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Assessing Perfectionism and Coping in Athletes

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Abstract

The current research design attempted to distinguish differences between the types of perfectionism found in athletes and the particular ways athletes attempt to cope with daily problems. Researchers have focused on a number of disturbed eating patterns in athletes with negative (self-critical/socially prescribed) perfectionism. As a personality construct, perfectionism is more complex than originally thought. It is important to distinguish between the types of perfectionism in order to understand the consequences of each type more clearly. This research identifies socially-prescribed perfectionism (SPP), and other-oriented perfectionism (OOP) as more negative types, as well as self-oriented perfectionism (SOP), which is considered more positive perfectionism. The complex relationship between perfectionism and coping strategies in athletes, particularly eating disorders was assessed in order to more easily identify "at-risk" individuals of eating disorders. Participants were volunteer female varsity athletes and non-varsity athletes from Bemidji State University. Each participant completed a packet of self-report questionnaires including the revised-Sport-MPS (Dunn, Gotwal & Dunn, 2005), the CERQ, EAT-26, EDE-Q, and several questions regarding amount of regular exercising, and the athletes' perception of her social support system. Based on this research I expected different levels of perfectionism and coping strategies including eating disorders in varsity athletes and non-varsity athletes.

Assessing Perfectionism and Coping in Athletes

Until recently perfectionism has been considered a uni-dimensional negative personality characteristic. Now most researchers agree with researcher, Hamacheck's (1978) work that distinguished between neurotic perfectionism and normal perfectionism. Normal perfectionists have the ability to experience high self-esteem when they achieve, and include their perfectionism in their strengths as well as their limitations. On the other hand, neurotic perfectionists are unable to feel satisfied, because they set unrealistically high goals, and never feel good enough (Haase & Prapavessis, 2004). Based on this discovery researchers work to identify the different dimensions of perfectionism, the domains they can apply to, and what specifically results from the separate dimensions.

Review of Literature

Negative Perfectionism, Consequences and Coping

Perfectionism is now recognized as a multidimensional construct and research focuses on its consequences, including the use of poor coping strategies in times of stress. Flett, Russo, and Hewitt (1994) attempted to examine the association between dimensions of perfectionism and coping tendencies and found that associations existed between the dimensions of perfectionism and the particular manner in which individuals attempt to cope with their daily problems. They assessed perfectionism using Hewitt's (1991) three dimensions, self-oriented perfectionism (SOP), which focuses on setting high personal standards and striving for personal perfection (see appendix A); socially prescribed perfectionism (SPP), which reflects concern over meeting the expectations of others (see appendix A); and/ or other-oriented perfectionism (OOP), which reflects the respondents' expectations for the standards that other people should meet (see appendix

A). Flett et al. (1994) conducted survey- research with a random sample of participants to determine associated coping mechanisms with each dimension of perfectionism. According to the measures used, socially prescribed (negative) perfectionism was associated with maladaptive coping, because SPP incorporates elements of hopelessness and helplessness. SPP was also associated with the absence of constructive thinking, the absence of positive emotional thinking and an absence of behavioral coping as assessed by the Beck Depression Inventory (BDI) and the Constructive Thinking Inventory (CTI). Also when combined with the coping strategy self-silencing, SPP associated strongly with depression. Hewitt, Flett and Endler, (1993) found that SPP was associated with poor constructive thinking, which means participants' responded poorly when confronted with a difficult situation and displayed helplessness, increased self-blame and negative affect (Flett et al., 1994). This study used participants that were not specific to any one population, as the participants were students randomly asked to fill out a survey for the researchers. Future research would benefit from assessing SPP/SC perfectionism in specific populations to determine the interaction between specific environments, personality and coping behaviors.

Similar research by Dunkley, Zuroff and Blankstein (2003) showed that self-critical- perfectionists (SC), (see appendix A) are uniquely prone to feelings of guilt, sadness, hopelessness and loneliness. Dunkley et al. (2003) used both positive striving (POS) perfectionism (see appendix A) and self-critical (SC) perfectionism as dimensions to define perfectionism, to show that high-SC perfectionists had low perceived self-efficacy, lower self-esteem when confronted with a stressful event, reported more negative affect on days when they used self-blame in coping, and were less confident in

their ability to successfully cope with significant stressors. They also found that SC perfectionists had lower levels of perceived social support. Similar to Flett et al. (1994), this study assessed random students without focusing specifically on the type of population that SC perfectionism could affect more than others.

