscales. There were not significant effects of Greek life membership on the Appearance and Weight Management or Social Reasons subscales.

Keywords: Exercise Dependence, Exercise Addiction, Greek Life, Sorority, Fraternity, Eating Disorders

CHAPTER I

INTRODUCTION

In 2019, heart disease and diabetes were the 1st and 7th leading cause of death in America, respectively, both of which can be caused by obesity (*How Much Physical Activity Do Adults Need?,* 2020). With obesity an ever-present problem in current times, it is important that adults are diligent in their quest for health. Exercise is often thought of as a crucial component of leading a healthy lifestyle. The Centers for Disease Control and Prevention recommend that adults get 150 minutes of physical activity a week, which equates to roughly 30 minutes a day, 5 days a week (*How Much Physical Activity Do Adults Need?,* 2020).

The adverse effects of the push to eat healthily, eating disorders, have been studied for many years. What has not been thoroughly studied, however, is the adverse effects of exercise on the psyche. Some individuals become so obsessed with the act and thought of physical exercise, that they cannot function normally until they have exercised. This phenomenon was first documented in 1976 as a "positive addiction" in runners, as the effects were subjectively more desirable than an addiction to a substance such as drugs or alcohol (Glasser, 1976). This will be referred to throughout the current study interchangeably as exercise dependence, exercise addiction, or obligatory exercise.

Exercise dependence can manifest either as a primary diagnosis, or, more often, as a secondary diagnosis with a primary diagnosis of an eating disorder. Primary diagnoses are rare, as exercise is often used to control weight, which is expedited when paired with disordered eating behaviors(Chamberlain & Grant, 2020). Exercise dependence can cause an individual to engage in exercise until they suffer an overuse related injury, and continue to exercise against a

physician‘s recommendations. Obligatory exercisers spend much of their time planning out their next workout, and sudden events such as a friend asking to have lunch that day may be met with a “no“ if it interferes with their plans to exercise.

The recentness of the majority of literature on exercise dependence leads to a lack of research on many populations. The population sought to gain insight into through the current study is that of Greek life, individuals that are members of fraternities or sororities on their college campus. The interest in the correlation between Greek life and exercise dependence comes from the idea that they are a unique social group, as membership is granted by older members of the chapter who has only met them a few times. It can then be deemed that a large portion of the criteria that prospective members are judged on as to whether they will be a “good fit” is appearance based (Arthur, 1997). The resulting pressure to achieve and maintain a culturally desirable body shape makes members and potential members particularly susceptible to eating disorders, and possibly, as will be explored in the current study, exercise dependence.

The present study seeks to discover if there is, indeed, a significantly larger likelihood that those who are members of Greek life also meet criteria for exercise dependence. This may be as either a primary or secondary diagnosis, as criteria for disordered eating will also be surveyed for. Exercise dependence may not always lead to an individual being underweight, but the disruption and inflexibility of schedule, as well as causation and aggravation of injury is cause for great psychological distress, and demands research to aid in the exploration for an adequate therapy.

Effect of Greek Life on Body Image

Research conducted by Chapman, Hirt, and Spruill (2008) found that the week-long sorority recruitment process significantly decreases the self-esteem of those who withdrew from

the process, but significantly increased self-esteem of those who successfully completed recruitment, measured by the Rosenberg Self-Esteem Scale.

This self-esteem boost, however, may just be a temporary one. There are many studies that conclude that sorority membership increases one's risk of negative body image, and disordered eating behaviors. One such study was completed by Schulken, Pinciaro, Sawyer, Jensen, & Hoban (1997), in which women who were members of sororities completed the Eating Disorder Inventory as well as a SMI Silhouettes Survey. The latter involves the participant looking at 7 silhouettes of varying BMIs, for which the number was replaced with the letters A-G, and selecting the silhouette that they believe is most representative of their current body size. The researchers found that the women who were members of a sorority scored significantly higher in drive for thinness and body dissatisfaction in comparison to their non-affiliated female peers in a previous studies (Brookings & Wilson, 1994) (Klemchuk et al., 1990) (Kurtzman et al., 1989). In addition, when asked what their ideal body would look like, 81% of the sorority members chose a silhouette that depicted an underweight body. These findings suggest that Greek life affiliation further perpetuates the thin-ideal that many cultures promote.

The immense pressure an individual in a sorority or fraternity feels to appear a certain way can be partially attributed to symbolic self-completion theory, in which an individual adopts a certain appearance in order to appear that they belong in the role that they are in (Arthur, 1997). This most commonly appears in the form of apparel or other accessories that have the Greek letters that symbolize the sorority or fraternity, but it can also materialize in the overall appearance of the individual. In Arthur's study, interviews with members of two sororities confirm that oftentimes to look the part of a "sorority girl", members alter their appearance. This can include bleaching hair, wearing fashionable clothing, tanning skin, and being perceived as

"thin". There is a gap in research regarding this phenomenon in fraternity members, but it would not be illogical to hypothesize that fraternity members self-complete in a similar manner.

The literature surrounding the effect of fraternity membership on male self-image is not as vast, but evidence that there is a relationship between the two does exist. A sample of fraternity men at a college campus were asked to complete a survey on their attitudes towards their bodies and working out.(Malburg, 2006) The researcher found that 36% of the participants met criteria for muscle dysmorphia, a form of body dysmorphic disorder in which one becomes obsessed with the idea of developing large muscles. This may involve spending excessive amounts of time lifting weights, taking nutritional supplements, or using anabolic steroids. (Pope et al., 1997) Further, Malburg also found that 19% of fraternity members felt that their weightlifting caused a significant disruption in their everyday lives, an indicator of exercise dependence. (Coverley Veale, 1987)

There is also significant evidence that being an active member of Greek life leads to more alcohol consumption than college students who are not in a fraternity or sorority (Ward et al., 2015). It has also been found that highly active students are more likely to binge drink (Barry & Piazza-Gardner, 2012) which suggests exercise being used as a means to offset the calories consumed while binge drinking, a term coined "drunkorexia". In their 2015 study, Ward and associates also found that affiliation with Greek life predicted the practice of restricted eating behaviors on days that alcohol was being consumed to prevent weight gain.

