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Competitiveness and Self-Image Among University Students: Athletes vs. Non-athletes and

Males vs. Females

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### Abstract

The purpose of this study was to evaluate the level of competitiveness, self-image, and trait competitiveness among athletes and non-athletes, male and females. The researchers hypothesize (H1) that students from a university should perform better when finding out the highest score to beat prior to performing the task. (H2) Males from a university will perform better than females from the same university when performing a competitive task. (H3) Student-athletes currently enrolled at a University will complete more pieces of a puzzle in the time allowed than non-athletes who are not members of a National Collegiate Athletic Association (NCAA) sport from the same university. (H4) Student-athletes will report a higher self-image rating compared to non-athletes at the same university. A total of 42 participants were evaluated. They were instructed to complete a puzzle in three minutes. Following the puzzle, subjects were randomly assigned into three conditions: no score, average score, and highest score. Then another puzzle was administered with the same instructions. Results concluded that none of the hypotheses were supported with evidence; no statistical significance was found. An additional analysis was conducted and found there was a statistical difference between athletes and non-athletes trait competitiveness scores.

*Keywords:* trait competitiveness, self-image, athlete, non-athlete, male, female

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During our redundant lives, whether you are an athlete or not, competitiveness is constantly influencing our behavior. Competitiveness builds teamwork, collaboration, mental toughness, and innovation. In the sport psychology field, competitiveness and self-image among the general population are popular research areas (Vealey, 1988). Specifically, athletes v. non-athletes and males v. females are among the most commonly studied areas. For our research, predictions of competitiveness, performance, and self-image will be examined. “Some individuals eagerly approach competitive challenges, others strive for noncompetitive personal goals, and others shy away from all types of sport orientation” (Gill, Dzewaltowski, & Deeter, 1988, p. 139). The act for intentional behavior toward a target with internal pushing forces is known as motivation and was investigated by the degree of importance of competition (Sallayici, Eroglu Kolayis, Keslimis, Kesilmis, 2018). There are various key components that represent sport orientation that will be discussed throughout this article. College athletes are exposed to certain attributes typically associated with masculine traits; such as competitiveness, individualism, power, toughness, strength, and aggressiveness (Steinfeldt, Zakrajsek, Carter, & Steinfeldt, 2011). Competitiveness is unique in the way that competitiveness itself can be studied, or the reasons why one is or becomes competitive can also be looked at. This is an important aspect of research in order to help determine what truly makes an individual succeed in competition.

**Competitiveness**

Competitiveness can be determined by three main domains: competitive, goal, and win orientation (Bowker & Findlay, 2009). Despite the fact that the three domains are related, they each represent distinct components of sport orientation. General competitiveness can be seen as the desire to strive for success, predominantly in a sports environment. A goal orientation is the desire to meet personal standards that one sets for themselves to achieve. A win orientation is the specific desire to win an athletic event; ultimately refusing to lose (Bowker & Findlay, 2009). According to Gill, Williams, Dowd, Beaudoin, and Martin (1996) and Gill and Deeter (1986), they view their three subscales as (a) competitiveness (i.e. enjoyment and desire to strive for success in competition), (b) win orientation (focuses on interpersonal comparison and winning), and (c) goal orientation (focuses on personal performance standards (for example, in a volleyball game - achieving nine kills for the game)). Gill and Deeter (1986) used a multidimensional inventory (competitiveness scale) that was developed in order to assess competitiveness. Researchers narrowed the pool of 58 items that represent achievement orientation and competitiveness in sports, to a 32-item inventory. It was then administered in two separate studies to males and females who were enrolled in competitive and noncompetitive skill classes at the University of Iowa. Researchers concluded from the study that students enrolled in competitive classes scored higher on the inventory scale than students enrolled in noncompetitive classes (Gill & Deeter, 1986). Ryska (2003) elaborates more on the topic of goal orientation, by stating that sport motivation comes from how an individual interprets personal success in competition. Task-oriented athletes draw confidence from self-based informational sources such as skill improvement, maximal effort, and task mastery in the pursuit of goals (Ryska, 2003).