Positive Perfectionism, Consequences and Coping

While SPP was associated with maladaptive consequences, SOP and OOP were not correlated with any of those negative consequences. Instead, SOP and OOP were associated with higher levels of self-control (Flett et al., 1994). Self-oriented perfectionism was associated with higher levels of adaptive, task-oriented coping in both men and women (Flett et al., 1994). The implication of this research is not to say that positive perfectionists don't ever engage poor coping mechanisms, nor does it suggest that people are either entirely an "adaptive perfectionist" or a "maladaptive perfectionist." However, results do show that although individuals who are higher positive perfectionists may experience increased levels of stress, the negative impact of possessing this maladaptive characteristic may be offset by the tendency of these individuals to engage in active, problem-focused coping (Dunkley et al., 2003).

Perfectionism and Eating Disorders in Athletes

Research has consistently and repeatedly linked perfectionism, athletes and eating disorders because athletes are known to have personalities including high perfectionism, neuroticism and obsessive-compulsive tendencies, all behaviors that would turn them toward using eating behaviors as coping strategies (Hopkinson &Lock, 2004). Likewise, Haase and Prapavessis (2004) showed that athletes constantly strive for and think of perfection in their performances, internally focusing their mental and physical strength in

order to drive for the perfect outcome. However, when failure inevitably occurs damaging consequences of compensatory behavior may ensue, emerging as anything from depression to disordered eating in order to maintain or achieve perfection once again (Haase &Prapavessis, 2004).

Domain Specificity. Earlier research has focused on perfectionism as a global construct that people apply to every aspect of life. Dunn Gotwals and Dunn (2005) assessed perfectionism specifically in student-athletes, applying perfectionism to the domain of sport and academe. The results showed that athletes had significantly higher levels of perfectionism in sport domain than either global domain or academic domain as assessed by the MPS created by Hewitt (1991). Haase and Prapavessis (2004) also examined perfectionism as it applied specifically in athletic situations. They assessed over 900 athletes and revised the Positive and Negative Perfectionism Scale, originally a 40-item questionnaire created by Terry-Short (1995), to a 19-item questionnaire that accurately reflects the concerns and perfectionism salient to athletes as a specific population. Future research would benefit from using these measures to further examine perfectionism in athletes.

Gender Specificity and Type of Athlete. Hopkinson and Lock (2004) tested a sample of elite athletes using the Eating Attitudes Test (EAT-26) (see appendix A) and the Eating Disorder Examination Questionnaire (EDE-Q) (see appendix A) and found a significant positive linear relationship between perfectionism and disturbed eating patterns in female athletes. They also found that when perfectionism is applied to the domain of eating and weight concern in females levels of perfectionism increase, as does the likelihood of disordered eating patterns. Contrary to previous research, the female athletes most "at

risk" for an eating disorder were recreational athletes as opposed to elite athletes (Hopkinson & Lock, 2004). The authors suggest this was the case because recreational athletes work out in order to maintain body image, shape concerns and weight concerns, where varsity athletes have exercise built in to their schedules, and don't have to worry about how to get "in shape." However, the surveys were given at completely different times in different environments, which may have influenced the participants depending on if they had just finished working out, were on their way to work out, or neither.

In another study by Dunn et al. (2005) significant gender differences were found in two of the nine subscales. They found that males had higher scores than females in SOP-sport and OOP-sport. Though past research has also attempted to identify the differences in perfectionism and eating disorders among athletes in different types of sports, results have not been conclusive thus far. Hopkinson and Lock (2004) only used runners, swimmers and soccer players, while Dunn et al. (2005) looked at a variety of athletes, but they were all elite athletes from Canada whose teams had won national championships in the previous five years. It would be beneficial to incorporate all types of athletes from different sports in order to accurately represent the athletic population.