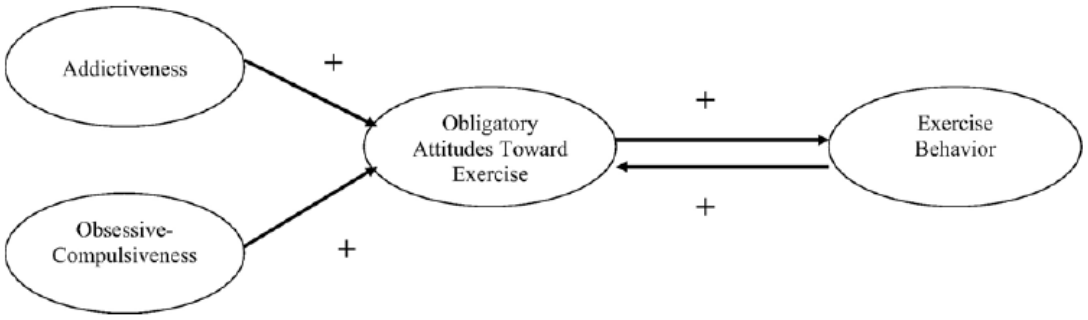
Exercise as a Means of Weight Loss/Control

In their 1999 study, Davis, Katzman, & Kirsh developed the original structural model of obligatory exercise (Figure 1). The research was conducted on adolescents diagnosed with

Anorexia Nervosa. The model shows both obsessive compulsive and addictive personality traits as predictors of obligatory attitudes towards exercise. The authors postulate that those who exhibit obsessive compulsive traits may cause one to have a larger desire to fit into societal beauty standards than those who do not possess those traits, leading to an obligatory attitude towards exercise in order to do so.

Figure 1

Original Structural Model of Obligatory Exercise (Davis et al., 1999)



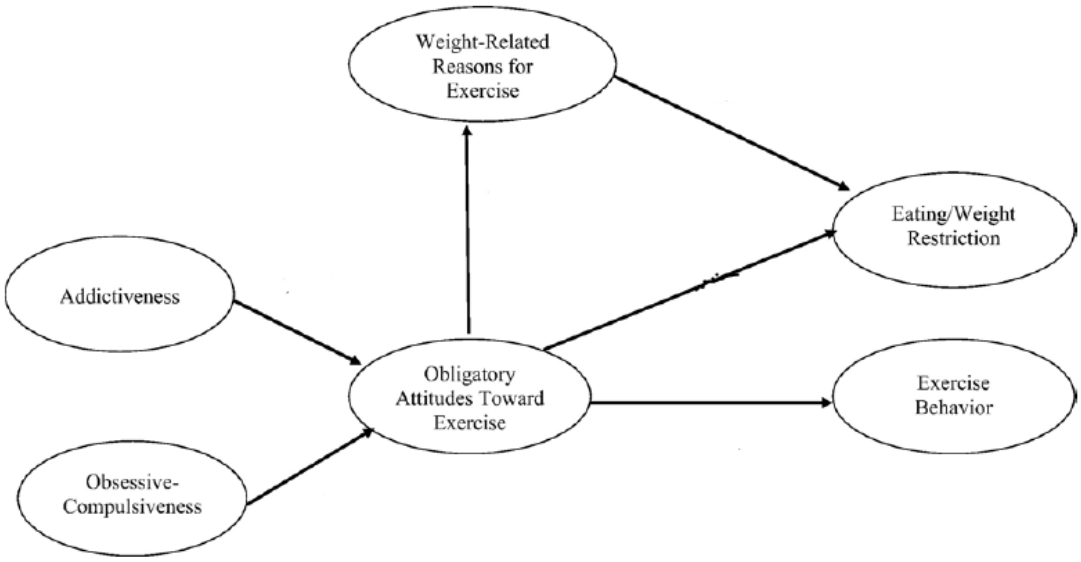
An individual's motivation for exercising may have an impact in the emotions that result from engaging in an exercise session. A study of 321 college women studied the relationship between motivation for exercise and body positivity (Homan & Tylka, 2014). An individual with low appearance based reasons for exercise engaged in physical activity for reasons such as health or enjoyment, not weight loss or changing the shape of the body, whereas those with high appearance based motivation exercised in order to lose weight and attain what they perceive to be an ideal body shape. The three components used to describe positive body image in this study were body appreciation, internal body orientation, and functional body satisfaction. Body appreciation is the respect and approval one has for their body. Internal body orientation is a focus on how well a person feels that their body is functioning, as opposed to the appearance of

the body. Functional body satisfaction refers to an individual's satisfaction with the capabilities of their body (Frisén & Holmqvist, 2010). It was found that those who had low appearance based reasons for exercise had a positive relationship between an increase in exercise and positive body image. The women who had high appearance based motivation for exercise not only had a weakened relationship between increased exercise and functional body satisfaction as well as internal body orientation, there was a negative relationship between increased exercise and body appreciation for these individuals (Homan & Tylka, 2014). The authors suggested that to combat this effect women should participate in exercise for health reasons, and move away from exercising for appearance altering reasons. The pressure women in sororities feel to adopt the appearance of the role that they are involved in would create high appearance based motivations for exercise, which can result in lessened body positivity as exercise increases.

The original model was expanded upon by Thome & Espelage (2007) with a sample of non-clinical college females. This study extended the original model by adding a motivational factor (Figure 2). The authors found that their results were consistent with the original results, suggesting that while addictive and obsessive compulsive traits do not directly effect exercise habits, they do effect the attitudes participants have toward exercise. The authors also found that when asked to identify which silhouette looked most like their current body size, 36.1% of participants classified by BMI as underweight chose a silhouette that was larger than their calculated BMI. When asked to select the body that most represented what they felt was the size women should be, 62.1% of the participants selected underweight silhouettes.