While Bowker and Findlay (2009) and Gill et al. (1986) focused on those domains, Elliot, Jury, and Muraryama (2017) concentrated on interpersonal competition and the degree to what was desired was affected by trait competitiveness or perceived environmental competitiveness. Interpersonal competition was success that was defined in terms of how one person does in a situation relative to another person. Trait competitiveness was the internal desire to succeed, which varies across situations and time. Environmental competitiveness was the external desire to succeed, which was the degree to which people viewed the situation and the people within them as competitive. These are separate predictors for performance-approach goals (directed towards success) and performance-avoidance goals (avoiding failure) (Elliot, et al., 2017). In Elliot et al. (2017) study, one aspect researchers focused on was the relationship between trait competitiveness and perceived environmental competitiveness in the classroom. Researchers used 403 undergraduate students at a university. Over a 16-week period, participants filled out a series of questionnaires and course exams. To measure the exam performance of each participant, the sum of the scores of each of the three 100-point course exams was taken. Researchers concluded that trait competitiveness was a positive predictor of perceived environmental competitiveness (Elliot et al., 2017). Nicholls (1984) combined the two ideas with achievement behaviors, explaining that individuals correlate success with high ability and low ability with failure.

According to Deaner, Balish, and Lombardo (2016), competitive moods are due to our elaborate culture and language. The authors stated that there were other ways to compete than just a sport; for example, starting a false rumor or eating all the cookies before a sibling could. It

was discussed that an organized activity where two or more individuals compete, could define a game. One key aspect of human competition was how it differs among men and women; however, Deaner et al. (2016) focused on if whether the sex differences in sports participation truly reflects a difference in motivation to participate. Within their study, they found that on average, male athletes were more likely to endorse competition when compared to female athletes and winning was a motive for participating in sports; whereas for females, it was goal orientated. One limitation that was addressed in the research was there was a sex difference in competitiveness among more selective populations in the United States, such as Division I schools vs. Division II schools (Deaner et al, 2016).

### **Self-Image**

Self-esteem is an indicator made by one-self as to how well one is doing and over self-worth. On the other hand, self-concept provides a description about one-self, rather than the evaluative component like self-esteem (Bowker & Findlay, 2009; Bowker, Gadbois, & Cornock, 2003). Bowker and Findlay (2009) used 351 adolescents who were recruited from elite sports and regular school classrooms. Those students were separated into three groups: elite athletes (n = 171), competitive athletes (n = 71), and non-athletes (n = 145). The purpose of the study was to examine the relationship between sports and self-esteem. Participants completed a series of questionnaires that assessed self-concept and self-esteem, as well as their physical activity and sports involvement. The study found that individuals who were classified as an elite athlete or competitive athlete reported higher self-esteem/self-concept scores than non-athletes (Bowker & Findlay, 2009). Dunn, Gotwals, and Wayment (2003) stated that self-esteem can be defined as

trait-like attitudes that a person had towards themselves, regarding their own value, self-worth, and importance. The global self-esteem can primarily be determined by an individual's level of perceived competence and self-acceptance -- control of your environment (Dunn, et al., 2003). Within Dunn et al. (2003), they used a sample of elite male and female Swedish athletes. They found that athletes that had reported higher levels of self-esteem had significantly higher personal standards, lower concerns about making mistakes, and smaller doubts about actions than athletes who reported lower levels of self-esteem. Aşçi, Gökmen, Tiryaki, & Aşçi (1997) definition of self-concept incorporated the ideas, values, commitments, and attitudes that created an individual's inner world. Self-concept can be influenced by many factors: such as age, sex, academic achievement, and socioeconomic status. Body image falls under the idea of self-concept and refers to how a person feels about themselves related to their physical appearance. Athletic participation may affect self-concept and body image (Aşçi, et al., 1997). The purpose of Aşçi, et al. (1997) study was to find if there were any significant differences between self-concept and satisfaction with body parts for athletes and non-athletes. After conducting a pilot study, the findings of the actual study indicated that participation in physical activity was significantly related to enhancement of self-conception. Researchers used 174 Turkish high school male athletes and 174 non-athletes. They found that male athletes scored higher than male non-athletes on athletic competence, social acceptance, and physical subscales; there were also differences in mean body satisfaction. In conclusion, the results indicated that participation in sports have psychological effects on such constructs as self-concept and body image among athletes and non-athletes (Aşçi, et al., 1997).