Conclusion

In the present study, the aim was to combine previous methodologies, and focus on eliminating the limitations of past research discussed above. The present study assessed perfectionism using the revised Sport-Hewitt-MPS (Dunn et al., 2005) (see appendix A), and the revised sport-PANPS (Haase & Prapavessis, 2004), both domain specific measures of perfectionism. The expectation was that the two measures adequately assessed athletes specifically for perfectionism. All three measures of

perfectionism as defined by Hewitt (1991) were looked at in the Sport-Hewitt-MPS to separate SPP from OOP and SOP. Further expectations were that SPP would have different associations with coping strategies and eating disorder symptoms than the other two measures. In fact, it was expected that SOP and OOP in all groups would negatively correlate with disturbed eating patterns and poor coping strategies, while SPP would have a positive linear relationship with both disturbed eating behaviors and negative coping. Coping was assessed using the Constructive Thinking Inventory (CTI), which looked at the ability of those with high SPP/ SC-perfectionism to use positive coping and positive interpretation. Eating disorder symptoms were examined using the EAT-26 to assess overall disturbed eating patterns, and the EDE-Q to assess specific subscales, including weight concern, shape concern, eating concern and restraint.

One expectation was that female athletes who were in different sports would not differ from each other on perfectionism measures, or coping strategies. Furthermore, female non-varsity athletes who exercised as much as varsity athletes would have higher levels of SPP than other non-varsity athletes. Thus female non-varsity athletes with higher SPP would have higher disturbed eating patterns than non-varsity athletes who exercised less. Females with higher SPP would also have lower perceived social support than those with lower SPP and higher SOP and OOP. Likewise participants with higher SOP and OOP would have higher constructive thinking patterns.

Although a major limitation of past research is the use of self-report measures to assess the variables, the current study maintained this strategy by employing self-report questionnaires to the participants. However, unlike past research, participants were not competitive at the national level, nor did they fill out the survey packet directly before a

game or workout. To keep consistency, all participants were recruited to participate on campus at Bemidji State University. They were given instructions to meet the researcher in an empty classroom on campus to complete the study. To increase willingness to participate, non-varsity participants were given extra credit in Introductory Psychology or Lifespan Development classes.

The purpose of this study was to eliminate some limitations of past research to define perfectionism in athletes specifically and obtain information on the way these particular athletes cope with that perfectionism.

Method

Participants

The sample consisted of 58 female college students from Bemidji State University. The participants were voluntary varsity athletes from female's varsity basketball (2), soccer (4) and softball (1) and non-varsity athletes (52) drawn from Introductory Psychology and Lifespan Development courses at Bemidji State University. The students from Introductory Psychology and Lifespan were given extra credit in the course for their participation. Varsity athletes were also recruited from the women's basketball and women's soccer teams, after a 5-minute meeting with each team as a group. The same instructions were given to both groups, and there were no questions or concerns from either group.

Materials

Perfectionism. Perfectionism was assessed using a revised measure that applied specifically to college athletes. The MPS-Sport is a 45-item self-report questionnaire: 15 questions assessing each dimension of perfectionism (SOP, OOP and SPP) (see appendix

B). Participants answer a series of questions indicating (1) strongly disagree; (2) disagree; (3) Neither agree nor disagree; (4) agree; or (5) strongly agree. The scale developed by Frost, Marten, Lahart, and Rosenblate (1990), was constructed using an all female sample at an elite university Internal reliability was found to be .88 for the total score, with subtests ranging from .57 to .95. This perfectionism scale was used to increase the support of past research of both negative perfectionism and socially prescribed perfectionism as the same construct, and self-prescribed perfectionism considered positive perfectionism. The revised version was used because previous research states that perfectionism in athletes is most often established in the domain of sport. Therefore results would accurately display the perfectionism athletes are particularly prone to. The PANPS was not used as a measure of perfectionism because the creator of the study could not be reached for permission.