Figure 2

Extended Structural Model of Compulsive Exercise (Thome & Espelange 2007)



It would be no surprise, then, to find a correlation between eating disorders and a dependency on exercise. (Schlegl et al., 2018). (2018) studied a sample of 109 healthy control females, 151 inpatient females with a primary diagnosis of anorexia nervosa, and 75 inpatient females with a primary diagnosis of bulimia nervosa, and concluded just this. The authors found that those diagnosed with anorexia nervosa and bulimia nervosa scored significantly higher on the Compulsive Exercise Test than healthy controls. More specifically, they scored significantly higher in the subcategories of avoidance and rule driven behavior, weight control exercise, mood improvement, and exercise rigidity. The Exercise Motivations Inventory-2 showed that those with anorexia nervosa scored significantly higher than healthy controls in Stress Management being a motivation for their exercise habits, while those with anorexia nervosa and bulimia nervosa scored significantly higher than healthy controls in Enjoyment, Challenge, Social Recognition, and Weight Management. Those with bulimia nervosa scored significantly higher

than healthy controls and those with anorexia nervosa in Appearance. The healthy controls scored significantly higher than the other groups in only one category: Ill-Health Avoidance. These findings suggest that many women with either anorexia nervosa and bulimia nervosa's motivations for exercise do not lie in a desire to lead healthy lives, rather as a tool to further their control over their appearance and weight. This, along with the findings that those in sororities experience a higher level of dissatisfaction with their bodies (Klemchuk et al., 1990; Kurtzman et al., 1989; Schulken et al., 1997), would lead to a possible correlation between sorority involvement and compulsive exercise. None of these studies include men with or without fraternity membership, which is a large gap in the research in the areas of male body dissatisfaction and exercise motivations.

Exercise Dependence

Compulsive exercise extends beyond the feeling that an individual might have that they must exercise a certain amount of days a week. It can also include a compulsion for a certain amount of time, repetitions, or distances in order for the work out to feel "complete". Taranis and Meyer (2010) sought to determine the relationship between self-criticism, high personal standards, and compulsive exercise. The authors found that high personal standards were associated with only the avoidance and rule-driven behavior component of compulsive exercise, whereas self-criticism was also associated with weight and shape exercise and exercise rigidity in addition to avoidance and rule-driven behavior, which suggests that self-criticism may be a more significant predictor of compulsive exercise. This finding may indicate that there is a relationship between compulsive exercise and Greek life affiliation, as the pressure to uphold the standard aesthetic of a stereotypical sorority or fraternity member leads to high personal standards and self-criticism.

In 2018, Serier et al. studied a sample of women who were in treatment for body dissatisfaction, who then completed the Obligatory Exercise Questionnaire. The authors found that women who were identified as obligatory exercisers had significantly different reasons for exercising, citing mood and appearance-based reasons, than those who did not exercise obligatorily. Those who engage in obligatory exercise were also more likely to use avoidant coping strategies. Since this study was limited to a sample of only women who were in treatment for body dissatisfaction, it would be beneficial to study men as well as individuals who were not dissatisfied with their bodies.

Exercise addiction as a primary diagnosis is quite abnormal. In their recent study, Chamberlain and James (2020) surveyed 642 young adults, assessing problematic exercise, quality of life, impulsivity, compulsivity, disordered eating, obsessive compulsive symptoms, and emotional dysregulation. The authors found that only 1.1% of those who participated had a high enough score on the Exercise Addiction to suggest a primary diagnosis of exercise addiction. They did find, however, that problematic exercise was associated with worse quality of life and maladaptive personality traits. There is evidence to suggest that strong relationships provide a protective factor against compulsive exercise in sorority members (Patterson & Goodson, 2018). This, combined with the evidence that problematic exercise creates conflict within relationships (Chamberlain & Grant, 2020) suggests that those involved in Greek Life could be particularly susceptible to a pattern of compulsive exercise.

Current Study

Research in obligatory exercise has allowed for insight into what separates a healthy practice from a dependence on physical activity. While this area of research has expanded exponentially within the last twenty years, there are still gaps. A large amount of the studies have

focused on female participants, leaving nearly 50% of the population out of the literature. There is a vast amount of research into the connection between sorority members and disordered eating patterns, yet virtually none connecting eating disorders to fraternity membership. Further, there is a lack of research of Greek life affiliation and exercise dependence.

There are 2 hypotheses being focused on in the current study. Hypothesis 1 predicts that members of fraternities and sororities will score higher on measures of exercise dependency and disordered eating than those who do not participate in Greek life, and there will be a significant interaction between exercise dependence and disordered eating. Hypothesis 2 predicts that individuals involved in Greek life will be more motivated to exercise for weight management/appearance and social reasons, as opposed to fitness/health management and stress/mood management, than those who are not in a fraternity or sorority.

CHAPTER II

METHOD

Recruitment of Participants

Participants were undergraduate students who were recruited through the online research pool system at a small university in the Midwest. An a priori power analysis conducted with G*Power 3.1.9.7 determined that at least 98 participants would be needed to detect a medium-sized effect with 80% certainty for hypothesis 1, and 125 participants to detect a medium-sized effect with 80% certainty for hypothesis 2. A total of 150 students completed the questionnaires. During data cleaning, 8 cases were excluded either for missing information, or for being an outlier. Of the 142 cases retained, there were 68 males (37 unaffiliated in Greek life, 31 fraternity members) and 74 females (38 unaffiliated in Greek life, 36 sorority members).

Procedure

The purpose of the current study is to expand upon current research int exercise dependence by focusing on a population whose unique social status increases their likelihood to believe that they must look a certain way (Schulken et al. 1997). In this study, it is predicted that individuals that are active members of Greek life (i.e. fraternities or sororities) will score significantly higher on exercise dependency measures, but the majority of participants who have an exercise dependence will also score significantly in measures of disordered eating, as exercise addiction as a primary diagnosis is quite rare (Chamberlain & James 2020).

Demographic information will be collected in order to assess the amount of exercise the participants are partaking in weekly, as well as the type of exercise being performed, which will provide insight into the possibility of certain modes of physical activities being conducive to exercise dependence. Participants will also indicate whether or not they are involved in a sorority or fraternity, as to determine whether or not membership in Greek life, a social environment which is historically apt to instill beliefs within its members that they must appear stereotypically attractive (Schulken et al. 1997), is linked to a higher prevalence of exercise dependence.

Participants will be assessed on both their motivations for and dependence on exercise. Assessing the motivations for exercise will allow us to determine if an individual is exercising for appearance-based reasons. Measuring dependence on exercise allows for insight into whether the amount of exercise being engaged in is concerning.

Disordered eating behaviors and thoughts will be assessed, as there is significant evidence that eating disorders and exercise dependence are most often comorbid, specifically exercise dependence usually manifests as a secondary diagnosis to an eating disorder (Bamber, 2000). Exercise often exacerbates eating disorders, and there is evidence that those with eating disorders are less likely to be motivated to cease obligatory exercise than they are to cease behaviors such as purging or binge eating (Kambanis et al., 2020).