In a study by Bowker and Findlay (2009), they examined the relationship between self-system and sport, taking into account the multidimensional nature of self-concept and adding an aspect of individual athletes and aspects of the sport itself. They expected that individuals who participated in competitive or elite competition would record more positive feelings about their physical appearance and competence than non-athletes would report. After conducting research, they found that participation in a sport (elite level; collegiate or professional) was related to a positive psychological well-being. It was also noted that there was a relationship between athleticism and self-concept, but it was dependent on the individual's motivation for competing (type of competitiveness orientation, like mentioned earlier). Researchers also found that elite athletes had significantly higher ratings of self-esteem and had greater perceived physical competence than non-athletes did (Bowker & Findlay, 2009). Specifically, regarding male athletes, it was indicated that sport participation may have positive short- and long-term effects on the athlete's self-esteem (Richman & Shaffer, 2000). Rao and Overman (1986) and Wilkins et al. (1991), found that athletes show greater confidence in the way that their bodies perform compared to non-athletes. In a study conducted by Miller and Levy (1996), they concluded that female athletes rated themselves significantly more masculine than female non-athletes, they also showed significantly more positive self-concepts concerning their physical appearance, body image, and athletic competence than female non-athletes.

Melendez (2006) stated that through an athlete's involvement in a sport, they were provided with opportunities to inherit or learn leadership skills; this could lead to help promote self-assurance, confidence in short-term and long-term goals, high levels of optimism, and



confidence in internal stress-coping abilities. Therefore, these findings suggested that athletes may perceive a better self-image than non-athletes -- mental, social, emotional, and attitudinal experiences. Melendez (2006) research also pointed out the idea that sport participation in college may hinder the student's adjustment to college by increased time demands of practices and study hall, less social interactions outside of the sport team, constraints to employment, and neglect to academics. The reinforcement of athletic goals and lack of reinforcement of academic goals was what many student-athletes reported. Researchers surveyed 207 athletes and non-athletes (101, 49% were athletes and 106, 51% were non-athletes) in Midwest universities. Results for their research concluded that student-athletes reported higher scores on academic adjustment scores than non-athletes. They did note that one factor may be the educational support groups, which were provided more frequently to student-athletes (Melendez, 2006). Aries, Banaji, and McCarthy (2004) reported that athletic participation positively related to growth in peer-relationships, leadership abilities, interpersonal skills, and social well-being. This article also discussed more details about how the time demands of athletic programs forced student-athletes to sacrifice certain areas of their life.

Aggression is one of the attributes women, along with the majority of athletes, feel they invoke when competing in a situation such as a sport. It is a contributor to the influence of self-image and Malinauskas, Dumciene, and Malinauskiene (2014) found that a difference in gender correlates with a difference in anger and verbal aggression; however, a difference in athletes and non-athletes did not exhibit the same correlation. Just as aggression affects self-concepts and competitiveness, so does perfectionism, which has been shown to have

influences on cognition, affect and behavior. The idea of perfectionism is extremely relevant because it can either help or hinder an athlete's ability. Regarding the topic of achievement goals that were mentioned earlier, athletes who felt the need to perform flawlessly experienced stress, while athletes who intended to strive for perfectionism enjoy the competition (Dunn et al., 2003). Another idea that affects athlete's self-image was the direct focus that athletics put immense pressure on athletes to succeed; when reporting success in one area, it comes at the expense of another (Jennings, Henderson, Erla, Abraham, & Gillum, 2018). Self-image is a gender-different intrinsic belief, differing in levels of confidence between males and females.

### **Gender**

It was found that in general, males typically score higher on the general competitiveness scale compared to females, while females score higher on the goal orientation scale. However, both females and males reported similar confidence at an elite level (collegiate) (Bowker & Findlay, 2009). In the study by Gill and Deeter (1986), they also concluded that males score considerably higher than females on competitiveness, but females worked harder. Similarly, at the elite level Vealey (1988), studied 103 (53 female, 50 male) high school subjects, 96 (71 female, 26 male) college subjects, and 48 (20 female, 28 male) elite athletes (n = 247). The purpose of the study was to examine the gender differences in competitive and sport-confidence. Sport-confidence was defined as the degree of certainty an individual possesses about their capability to succeed in a sport. In a non-competitive situation; therefore, a practice or team meeting setting, participants were given various inventories to complete (coaches were not present, only investigators). Researchers found that at the elite level for both males and females,