Coping. Coping strategies were examined by use of the Cognitive Emotional Regulation Questionnaire (CERQ), (see appendix C). The survey is a self-report 36-item questionnaire designed to show participants' positive as well as negative cognitive coping strategies in times of stress. This shows the differences between participants with positive perfectionism and participants with more negative perfectionism in the way they cognitively cope in stressful situations. When answering the questions the person assesses him/herself on a five-point scale the extent to which he or she – '(nearly) never' (1), 'sometimes' (2), 'regularly' (3), 'often' (4) or '(nearly) always' (5) - makes use of a certain cognitive coping strategy. The reliability of the subscales of the CERQ for the various populations is good to very good. Most alpha-coefficients are above .70, and in a lot of cases even above .80.

Eating Disorder Symptoms. The Eating Attitudes Test (EAT-26) is a 26-item version of the Eating Attitudes Test (see appendix D). Participants responded to 26 items indicating that they engaged in the particular thinking pattern: always, usually, often, sometimes, rarely or never. This scale assesses the attitudes of participants more than the behaviors associated with eating disorders. The reliability of the final instrument was 0.93.

In order to attain information on behaviors of participants' eating patterns, a second measure, the Eating Disorders Examination Questionnaire (EDE-Q), (see appendix E), was used. The EDE-Q, from Fairburn and Cooper (1993) as cited in Hopkinson and Lock (2004), is a 22- item self report questionnaire that can be split into and assessed by the sub-sections of weight concern, shape concern, eating concern and restraint. Participants answer questions regarding frequency of behaviors and attitudes associated with eating disorders.

Other Measures. The participants were also asked to fill out a demographic survey (see appendix F) that provided information about their athletic habits and perceived social support. Basic demographic information helped adequately assess individual characteristics that could identify "at-risk" individuals for eating disorders. The expectation was that non-varsity athletes who worked out as much as varsity athletes would have similar levels of negative perfectionism and eating disorder symptoms. A question about perceived social support was provided because research has shown that it may offset the positive linear relationship between negative perfectionism scores and poor coping strategies as well as eating disorder behaviors.

Procedure

Both varsity and non-varsity participants were recruited in Introductory Psychology and Lifespan Development courses at Bemidji State University. They were asked to take 45 minutes to sit down with the researcher to fill out a series of questionnaires about sports and exercise on a date agreed upon by the researcher. Participants who completed the study received extra credit for their course.

Participants were shown to a classroom where they were seated. Participants were instructed first to read the informed consent (see appendix G), as the researcher read it out loud, and sign if they wished to continue. If participants did not sign the informed consent they were thanked and asked to leave without penalty. All the participants signed the informed consent without any questions.

Next the participants were given a packet of surveys put in random order including: revised sport-MPS, CERQ, EAT-26 and EDE-Q and demographics survey. They were asked to fill out the questionnaires in the order they were given, and to remember that their answers would remain confidential, and all results would be anonymous. The participants were also instructed to take their time, and answer each question as accurately and as honestly as possible. They were further instructed to wait quietly for everyone to finish if they completed the questionnaires before others.

Once the participants finished, the questionnaires were collected and placed in individual manila folders. The participants were debriefed (see appendix H), and given a pamphlet with information about eating disorders courtesy of BSU Health Services. Introductory psychology and Lifespan Development participants were given an extra credit token, thanked for their participation, and allowed to leave.

Varsity athletes from Basketball and Soccer met as teams where the researcher explained the purposes and procedures of the study. Envelopes including the surveys were left in a box in the locker rooms for individuals to pick up anonymously. Completed packets were put into a box in the main athletic office, and the informed consent turned in a separate box for privacy purposes.

Results/Conclusions

Two participants were excluded for not completing the entire packet of information because the researcher was left with insufficient information regarding eating disorder attitudes and behaviors. Of the 57 participants remaining only four had an EAT score of 20 or above, four more had a score of 19. Sixteen more participants were used as a cut off between those considered more at risk for an eating disorder because they had scores of 8 or above. Twenty-four participants were therefore considered the "at-risk" population for an eating disorder. One of the twenty-four was a Varsity Soccer athlete. Analyses showed no significant differences in Varsity athletes and non-varsity athletes in preliminary tests. Therefore many of the hypothesis were tested using the "at-risk" population for eating disorders, rather that the non-varsity and varsity population. It is possible that the sample sizes of the two groups were too skewed to do accurate comparisons.