Measures

Demographic Questionnaire. Participants were administered a questionnaire to assess age, sex assigned at birth, gender identity, Greek life involvement, participation in intramural sports, hours per week of exercise, and type of physical activity performed.

Exercise Dependence Scale (EDS-21). This inventory has 21 items that assess exercise behaviors and cognitions. Participants answer each question on a scale from 1 "never" to 6 "always". This metric was developed in consistence with the DSM-IV criteria for substance dependence; in which the individual suffers from maladaptive exercise patterns which manifest in 3 of the 7 following: tolerance, withdrawal, intention effect, lack of control, time, reduction in other activities, and continuance (*Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)*, 2000). The scale was found to be internally valid, with Cronbach's alpha in the range of 0.67 to 0.93 for the seven criteria (Downs et al., 2004).

Reasons for Exercise Inventory (REI). This 24-item questionnaire determines the participant's motivations for exercise. Each question is rated on a 7-point Likert scale from 1 "not at all important" to 7 "very important". The four factors assessed are "Fitness/Health Management", "Appearance/Weight Management", "Stress/Mood Management", and "Socializing" (Silberstein et al., 1988) All four factors have been determined to be internally consistent (Cash et al., 1994).

Eating Attitudes Test (EAT-26). The EAT is a 3-part metric designed to assess individual's anorexic and bulimic behaviors and attitudes. (Garner & Garfinkel, 1979).Part A asks the participant's height and weight in order to determine BMI, as well as highest, lowest, and ideal adult weight. Part B consists of 26 questions which are answered on a 6 point Likert scale, with choices of "never" "rarely", "sometimes", "often", "usually", and "always". Part C asks the participant about their behaviors regarding eating, with choices of "never", "once a month or less", "2-3 times a month", "once a week", "2-6 times a week", and "once a day or more", along with one "yes" or "no" question. The test is scored solely based on answers to Part B, with a total possible score of 76. Scores above 20 indicate disordered eating, with 31

indicating severely disordered eating attitudes. Part B should be evaluated in conjunction with A and C for a more holistic insight into the individual. This inventory has been determined to be an ideal measurement in detecting eating disorder diagnosis, with a Cronbach's alpha of 0.89 (Constaín et al., 2017).

Data Analysis Plan

To test hypothesis 1, that members of fraternities and sororities will score higher on measures of exercise dependency and disordered eating than those who do not participate in Greek life, and there will be a significant interaction between exercise dependence and disordered eating, a two-way multivariate analysis of variance (MANOVA) was conducted. Data from the Eating Attitudes Test and the Exercise Dependence Scale was used as measures of disordered eating and exercise dependency. Univariate analysis of variance (ANOVAs) were conducted as follow up tests to evaluate group differences.

To test hypothesis 2, that members of Greek life will score higher on the weight/appearance management and social factors of the Reasons for Exercise Inventory, a 2-way factorial ANOVA was conducted. Univariate analysis of variance (ANOVAs) were conducted as follow up tests to evaluate group differences.

Reliability analyses were performed on the Exercise Dependence Scale, Reasons for Exercise Inventory, and Eating Attitudes Test. All three measurements were found to have highly reliable Cronbach's alpha values. The Exercise Dependence Scale contains 21 items (α=0.862), the Reasons for Exercise Inventory contains 26 items (α=0.889), and the Eating Attitudes Test contains 31 items (α=0.915).

CHAPTER III

RESULTS

Descriptive Statistics

After removing the cases that were not complete, there were 142 participants in the study, 68 males (37 unaffiliated in Greek life, 31 fraternity members) and 74 females (38 unaffiliated in Greek life, 36 sorority members. Descriptive data of the participants (Table 1) showed that both the current and ideal weight of those involved in Greek life was slightly lower than those not involved. Unaffiliated females exercised on an average of 2.11 days a week, while those in sororities did on an average of 3.61 days. Unaffiliated males exercised on average 3.54 days a week, while those in fraternities completed 4.81 days a week on average (Table 2). The average duration of exercise each session varied by group, as detailed in Table 3, with the majority of unaffiliated females engaged in less than 30 to 60 minutes of exercise, affiliated females engaged in 30 to 60 minutes, unaffiliated males engaging in 30 to 90, and affiliated males 60 to 90 minutes per day of exercise. General descriptives were completed on the Exercise Dependence Scale, Reasons for Exercise Inventory, and Eating Attitudes Test before multivariate analysis of variance was performed, which can be seen in Table 4.

Analysis of Hypothesis 1

MANOVAS. A factorial MANOVA was conducted to determine the effect of Greek life affiliation and gender on the dependent variables of the Exercise Dependence Scale (EDS) and the Eating Attitudes Test (EAT). Participants that did not complete every question of the questionnaire were removed. Box's Test of Equality of Covariance Matrices was found to be insignificant, so Wilks' Lambda criterion was used. MANOVA results indicate that gender

[Wilks' Λ= 0.708, F(9,130)=5.949, p=<0.001, η^2 =0.292] and Greek life affiliation[Wilks' Λ=0.803, F(9,130)=3.555, p=<0.001, η^2 =0.197] significantly affected the combined DV. There was no significant interaction between the two independent variables. Univariate ANOVA tests were conducted as follow-up tests. ANOVA results indicate that gender significantly differs for the EDS total score[F(1,138)=11.713, p=<0.001, η^2 =0.078] and EAT[F(1,138)=9.491, p=0.002, η^2 =0.064]. More specifically, the tolerance[F(1,138)=17.368, p<0.001, η^2 =0.112], lack of control[F(1,138)=14.179, p=<0.001, η^2 =0.093], reduction in other activities[F(1,138)=14.688, p=<0.001, η^2 =0.096], and time[F(1,138)=9.646, p=0.002, η^2 =0.065] subscales of the EDS were significantly different for gender. Greek life affiliation was also significantly different for the EDS total [F(1,138)=18.112, p=<0.001, η^2 =0.116]. The withdrawal effects[F(1,138)=8.587, p=0.004, η^2 =0.059], continuance[F(1,138)=7.906, p=0.006, η^2 =0.054], tolerance[F(1,138)=22.359, p=<0.001, η^2 =0.139], lack of control [F(1,138)=14.713, p=<0.001, η^2 =0.096], reduction in other activities[F(1,138)=7.090, p=0.009, η^2 =0.049], time[F(1,138)=14.353, p=<0.001, η^2 =0.094], and intention effects[F(1,138)=8.959, p=0.003, η^2 =0.061] subscales, which make up all of the subscales in the EDS, were significantly different for Greek life affiliation.