there were no differences in sport-confidence. They also found that college male athletes scored higher in sport-confidence than college female athletes and all high school groups (Vealey, 1988). According to Steinfeldt et al. (2011) female athletes felt pressured under the dilemma that in order to be successful athletes, they had to associate certain characteristics about themselves, such as masculinity -- strength, assertiveness, competitiveness and independence. Steinfeldt (2011) found that female athletes see themselves as different from female non-athletes and think that they have masculine characteristics. When comparing body image of females to males, women felt less positively towards their bodies than men did (McKinley, 1998). Bowker et al. (2003), found results regarding femininity and the level of sports participation predicted athletic competence. Their main purpose was to examine gender roles, sports participation, and predicting individual's self-esteem. Researchers used 100 participants (60 female, 40 male) from two high schools in southwestern Canada. Questionnaires were administered to all subjects. By using multiple inventory scales, results showed that participants' gender role orientation, rather than their gender alone, predicted their feelings about their own appearance and athletic competence (Bowker et al., 2003). All three main topics are incorporated into the study presented.

### **Current Study**

Within our study, we comprised four different hypotheses to evaluate. In order to examine competitiveness, self-image, and trait competitiveness among athletes, non-athletes, males and females, we explored the idea of manipulating a situation in order to assess the different levels per participant. The first hypothesis (H1) and purpose of our study stated that in

general, participants from a university who are told the highest score to beat, will perform better when completing a puzzle, compared to participants who received an average score or no score to beat before the task. Our second hypothesis (H2) entailed that male participants from a university will perform better than females from the same university when completing the puzzle. The third hypothesis (H3) consisted of student-athletes currently enrolled in a National Collegiate Athletic Association (NCAA) sport at a university will significantly complete the puzzle in a shorter amount of time than non-athletes (students who are not members of the NCAA) at the same university. The fourth hypothesis (H4) presented that student-athletes will report a higher self-image rating compared to non-athletes at the same university.

### **Method**

#### **Participants**

Participants will include students at a liberal arts university, age 18 and above, located in the Midwest. By using convenience sampling, there will include roughly 120 athletes and non-athletes, both male and female. The experiment is open to all university students who wish to participate. To find participants, researchers will pass out sign-up sheets to various classes and sport teams at the university. Participants may be offered extra credit by professors for completing the study. These participants will be treated ethically. Our research was approved by the institutional review board of the school prior to the study being conducted.

#### **Materials and Procedures**

All participants will be asked to sign an Informed Consent prior to starting the study. After this, a demographic questionnaire (see Appendix A) will be handed out to get basic

information from each student. Questions will include: age, class, gender, major, hours spent exercising, and if they play a sport at the collegiate level. Participants will then be asked to perform a task to determine their level of competitiveness. The task includes all participants completing a basic large piece puzzle - all participants are receiving the same logo design on such a puzzle. The task will be timed for three minutes; we will give a two-minute warning, one-minute warning, and ten second countdown. Participants will record the number of pieces to the puzzle they were able to connect together on the slot given on demographics questionnaire. Following the first puzzle, participants will be randomly placed into a condition and will be instructed to complete another basic large piece puzzle; however, to avoid a carry-over effect, the design logo for the second puzzle will be different from the first. Participants will again record their number of pieces connected on the demographic questionnaire after the three minutes is up.

In the No Score condition, participants will not be told the score of other students. This is the control group. In the Average Score condition, participants will be told prior to starting the task an average score to beat. Finally, in the highest score condition, participants will be told prior to starting the task the highest score to beat. Results from each task performed will be compared.

After the tasks have been completed, participants will be asked to complete a trait competitiveness questionnaire (see Appendix B); therefore, allowing us as researchers to get a general baseline of each of the participant's competitive levels. The trait competitiveness scale was adapted from Gill and Deeter (1988), which yielded evidence for construct validity for both competitiveness and win orientation. This scale includes statements that describe reactions to

sport situations. This allows us to know how the participant usually feels about sports and competition. Participants will indicate whether they *strongly agree, slightly agree, neither agree nor disagree, slightly disagree, or disagree* with the statement. Following the trait competitiveness survey, participants will then be asked to complete a self-image survey (see Appendix C), allowing us as researchers to evaluate an individual's self-image views. The self-image survey was adapted from Rosenberg (1965). Participants will indicate whether they *strongly agree, agree, disagree, strongly disagree*. Once the participant has completed the necessary items for our research, they will be thanked and debriefed.