Hypotheses

1. Varsity athletes will have higher levels of negative perfectionism than non-varsity athletes who exercise very little.

There was no significant difference between Varsity athletes and non-varsity athletes in levels of negative perfectionism. Participants considered "at risk" for an eating

disorder did not show a significant level of negative perfectionism. Nor was there a significant relationship between negative perfectionism levels at EAT scores, $r(22) = -.089$, $p > .05$.

2. Non-varsity athletes who exercise as much as varsity athletes will have higher levels of negative perfectionism than those who exercise less.

There was no significant relationship between levels of negative perfectionism and the amount of time spent exercising in athletes "at-risk" of an eating disorder, There was also no significant relationship in the number of times per week participants exercised and EAT scores for participants at the "at risk level," $r(22) = 0.063$, $p > .05$. Assessing further, there was no significant relationship in the length of exercise sessions and EAT scores for participants at the "at risk level," $r(22) = -0.340$, $p > .05$. There was also no significant relationship in the intensity of workouts when participants exercised and EAT scores for participants at the "at risk level," $r(22) = 0.235$, $p > .05$.

3. Negative perfectionism will associate positively with eating disorder attitudes, and eating disorder behaviors.

There was no significant relationship in negative perfectionism scores and Eating Attitude Test Scores for participants at the "at risk level," $r(22) = -0.09$, $p > .05$. There was no significant relationship in coach pressure scores and Eating Attitude Test Scores for participants not considered "at risk" of an eating disorder, $r(31) = .171$, $p > .05$. There was also no significant relationship between participants' "doubts about actions" scores and EAT scores, $r(31) = .033$, $p > .05$. Likewise, there was no significant relationship between participants' parental pressure scores and EAT scores for those not "at risk" of an eating disorder, $r(31) = .093$, $p > .05$.

4. Negative (maladaptive) perfectionism will also associate positively with negative coping strategies.

The CERQ categories that are considered negative coping strategies are "self-blame," "rumination," "catastrophing," and "blaming others." There was no significant relationship in negative perfectionism scores and self blame for participants at the "at risk level," of eating disorders, $r(22)= -.053$, $p>.05$. Likewise there was no significant relationship in negative perfectionism scores and rumination for participants at the "at risk level," of eating disorders, $r(22)= .179$, $p>.05$. There was no significant relationship in negative perfectionism scores and "catastrophing" for participants at the "at risk level," of eating disorders, $r(22)=-.102$, $p>.05$. Similarly there was no significant relationship in negative perfectionism scores and "blaming others" for participants at the "at risk level," of eating disorders, $r(22)=.334$, $p>.05$.

Discussion

There were limitations of this research that would be necessary to expand upon in order to further research in this area. The first of these is problems with the measures used.Use of the revised MPS- though it was shown to accurately assess other varsity athletes, it may not have been right for all the participants. In the future a different measure should be used that would adequately assess both groups and their differences. Another problem is that every article in literature as well as my own research use forms of self-report as measures of perfectionism, coping, eating disorders, and any other traits the authors and I wanted to link together. Future research may benefit from using other forms of research, including looking at behavioral responses of athletes in specific situations. Self-report studies can be misleading because it is difficult for people to assess

their own attitudes or beliefs without some sort of bias. This also becomes troubling when athletes feel pressure to give certain answers rather than assessing the possible truth of their own situations. It may also be helpful to look at perfectionist tendencies of individuals through the eyes of those close to them. It has been suggested that using other measures like behavioral observations could better assess athletes, especially since athletes may have a hard time assessing themselves accurately (Hopkinson & Lock, 2004). Unfortunately due to financial constraints and time restraints this research could not be conducted using any behavioral observations, nor could others close to the participants be asked questions regarding the athletes' behavior.