Post-hoc Tests. Post-hoc tests indicate that males [M=59.250, SD=18.315] scored significantly higher than females [M=50.824, SD=14.975] in the total EDS score. Males [M=10.19, SD=3.351] scored significantly higher than females [M=8.270, SD=2.868] in the tolerance subscale of the EDS. Males [M=7.618, SD=3.532] scored significantly higher than females [M=5.8913, SD=2.620] in the lack of control subscale of the EDS. Males [M=6.824, SD=2.671] scored significantly higher in the reduction in other activities subscale of the EDS. Males [M=8.059, SD=2.972] scored significantly higher than females [M=6.757, SD=2.606] in

the time subscale of the EDS. Females [M=11.189, SD=10.489] scored significantly higher than males [M=6.735, SD=5.637] on the EAT.

Those affiliated with Greek life [M=60.537, SD=16.241] scored significantly higher on the EDS total score than unaffiliated individuals [M=49.787, SD=16.383].Greek life members [M=9.299, SD=2.594] scored significantly higher in the withdrawal effects subscale of the EDS than nonmembers [M=7.987, SD=2.897]. Greek life members (M=8.956, SD=2.982) scored significantly higher than nonmembers [M=7.587, SD=3.107] on the continuance subscale of the EDS. Greek life members [M=10.358, SD=3.213] scored significantly higher than nonmembers [M=8.147, SD=2.916] on the tolerance subscale of the EDS. Greek life members [M=7.718, SD=3.445] scored significantly higher on the lack of control subscale of the EDS than nonmembers [M=5.880, SD=2.721]. Greek life members [M=6.582, SD=2.786] scored significantly higher than nonmembers [M=5.587, SD=2.267] on the reduction in other activities subscale of the EDS. Greek life members [M=8.239, SD=2.845] scored significantly higher on the time subscale of the EDS than nonmembers [M=6.613, SD=2.650]. Greek life members [M=9.448, SD=2.798] scored significantly higher than nonmembers [M=7.987, SD=3.087] on the intention affects subscale of the EDS.

Analysis of Hypothesis 2

MANOVA. To determine the effect of Greek life affiliation on the dependent variables of the Reasons for Exercise Inventory (REI) total mean, as well as the 5 REI subscales, a One-Way Multivariate analysis of variance was conducted. The analysis found that there was not a significant main effect of Greek Life affiliation.

Post-hoc tests. Follow-up ANOVAS revealed that, as predicted, there was a significant effect of Greek Life affiliation on the REI total score [F (1,140) = 5.590, p=0.019, η^2 =0.039]. Greek life members [M=3.936, SD=0.742] also scored significantly higher on the overall REI score than non-members [M=3.612, SD=0.876]. Unlike the predicted result, there was no significant effect of Greek life on the Appearance and Weight Management [F (1,140) = 1.344, p=0.248, η^2 =0.01] or Social reasons [F (1,140) = 1.348, p=0.248, $\eta 2$ =0.01]subscales, but there was a significant effect of Greek life on the Stress and Mood Management subscale [F(1,140)= 4.430, p=0.033, η^2 =0.031] and the Fitness and Health Management subscale [F(1,140) = 6.154, p=0.014, η^2=0.044]. Those affiliated with Greek life [M=3.981, SD=1.153] scored significantly higher on the Stress and Mood Management subscale than undergraduates that are not in Greek life [M=3.520, SD=1.296]. Those involved in Greek life [M=4.511, SD=0.752] scored significantly higher on the Fitness and Health Management subscale.

CHAPTER IV

DISCUSSION

The purpose of the current study was to explore the relationship between Greek Life membership and exercise. In particular, the measures used in this study sought to discover if those who were in Greek Life were more prone to exercise dependence than those who are unaffiliated. To demonstrate this, the Exercise Dependency Scale was administered. In addition to this measurement, which illustrates the participants' exercise habits using the criteria used to assess substance use disorder, the Reasons for Exercise Inventory was used to highlight the motivations that subjects' had for exercising. In order to distinguish exercise dependency from eating pathology, the Eating Attitudes Test was included. Subsequent to data collection, Analyses were run to determine whether the independent variables of Greek life membership and gender had an effect on the participants' scores on the overall and subscales of the Exercise Dependence Scale, as well as their scores on the Exercise Attitudes Test. The relationship between Greek life membership and one's score on the Reasons for Exercise Inventory and its' subscales was also analyzed.

The factorial MANOVA that was conducted to determine the effect of Greek life affiliation and gender on the dependent variables of the Exercise Dependence Scale and the Eating Attitudes Test revealed that there was a significant effect of both independent variables on the dependent variables, but no interaction effect. More specifically, follow-up ANOVAs showed that in regards to gender, males had significantly higher scores on the tolerance, lack of control, reduction in other activities, and time subscales of the of the Exercise Dependence Scale, as well as overall EDS scores. Females had significantly higher scores on the Eating Attitudes Test. Those who were a member of a fraternity or sorority had significantly higher scores on the

overall score of the EDS, as well as all seven subscales: withdrawal effects, continuance, tolerance, lack of control, reduction in other activities, time, and intention effects. These results suggest that while males show more signs of exercise dependence, specifically building a tolerance to workouts, an inability to stop themselves from working out, reducing our ceasing other plans to work out, and spending excessive time working out, females were more likely to exhibit disordered thought patterns in regards to eating habits and attitudes. This could be due to the stereotype of a woman's ideal body being more centered around being thin, while men may be more inclined to have a more muscular body – not a thin one. Those who were members of a Greek life organization may feel that they need to work out in excess in order to fulfill the stereotype that people who are in a fraternity or sorority are conventionally attractive. They may subscribe to this stereotype either from an assumption as an individual who is rushing, or from firsthand knowledge of the recruitment process and the role that an individual's physical appearance have on their likelihood of being asked to join the organization.

The multivariate analysis of variance run to determine the effect of Greek life membership on participants' motivations for exercise produced insignificant results, although one-way ANOVAs showed that Greek life members had significantly higher scores on the overall Reasons for Exercise Inventory, as well as the Fitness and Health Management and Stress and Mood Management subscales. There were not significant effects of Greek life membership on the Appearance and Weight Management or Social Reasons subscales, contrary to the prediction of the investigators. This could be that Greek life members may feel that it is important for the participants in their organization to be in good physical health, which subsequently has the outcome of a change in physical appearance. In this way, fitness is the primary reason, and the secondary motivation of physical appearance is a welcomed byproduct.