### **Design**

The design proposed is a 2 (two levels of subject variables: male vs female) x 3 (three levels of the independent variable: No Score, Average Score, and Highest Score) x 2 (two levels of subject variables: athletes vs non-athletes) factorial design. Each participant was only exposed to one condition. The subject variables include: athletes vs. non-athletes, and males vs. females. A statistical analysis will be conducted following the competition and surveys.

### **Results**

The demographic statistics were explored first. The study consisted of 42 participants, 15 were male (35.7%) and 27 were female (64.3%). Of those 42 participants, 27 (64.3%) reported they were not a part of a National Collegiate Athletic Association (NCAA) sports team at a university, while 15 (35.7%) reported they were on a NCAA team. Within those 15 participants who reported being on a NCAA team, 7 of them were males (47%) and 8 of them were female (53%). Participants ranged in age from 18 to 25 ( $M = 20.60$ ,  $SD = 1.39$ ).

For the first Hypothesis (H1) stated that in general, participants from a university who are told the highest score to beat, will perform better when completing a puzzle, compared to participants who received an average score or no score to beat before the task. The results when looking at a one-way ANOVA showed there was not a significant difference between the No Score condition ( $M = 3.25$ ,  $SD = 6.41$ ), the Average Score condition ( $M = 4.00$ ,  $SD = 4.06$ ), and the Highest Score condition ( $M = 3.42$ ,  $SD = 7.39$ ),  $F(2, 39) = .052$ ,  $p = .95$ .

The second hypothesis (H2) tested, stated that males from a university will perform better than females from the same university when performing a competitive task. When analyzing the results of the two-way ANOVA, significant evidence was not found in the difference between males ( $M = 5.33$ ,  $SD = 4.70$ ) and females ( $M = 2.51$ ,  $SD = 6.58$ ) puzzles scores  $F(1, 36) = 1.21$ ,  $p = .31$ .

In the third hypothesis (H3) stated that student-athletes currently enrolled at a university will complete more pieces of a puzzle in the time allowed than non-athletes who are not members of a National Collegiate Athletic Association (NCAA) sport from the same university. When analyzing the results of the two-way ANOVA, significant evidence was not found in the difference between student-athletes ( $M = 6.00$ ,  $SD = 5.80$ ) and non-athletes ( $M = 2.14$ ,  $SD = 5.88$ ) puzzle scores,  $F(1, 36) = .44$ ,  $p = .65$ .

In the fourth hypothesis (H4) stated that student-athletes will report a higher self-image rating compared to non-athletes at the same university. When analyzing the results of the independent samples t-test there was not a significant difference between athletes ( $M = 29.67$ ,  $SD = 4.53$ ) and non-athletes ( $M = 29.30$ ,  $SD = 4.50$ ) self-image rating,  $t(40) = -2.55$ ,  $p = .80$ .

A secondary analysis was conducted to explore the effect of trait competitiveness among athletes and non-athletes in addition to the study's hypotheses. An independent samples t-test was analyzed and it found athletes ( $M = 24.30, SD = 5.66$ ) and non-athletes ( $M = 29.60, SD = 3.73$ ) trait competitiveness score,  $t(40) = -3.24, p = .002$ . Therefore, there was a statistical difference for trait competitiveness scores between athletes and non-athletes at the same university. Possible reasons for the result's findings will be explained in the next section.

### **Discussion**

The initial hypotheses made by the researchers were not supported by the results of the statistical analysis. In regard to the first hypothesis, the results of this experiment did not find a statistically significant difference between being told no score, average score, and highest score. The results found did not align with the findings of Ryska (2003), who stated that athletes draw confidence from self-based informational sources such as skill improvement, maximal effort, and task mastery in the pursuit of goals. Results also did not align with Bowker and Findlay (2009) and Gill and Deeter (1986), who discussed win orientation, which revolved around interpersonal comparison and winning.

Regarding the researchers second hypothesis, the results found from this study did not find a statistically significant difference between the puzzle scores of males and females. Therefore, the hypothesis that males will perform better than females regarding a competitive task was not supported in this study. The results found did not align with the findings of Gill and Deeter (1986), who found that males score considerably higher than females on competitiveness.



The results found also did not align with Deaner et al. (2016), who found that on average, male athletes are more likely to endorse in competition when compared to female athletes.

In regard to the third hypothesis, the results from this study did not find a significant difference between the puzzle scores of athletes and non-athletes. Therefore, the hypothesis that athletes will complete more pieces of a puzzle in the time allowed than non-athletes was not supported in this study. The results found did not align with Aşçi et al. (1997), who found that male athletes scored higher than non-athletes on athletic competence.