Another potential problem with this design is that perfectionism levels were only collected at one time. Suggestions of past research indicate that perfectionism is not only domain-specific but it changes over time. Future research should look at more longitudinal designs (or possibly cross-sectional designs) to determine if and how perfectionism changes. The surveys were also conducted in a classroom setting at a time where participants are expected not to have a major performance for at least one week (for varsity sports, as well as intramurals). The SPP perfectionism levels at this time may be less salient than before or right after an important event, game or match.

Another limitation is the sample size of this study. Low participation level from varsity athletes caused a skewed sample of athletes between non-varsity and varsity. The sample also caused problems because volunteering athletes may significantly differ from the population of non-volunteers. Unfortunately the study only used athletes representative of three varsity sports from BSU: basketball and soccer, and one softball

athlete. The differences between athletes in different sports could not be adequately assessed.

Also, the participants are a convenience sample, thus possibly unrepresentative of the general population. The sample of athletes is also taken from BSU, and may not generalize to other populations of athletes from different schools. Excluding hockey which is Division I (DI), all other Bemidji sports are Division II (DII). Many other schools are have many if not all DI sports, or DIII. Division I athletes for example, are expected to perform 100 % of the time, and often attend college on a full scholarship where athletics is a "job." On the other hand, Division III athletes do not give athletic scholarships, and although competitive, coaches understand that the students' main responsibility is school. Bemidji athletes seem to fall in the middle as a Division II (DII) school. It is quite possible that different divisional athletes have different levels of SPP, as well as OOP and SOP. Future research should look at DI and DIII schools as well to assess the types of perfectionism and coping in different extremes of the college sports domain.

One final limitation is the notion that the constructs identified in this study are all multi-dimensional in nature, and have many indicators as well as contributing factors. In this study there was no way to know if the scales accurately assessed the participants' perfectionism as it applies to their own lives. It is also possible that disturbed eating patterns and symptoms stem from other factors in the participants' lives. There were four participants with disturbed eating patterns with an EAT score of 20 or higher. The results did not show a relationship between EAT scores and perfectionism scores, thus the factors of disturbed eating patterns cannot be identified. Another problem is that

participants may not have fully comprehended and distinguished between each question, given the volume of questions the participants were asked to complete.

Despite the limitations of this research it is important to continue assessing negative perfectionism and the consequences associated with it. Past research has indicated there is a significant relationship between negative perfectionism and eating disorder behaviors. It is important to identify ways to lower SPP in athletes, and/or increase positive coping strategies in athletes with negative (self-critical) perfectionism. Especially if SOP can be developed in athletes to lower avoidance coping and give athletes a stronger, more reliable way of dealing with the stress of their perfectionist tendencies. This research had many limitations therefore I do not believe this article could overshadow all the past research that showed this relationship.

By understanding the specific athletic population, researchers will have an idea of where to start applying this knowledge to the prevention and intervention of these problems. Past research alludes to the possibility that teaching athletes positive interpretational strategies will increase positive perfectionism, or at least mediate between SC-perfectionism and poor coping strategies (Flett et al., 1994). Decreasing self-critical perfectionists' negative affect and the negative impact of stressful events might be accomplished by reducing their tendency to engage in avoidant coping. Increasing SC perfectionists' positive affect might also be accomplished by increasing their perceptions of social support availability and use of positive reinterpretation and growth coping (Dunkley et al., 2003). These strategies can also be applied to non-varsity athletes to help them identify ways to deal with the stress of working out to maintain physical appearances.

If the evidence provided in past research holds up, coaches and parents will have the capability to help student-athletes (varsity or non-varsity) avoid using poor coping strategies by exercising their adaptive perfectionist qualities and by decreasing maladaptive perfectionism and therefore the negative effects associated with it. This will improve their standards of performance, and achievement, not to mention creating several other possible positive life experiences.

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Appendix A

Glossary

Cognitive Emotional Regulation Questionnaire (CERQ): The Cognitive Emotional Regulation Questionnaire (CERQ) was created in 2002 by Garnefski, Kraaij, and Spinhoven. The survey is a self-report 36-item questionnaire designed to show participants' positive as well as negative cognitive coping strategies in times of stress. When answering the questions the person assesses him/herself on a five-point scale the extent to which he or she – '(nearly) never' (1), 'sometimes' (2), 'regularly' (3), 'often' (4) or '(nearly) always' (5) - makes use of a certain cognitive coping strategy. The reliability of the subscales of the CERQ for the various populations is good to very good. Most alpha-coefficients are above .70, and in a lot of cases even above .80.