There could also be many sorority members that are using disordered eating as a means to control appearance and weight, as demonstrated by their scores on the Eating Attitudes Test, which would make appearance reasons for exercise less necessary for them. Social reasons may not be significant, as Greek life is a social organization, and the people they may workout could already be friends from their chapter.

Limitations

There are several limitations that may have hindered the results of the current study. The study was limited to a single semester at one university. Having universities from differing regions in the United States may have produced results which varied from those of the current study. It is difficult to differentiate between primary and secondary exercise dependence, as eating pathology is often a causal factor in the motivation individuals have for excessive exercise.

Future Studies

Future studies could be conducted to further investigate the specifics of exercise dependence. Since the Exercise Dependence scale is based on the DSM criteria for substance use disorder, it would be of value to determine whether exercise dependence should be subcategory of addiction, disordered eating, or its own diagnosis. This is integral to Exercise dependence becoming a diagnosis, which would certainly lead and increase in research on the subject, and those who suffer from it more likely to receive adequate counsel. Future research could explore the relationship between Greek life membership and exercise dependence within one of the "Divine Nine" historically African American sororities and fraternities at one of the Historically Black Colleges and Universities (HBCU) in the United States.

Conclusion

The results of the current study suggest that being a member of a sorority or fraternity may impact one's exercise thoughts and habits. This may manifest in a shift in motivations for working out, time and dedication even at the detriment of physical or mental health (Glasser, 1976). The testing of hypothesis 1, that members of fraternities and sororities will score higher on measures of exercise dependency and disordered eating than those who do not participate in Greek life, and there will be a significant interaction between Greek life and gender, showed that while there were significant main effects of Greek life and gender, there was no significant reaction. Follow up tests revealed that males had significantly higher scores on the tolerance, lack of control, reduction in other activities, and time subscales of the of the Exercise Dependence Scale, as well as overall EDS scores. Females had significantly higher scores on the Eating Attitudes Test. Greek life members had significantly higher scores on the overall score of the EDS, as well as all seven subscales: withdrawal effects, continuance, tolerance, lack of control, reduction in other activities, time, and intention effects.

The analysis of hypothesis 2, that members of Greek life will score higher on the weight/appearance management and social factors of the Reasons for Exercise Inventory, produced insignificant results, although one-way ANOVAs showed that Greek life members had significantly higher scores on the overall Reasons for Exercise Inventory, as well as the Fitness and Health Management and Stress and Mood Management subscales. There were not significant effects of Greek life membership on the Appearance and Weight Management or Social Reasons subscales.

These results demonstrate the plausibility that membership fosters a toxic relationship between the member and their body image, resulting in warped beliefs regarding food and

exercise. Results of the Exercise Dependence Scale suggested that Greek life members were more likely to have an addiction-like approach to working out, as the scale itself is a modification of the diagnostic criteria for Substance Use Disorder outlined in the DSM. This is consistent with the findings that 36% of surveyed fraternity members met criteria for muscle dysmorphia, a phenomenon where those affected become obsessed with the size of their muscles, believing that they are not big enough. They may work out in excess, take nutritional supplements, or anabolic steroids to achieve their ideal body (Malburg, 2006), as well as sorority members scoring significantly higher in drive for thinness and body dissatisfaction when compared to non-affiliated college females (Brookings & Wilson, 1994) (Klemchuck et al., 1990) (Kurtzman et al., 1989) and sorority members experiencing higher levels of body dissatisfaction ((Klemchuck et al., 1990) (Kurtzman et al., 1989) (Schulken et al., 1997). The Reasons for Exercise Inventory showed that those in Greek life scored significantly higher in subscales relating to their physical and mental health. While this could simply mean that maintaining a healthy lifestyle, but with the results of the EDS in the current study, it could also mean being so worried about health that exercise is used excessively to try and maintain both their mental and physical wellness. The results of the current study, as well as results of previous studies regarding the effects of Greek life as it pertains to perpetuating stereotypes, body image, substance abuse, and mental wellness in general, such as symbolic-self completion theory, when an individual adopts a certain appearance in order to appear that they belong in the role that they are in (Arthur 1997), which demonstrates a desperate need to continue to fill the gap in research. With this knowledge, universities can develop and implement educational materials to these organizations, as it should be their responsibility to protect their own students from the negative effects of university sanctioned social groups.

Appendix A

Figure 3

Exercise Dependence Scale (EDS-21)

Instructions: Using the scale provided below, please complete the following questions as honestly as possible. The questions refer to current exercise beliefs and behaviors that have occurred in the past 3 months. Please circle your answer for each question.

1	2	3	4	5	6
ALWAYS					NEVER

1. I exercise to avoid feeling irritable.

1	2	3	4	5	6
ALWAYS					NEVER

2. I exercise despite recurring physical problems.

1	2	3	4	5	6
ALWAYS					NEVER

3. I continually increase my exercise intensity to achieve the desired effects/benefits.

1	2	3	4	5	6
ALWAYS					NEVER

4. I am unable to reduce how long I exercise.

1	2	3	4	5	6
ALWAYS					NEVER

5. I would rather exercise than spend time with family/friends.

1	2	3	4	5	6
ALWAYS					NEVER

6. I spend a lot of time exercising.

1	2	3	4	5	6
ALWAYS					NEVER

7. I exercise longer than I intend.

1	2	3	4	5	6
ALWAYS					NEVER

8. I exercise to avoid feeling anxious.

1	2	3	4	5	6
ALWAYS					NEVER

9. I exercise when injured.

1	2	3	4	5	6
ALWAYS					NEVER

10. I continually increase my exercise frequency to achieve the desired effects/benefits.

1	2	3	4	5	6
ALWAYS					NEVER

11. I am unable to reduce how often I exercise.

1	2	3	4	5	6
ALWAYS					NEVER

12. I think about exercise when I should be concentrating on school/work.

1	2	3	4	5	6
ALWAYS					NEVER

13. I spend most of my free time exercising.

1	2	3	4	5	6
ALWAYS					NEVER

14. I exercise longer than I expect.

1	2	3	4	5	6
ALWAYS					NEVER

15. I exercise to avoid feeling tense.

1	2	3	4	5	6
ALWAYS					NEVER

16. I exercise despite persistent physical problems.

1 2 3 4 5 6

ALWAYS NEVER

17. I continually increase my exercise duration to achieve the desired effects/benefits.

1 2 3 4 5 6

ALWAYS NEVER

18. I am unable to reduce how intense I exercise.

1 2 3 4 5 6

ALWAYS NEVER

19. I choose to exercise so that I can get out of spending time with family/friends.

1 2 3 4 5 6

ALWAYS NEVER

20. A great deal of my time is spent exercising.

1 2 3 4 5 6

ALWAYS NEVER

21. I exercise longer than I plan.

1 2 3 4 5 6

ALWAYS NEVER

Figure 4

Reasons for Exercise Inventory (REI)

Instructions: Please respond to the items below as honestly as possible. To what extent is each of the following an important reason that you have for exercising? Use the scale below, ranging from 1 to 7, and circle the best fitting number.