Regarding the researcher's fourth hypothesis, results from this study did not find a significant difference between athletes and non-athletes. Therefore, the hypothesis that student-athletes will report a higher self-image rating compared to non-athletes at the same university was not supported. The results did not align with Melendez (2006), who stated that athletes may perceive a better self-image than non-athletes. It also did not align with Bowker and Findlay (2009), who found that elite athletes or competitive athletes reported higher self-esteem/self-concept scores than non-athletes; participation in a sport was related to a positive psychological well-being. Results did not align with Richman and Shaffer (2000) who stated that sport participation may have positive short- and long-term effects on the athlete's self-esteem. Rao and Overman (1986) and Wilkins et al. (1991), found that athletes show greater confidence in the way that their bodies perform compared to non-athletes, which also did not align with results found.

In regard to the additional analysis conducted for trait competitiveness, results from the study did find a significant difference between athletes and non-athletes' competitiveness level.

These findings do align with Aşçi et al. (1997), who found that male athletes scored higher than non-athletes on athletic competence.

One strength of this conducted research was that it can be compared to smaller universities. These results would likely be compared to another university, due to the fact that the effects of Coronavirus Disease (COVID-19) occurred to all universities in the United States. Another strength to this study was it was cheap and not time consuming; therefore, it can easily be replicated. Since this study was only conducted at one university, the external validity is unknown; therefore, results may not represent the population outside of the university setting.

The largest limitation to the study was the effect of COVID-19, which is transmitted through bodily fluids and is a deadly disease. It was a world pandemic, which halted the progress of the researcher's study. The study was cut short unexpectedly and researchers were limited to the number of participants collected. Ideally for the study, 120 participants were expected; however, only 42 were obtained prior to social distancing and shelter in place orders given out to each state. The university in which the study was located at, closed their campus and moved to online learning. This affected the ratio of male to female and athlete to non-athlete. Preferably it would have been 60 males and 60 females and then a random assignment of athletes and non-athletes. Due to the fact of the small sample size and the larger proportion of female participants, it is possible that data regarding gender differences could not be accurate.

Another limitation to the study may be the carry over effect, which is the effect that carries from one experimental condition to another. Participants conducted two sets of puzzles,

and although the puzzles were different, the effect of practicing the puzzle, may have made completing the puzzle easier the second time.

To further explore this field of research, it would be beneficial to collect a larger sample size from the general population. With a larger sample size, researchers may identify outliers that could skew results and it may produce more accurate results. To expand on the topic, researchers may look into younger and older populations (classifying that the participant will be an NCAA athlete or was an NCAA athlete). Researchers may also focus on the differences between Division I, Division II, Division III, National Association of Intercollegiate Athletics (NAIA colleges), and National Junior College Athletic Association (NJCAA colleges). Analyzing other countries could yield significant results and researchers may incorporate culture as being a factor. Other possible fields to explore may be personality traits and how that affects self-image or competitiveness among students. Researchers could compare personality traits among athletes and non-athletes as well.

## References

- Aries, E., Banaji, M., & McCarthy, D. (2004). A comparison of athletes and non-athletes at highly selective colleges: Academic performance and personal development. *Research in Higher Education, 45*(6), 577-600. doi: 10.1023/B:RIHE.0000040264.76846.e9
- Aşçi, F. H., Gökmen, H., Tiryaki, G., & Aşçi, A. (1997). Self-concept and body image of Turkish high school male athletes and nonathletes. *Adolescence, 32*(128), 959–968. Retrieved from <https://www.journals.elsevier.com/journal-of-adolescence/>
- Bowker, A., & Findlay, L. (2009). The link between competitive sport participation and self-concept in early adolescence: A consideration of gender and sport orientation. *Journal of Youth Adolescence, 38*, 39-40. doi: 10.107/s10964-007-9244-9
- Bowker, A., Gadbois, S., & Cornock, B. (2003). Sports participation and self-esteem: Variations as a function of gender and gender role orientation. *Sex Roles, 49*, 47-58. Retrieved from <https://www.springer.com/journal/11199>
- Deaner, R. O., Balish, S. M., & Lombardo, M. P. (2016). Sex differences in sports interest and motivation: An evolutionary perspective. *Evolutionary Behavioral Sciences, 10*(2), 73–97. <http://dx.doi.org/10.1037/ebs0000049>
- Dunn, J. G. H., Gotwals, J.K., & Wayment, H. A. (2003). An examination of perfectionism and self-esteem in intercollegiate athletes. *Journal of Sport Behavior, 26*(1), 17-38. Retrieved from <https://journalofsportbehavior.org/index.php/JSB>
- Elliot, A. J., Jury, M., & Murayama, K. (2017). Trait and perceived environmental competitiveness in achievement situations. *Journal of Personality, 86*(3), 353–367.