1. To be slim

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

2. To lose weight

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

3. To maintain my current weight

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

4. To improve my muscle tone

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

5. To improve my strength

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

6. To improve my endurance, stamina

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

7. To improve my flexibility, coordination

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

8. To cope with sadness, depression

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

9. To cope with stress, anxiety

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

10. To increase my energy level

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

11. To improve my mood

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

12. To improve my cardiovascular fitness

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

13. To improve my overall health

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

14. To increase my resistance to illness and disease

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

15. To maintain my physical well-being

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

16. To improve my appearance

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

17. To be attractive to members of the opposite sex

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

18. To be sexually desirable

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

19. To meet new people

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

20. To socialize with friends

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

21. To have fun

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

22. To redistribute my weight

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

23. To improve my overall body shape

1 2 3 4 5 6 7

NOT AT ALL IMPORTANT IMPORTANT VERY IMPORTANT

24. To alter a specific area of my body

1	2	3	4	5	6	7
NOT AT ALL IMPORTANT			IMPORTANT			VERY IMPORTANT

Figure 5

Eating Attitudes Test (EAT-26)

Instructions: Please fill out the below form as accurately, honestly and completely as possible.

There are no right or wrong answers.

Part A: Complete the following questions:

1) Birth Date Month: ..... Day: ..... Year: ..... 2) Gender: ❑ Male ❑ Female

3) Height Feet: ..... Inches: .....

4) Current Weight (lbs.): ..... 5) Highest Weight (excluding pregnancy): .....

6) Lowest Adult Weight: ..... 7) Ideal Weight: .....

Part B: Please check a response for each of the following statements:	Always	Usually	Often	Sometimes	Rarely	Never
1. Am terrified about being overweight.	❑	❑	❑	❑	❑	❑
2. Avoid eating when I am hungry.	❑	❑	❑	❑	❑	❑
3. Find myself preoccupied with food.	❑	❑	❑	❑	❑	❑
4. Have gone on eating binges where I feel that I may not be able to stop.	❑	❑	❑	❑	❑	❑
5. Cut my food into small pieces.	❑	❑	❑	❑	❑	❑
6. Aware of the calorie content of foods that I eat.	❑	❑	❑	❑	❑	❑
7. Particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.)	❑	❑	❑	❑	❑	❑
8. Feel that others would prefer if I ate more.	❑	❑	❑	❑	❑	❑
9. Vomit after I have eaten.	❑	❑	❑	❑	❑	❑
10. Feel extremely guilty after eating.	❑	❑	❑	❑	❑	❑
11. Am preoccupied with a desire to be thinner.	❑	❑	❑	❑	❑	❑
12. Think about burning up calories when I exercise.	❑	❑	❑	❑	❑	❑
13. Other people think that I am too thin.	❑	❑	❑	❑	❑	❑
14. Am preoccupied with the thought of having fat on my body.	❑	❑	❑	❑	❑	❑
15. Take longer than others to eat my meals.	❑	❑	❑	❑	❑	❑
16. Avoid foods with sugar in them.	❑	❑	❑	❑	❑	❑
17. Eat diet foods.	❑	❑	❑	❑	❑	❑
18. Feel that food controls my life.	❑	❑	❑	❑	❑	❑
19. Display self-control around food.	❑	❑	❑	❑	❑	❑
20. Feel that others pressure me to eat.	❑	❑	❑	❑	❑	❑
21. Give too much time and thought to food.	❑	❑	❑	❑	❑	❑
22. Feel uncomfortable after eating sweets.	❑	❑	❑	❑	❑	❑
23. Engage in dieting behavior.	❑	❑	❑	❑	❑	❑
24. Like my stomach to be empty.	❑	❑	❑	❑	❑	❑
25. Have the impulse to vomit after meals.	❑	❑	❑	❑	❑	❑
26. Enjoy trying new rich foods.	❑	❑	❑	❑	❑	❑

Part C: Behavioral Questions. In the past 6 months have you:	Never	Once a month or less	2-3 times a month	Once a week	2-6 times a week	Once a day or more
A. Gone on eating binges where you feel that you may not be able to stop?	❑	❑	❑	❑	❑	❑
B. Ever made yourself sick (vomited) to control your weight or shape?	❑	❑	❑	❑	❑	❑
C. Ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?	❑	❑	❑	❑	❑	❑
D. Exercised more than 60 minutes a day to lose or to control your weight?	❑	❑	❑	❑	❑	❑
E. Lost 20 pounds or more in the past 6 months		❑ Yes			❑ No	

• Defined as eating much more than most people would under the same circumstances and feeling that eating is out of control.