doi: 10.1111/jopy.12320

Gill, D. L., & Deeter, T. E. (1986). Initial development of a multidimensional, sport-specific competitiveness inventory. *Eric Clearinghouse on Teacher Education*, 2-24. Retrieved from <https://journals.sagepub.com/doi/abs/10.1177/002248716902000116?journalCode=jtea>

Gill, D. L., & Deeter, T. E. (1988). Development of the sport orientation questionnaire. *Research Quarterly for Exercise and Sport*, 59(3), 191-202.  
doi: 10.1080/02701367.1988.10605504

Gill, D. L., Dzewaltowski, D. A., & Deeter, T. E. (1988). The relationship of competitiveness and achievement orientation to participation in sport and non sport activities. *Journal of Sport and Exercise Psychology*, 10, 139-150. Retrieved from <https://www.tandfonline.com/loi/rjjs20>

Gill, D. L., Williams, L., Dowd, D. A., Beaudoin, C., & Martin, J. J. (1996). Competitive orientation and motives of adult sport and exercise participants. *Journal of Sport Behavior*, 19(4), 307-318. Retrieved from <https://journalofsportbehavior.org/index.php/JSB>

Jennings, R. A., Henderson, C. S., Erla, M. A., Abraham, S., & Gillum, D. (2018). Stress coping behaviors of faith-based college non-student athletes vs. student-athletes. *College Student Journal*, 52(2), 245–257. Retrieved from <https://www.projectinnovation.com/college-student-journal.html>

Malinauskas, R., Dumciene, A., & Malinauskiene, V. (2014). Perceived characteristics of

- aggressiveness in male adolescent athletes and nonathletes. *Revista de Cercetare Si Interventie Sociala*, 45, 17–30. Retrieved from <https://www.rcis.ro/>
- McKinley, N. M. (1998). Gender differences in undergraduates' body esteem: The mediating effect of objectified body consciousness and actual/ideal weight discrepancy. *Sex Roles*, 39, 113-123. doi:10.1023/A:1018834001203
- Melendez, M. C. (2006). The influence of athletic participation on the college adjustment of freshmen and sophomore student athletes. *Journal of College Student Retention: Research Theory, and Practice*, 8, 39-55. Retrieved from <https://journals.sagepub.com/home/csr>
- Miller, J. L., & Levy, G. D. (1996). Gender role conflict, gender-typed characteristics, self concepts, and sport socialization in female athletes and non-athletes. *Sex Roles*, 35, 111-122. doi: 10.1007/BF01548178
- Nicholls, J. G. (1984). Achievement motivation: Concepts of ability, subjective experience, task choice, and performance. *Psychology Review*, 91, 328-346. Retrieved from <https://journals.sagepub.com/home/psr>
- Richman, E. L., & Shaffer, D. R. (2000). If you let me play sports: How might sport participation influence the self-esteem of adolescent females?. *Psychology of Women Quarterly*, 24, 189-199. doi: 10.1111/j.1471-6402.2000.tb00200.x
- Rosenberg, M. (1965). Society and the adolescent self-image. *Princeton University Press*. 83. doi: <http://dx.doi.org/10.1515/9781400876136>
- Ryska, T. A. (2003). Sportsmanship in young athletes: The role of competitiveness, motivational

orientation and perceived purposes of sport. *Journal of Psychology*, 137, 273-293.