Appendix B

Table 1

Descriptive Statistics

	Age			Current Weight			Ideal Weight			BMI		
	M	*SD*	*Range*	*M*	*SD*	*Range*	*M*	*SD*	*Range*	*M*	*SD*	*Range*
Unafiliated Female	19.58	1.55	5	145.87	22.3	102	134.53	15.92	75	23.61	3.6	17.78
Unafiliated Male	19.73	2.46	6	183.03	32.88	138	182.25	25.25	100	25.14	5.2	23.59
Unafiliated Total	19.65	2.04	6	164.2	33.53	138	158.01	31.84	120	24.37	4.49	23.59
Sorority Member	19.19	1.09	4	144.53	20.35	95	134.33	13.37	55	23.74	3.82	18.74
Fraternity Member	19.48	1.43	7	174.77	33.94	160	178	24.97	110	23.99	3.68	14.64
Greek Life Member	19.33	1.26	7	158.52	31.21	175	154.54	29.32	130	23.86	3.73	18.74

Table 2

Frequency and Type of Exercise Regularly Engaged in

	Days Per Week of Exercise			Regularly Engage in Cardio		Regularly Lift Weights		Regularly Play Sports		Regularly Perform Body Weight Exercises	
	M	*SD*	*Range*	*n*	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Unafiliated Female	2.11	1.71	6	28	73.68	18	47.37	6	15.79	13	34.11
Unafiliated Male	3.54	1.59	6	27	72.97	23	62.16	11	29.73	13	35.14
Unafiliated Total	2.81	1.79	6	55	73.33	41	54.67	17	22.67	26	34.67
Sorority Member	3.61	1.57	7	28	77.78	21	58.33	8	22.22	11	30.56
Fraternity Member	4.81	0.5	6	18	58.06	25	80.65	13	41.94	5	16.13
Greek Life Member	4.16	1.77	7	59	88.06	46	68.66	21	31.34	16	23.88

Table 3

Average Length of Exercise

	Less Than 30 Minutes		30-60 Minutes		60-90 Minutes		More than 90 Minutes	
	n	%	*n*	%	*n*	%	*n*	%
Unafiliated Female	12	31.6	21	55.3	5	13.2	0	0
Unafilitated Male	5	13.5	19	51.4	11	29.7	2	5.4
Unafilitated Total	17	22.7	40	53.3	16	21.3	2	2.6
Sorority Member	3	8.3	26	72.2	7	19.4	0	0
Fraternity Member	1	3.2	11	35.5	15	48.4	4	12.9
Greek Life Total	4	5.9	37	55.2	22	32.8	4	5.9

Table 4

Descriptive Statistics of EDS, REI, and EAT Measures

	Female			Male			Afiliated			Unafiliated			Afiliated Female			Afiliated Male			Unafiliated Female			Unafiliated Male			Total		
	M	*SD*	*Range*	*M*	*SD*	*Range*	*M*	*SD*	*Range*	*M*	*SD*	*Range*	*M*	*SD*	*Range*	*M*	*SD*	*Range*	*M*	*SD*	*Range*	*M*	*SD*	*Range*	*M*	*SD*	*Range*
Exercise Dependence Scale																											
Withdrawal Effects	8.32	2.61	10	8.91	3.03	14	9.30	2.54	12.00	7.99	2.90	14	8.75	2.44	10	9.93	2.66	11	7.92	2.73	10	8.05	3.09	14	8.61	2.83	14
Continuance	7.96	3.03	12	8.53	3.20	14	8.96	2.89	14.00	7.59	3.11	12	8.22	2.65	10	9.81	3.16	14	7.71	3.37	12	7.46	2.85	11	8.23	3.11	14
Tolerance	8.27	2.87	11	10.19	3.35	15	10.36	2.92	14.00	8.15	2.91	11	9.11	2.65	10	11.81	3.24	13	7.47	2.87	10	8.84	2.83	11	9.19	3.24	15
Lack of Control	5.89	2.62	13	7.62	3.53	15	7.66	3.10	13.00	5.88	2.72	15	6.28	2.75	13	9.26	3.51	13	5.53	2.47	11	6.24	2.95	15	6.71	3.2	15
EDS Reduction in Other Activities	5.35	2.26	8	6.82	2.67	12	6.58	2.55	12.00	5.59	2.27	9	5.53	2.29	8	7.81	2.85	12	5.18	2.25	8	6	2.24	9	6.05	2.56	12
Time	6.75	2.61	10	8.06	2.97	11	8.24	2.68	11.00	6.61	2.65	11	7.31	2.51	10	9.32	2.87	11	6.24	2.62	9	7	2.66	11	7.38	2.85	11
Intention Effects	8.27	2.77	13	9.12	3.25	13	9.45	2.75	12.00	7.99	3.09	13	9.11	2.31	10	9.84	3.27	12	7.47	2.97	13	8.51	3.16	13	8.68	3.03	13
Total	50.82	14.96	64	59.25	18.32	73	60.54	14.66	67.00	49.79	16.38	71	54.31	12.29	52	67.77	17.41	67	47.53	16.63	64	52.11	16.02	71	54.86	0.98	73
Reasons for Exercise Inventory																											
Fitness and Health Management	4.21	0.98	5.5	4.39	0.96	6	4.52	0.75	3.50	4.11	1.11	6	4.4	0.74	3.25	4.65	0.76	3	4.04	1.16	5.5	4.19	1.07	6	4.3	0.98	6
Appearance and Weight Management	3.68	1.19	5.5	3.56	1.15	5.38	3.74	1.11	5.25	3.52	1.22	5.5	3.71	1.2	4.38	3.78	1	5.25	3.66	1.19	5.38	3.38	1.24	5.38	3.62	1.17	5.5
Stress and Mood Management	3.86	1.28	5.5	3.06	1.3	6	3.98	1.25	6.00	3.52	1.3	6	4.08	1.12	4.75	3.86	1.4	6	3.64	1.39	5.5	3.39	1.19	5.5	3.74	1.29	6
Social	2.44	1.47	5	2.84	1.77	6	2.79	1.65	6.00	2.49	1.58	6	2.59	1.38	4.5	3.02	1.96	6	2.29	1.56	5	2.69	1.59	6	2.63	1.63	6
Other	3.85	1.18	5	3.68	1.19	5.5	3.83	1.10	4.00	3.71	1.26	6	3.93	1.14	4	3.71	1.05	4	3.78	1.22	5	3.65	1.32	5.5	3.77	1.18	6
Total	90.99	13.07	4.43	91.04	20.8	5.29	95.01	17.75	3.79	87.44	21.09	5.3	94	17.48	2.78	96.19	18.07	3.79	88.13	20.28	4.43	86.73	22.16	4.93	91.01	19.85	5.3
Eating Attitudes Test																											
Part B	11.19	10.49	53	6.74	5.64	29	8.53	6.81	33.00	9.53	9.99	53	10.14	8.52	33	6.65	4.82	16	12.18	12.09	53	6.81	6.31	29	9.06	8.78	53
Part C	2.49	3.03	16	2.4	2.99	16	2.73	2.66	10.00	2.19	3.26	16	2.61	2.66	10	2.87	2.67	8	2.37	3.37	16	2	3.16	16	2.44	2.99	16

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