Retrieved from <https://www.tandfonline.com/loi/vjrl20>

Sallayici, M., Eroglu Kolayis, I., Kesilmis, I., & Kesilmis, M. M. (2018). Examination of athlete's anxiety, motivation, imagination value in competitions with different severity level. *Asian Journal of Education and Training*, 4(1), 9-12.

doi: 10.20448/journal.522.2018.41.9.12

Steinfeldt, J. A., Zakrajsek, R., Carter, H., & Steinfeldt, M. C. (2011). Conformity to gender norms among female student-athletes: Implications for body image. *Psychology of Men & Masculinity*, 12(4), 401–416. doi: 10.1037/a0023634

Vealey, R. S. (1988). Sport-confidence and competitive orientation: An addendum on scoring procedures and gender differences. *Journal of Sport and Exercise Psychology*, 10, 471-478. Retrieved from <https://pdfs.semanticscholar.org/c573/37ad35cfa25f142a3e24ec6ded9591cb5dfc.pdf>

## Appendix A

**Please read each question carefully and answer accordingly**

1. What is your age?
  - a. \_\_\_\_\_
  
2. What is your gender?
  - a. Male
  - b. Female
  - c. Other: \_\_\_\_\_
  - d. Prefer not to answer
  
3. Are you employed?
  - a. Yes
  - b. No
  
4. What is your ethnicity?
  - a. African-American
  - b. Latino or Hispanic
  - c. Asian
  - d. Caucasian/White
  - e. Two or More
  - f. Other/Unknown
  - g. Prefer not to answer
  
5. What year are you in school?
  - a. Freshman
  - b. Sophomore



- c. Junior
  - d. Senior
  - e. Super Senior
6. Are you a member of an NCAA (National Collegiate Athletic Association) team?
- a. Yes
  - b. No
7. If you answered yes to the above, which team are you a member of?
- a. \_\_\_\_\_
8. On average, how many hours of exercise do you get per week?
- a. \_\_\_\_\_

Puzzle Score #1: \_\_\_\_\_

Puzzle Score #2: \_\_\_\_\_

## Appendix B

**Please read each question carefully and circle the answer that most applies to you.**

**1. Winning is important to me.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**2. I love playing sports.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**3. I like to shop.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**4. I set goals for myself when I complete.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**5. I love spending time with people.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**6. I like to read.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**7. I try my hardest to win.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**8. Scoring more points than my opponent is very important to me.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**9. I find it easy making new friends.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**10. I hate to lose.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**11. When I have down time, I spend it watching tv.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**12. Performing to the best of my ability is very important to me.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**13. I always turn my homework in on time.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**14. The only time I am satisfied is when I win.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**15. Losing upsets me.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**16. I love playing board games.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**17. I have the most fun when I win.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**18. I love making money.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**19. I like watching sports on television.**

Strongly Agree      Slightly Agree      Slightly Disagree      Strongly Disagree

**20. I perform my best when I am competing against an opponent.**

Strongly Agree

Slightly Agree

Slightly Disagree

Strongly Disagree

**21. I want to be the best every time I compete.**

Strongly Agree

Slightly Agree

Slightly Disagree

Strongly Disagree

## Appendix C

**Please read each question carefully and circle the answer that most applies to you.**

- 1. I feel that I am a person of worth, at least on an equal basis with others.**

Strongly Agree    Agree    Disagree    Strongly Disagree

- 2. I am very punctual and hate when I am late to things.**

Strongly Agree    Agree    Disagree    Strongly Disagree

- 3. I often pick fights with people just to see their reactions.**

Strongly Agree    Agree    Disagree    Strongly Disagree

- 4. I have been known to be moody for no reason at all.**

Strongly Agree    Agree    Disagree    Strongly Disagree

- 5. I feel that I have a number of good qualities.**

Strongly Agree    Agree    Disagree    Strongly Disagree

- 6. I usually take initiative in making new friends.**

Strongly Agree    Agree    Disagree    Strongly Disagree

- 7. I would be unhappy if I were prevented from making numerous social contacts.**

Strongly Agree    Agree    Disagree    Strongly Disagree

- 8. All in all, I am inclined to feel that I am a failure.**

Strongly Agree    Agree    Disagree    Strongly Disagree

- 9. My mind often wanders while I am trying to concentrate.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**10. I am able to do things as well as most other people.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**11. I feel I do not have much to be proud of.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**12. I like to be the center of attention.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**13. I put on a show to impress or entertain certain people.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**14. I really enjoy talking to people.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**15. I take a positive attitude toward myself.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**16. I find some people to be egotistical or selfish.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**17. I wish I would have more respect for myself.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**18. I certainly feel useless at times.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**19. I often feel tense and jittery.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**20. I often feel fearful or anxious.**

Strongly Agree    Agree    Disagree    Strongly Disagree

**21. At times I think I am no good at all.**

Strongly Agree    Agree    Disagree    Strongly Disagree