Eating Attitudes Test-26 (EAT-26): The Eating Attitudes Test (EAT-26) is a 26-item version of the Eating Attitudes Test The scale was created in 1979 by David Garnder and Paul Garfinkel, and revised by Garner et al. in 1982. Participants responded to 26 items indicating that they engaged in the particular thinking pattern: always, usually, often, sometimes, rarely or never. This scale assesses the attitudes of participants more than the behaviors associated with eating disorders. The reliability of the final instrument was 0.93.

Eating Disorder Examination Questionnaire (EDE-Q): The EDE-Q, from Fairburn and Cooper (1993) as cited in Hopkinson and Lock (2004), is a 22- item self report questionnaire that can be split into and assessed by the sub-sections of weight concern, shape concern, eating concern and restraint. Participants answer questions regarding frequency of behaviors and attitudes associated with eating disorders.

Multidimensional Perfectionism Scale (MPS): The MPS was originally created by Hewitt (1991) and revised to apply to the domain of sport called the Sport-MPS (Dunn et al., 2005). The MPS-Sport is a 45-item self-report questionnaire: 15 questions assessing each dimension of perfectionism (SOP, OOP and SPP). The scale developed by Frost, Marten, Lahart, and Rosenblate (1990), was constructed using an all female sample at an elite university Internal reliability was found to be .88 for the total score, with subtests ranging from .57 to .95. Participants answer a series of questions indicating (1) strongly disagree; (2) disagree; (3) Neither agree nor disagree; (4) agree; or (5) strongly agree.

Other-Oriented Perfectionism (OOP): Other-oriented perfectionism is a dimension of perfectionism described by Hewitt (1991) as respondents' expectations for the standards that other people should meet. The MPS dedicated 15 of 45 questions to assessing OOP.

Positive and Negative Perfectionism Scale-Sport (PANPS-sport): Positive and Negative Perfectionism Scale, originally a 40-item questionnaire created by Terry-Short (1995), to a 19-item questionnaire that accurately reflects the concerns and perfectionism salient to athletes as a specific population.

Positive-Striving Perfectionism (POS perfectionism): Positive striving perfectionism is considered the dimension of positive perfectionism. Positive striving perfectionists have

higher levels of self-esteem, and were more confident in their ability to successfully cope with significant stressors.

Self-Critical Perfectionism (SC perfectionism): Self-critical perfectionism is considered a negative dimension of perfectionism as a whole. Self-critical perfectionists are uniquely prone to feelings of guilt, sadness, hopelessness and loneliness.

Self-Oriented Perfectioinism (SOP): Self-oriented perfectionism is a dimension of perfectionism described by Hewitt (1991) as setting high personal standards for one's self and striving for personal perfection. The MPS dedicated 15 of 45 questions to assessing SOP.

Socially-Prescribed Perfectionism (SPP): Socially prescribed perfectionism is a dimension of perfectionism described by Hewitt (1991) as concern over meeting the expectations of others. The MPS dedicated 15 of 45 questions to assessing SPP.

Competitive Orientations Scale (Sport-MPS-2)

INSTRUCTIONS The purpose of this questionnaire is to identify how players view certain aspects of their competitive experiences in sport. Please help us to more fully understand how players view a variety of their competitive experiences by indicating the extent to which you **agree or disagree** with the following statements. (Circle one response option to the right of each statement). Some of the questions relate to your sport experiences in general, while others relate specifically to experiences on the team that you have most recently played with. **There are no right or wrong answers** so please don't spend too much time on any one statement; simply choose the answer that best describes how you view each statement.

	To what extent do you agree or disagree with the following statements?	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1.	If I do not set the highest standards for myself in my sport, I am likely to end up a second-rate player.	1	2	3	4	5
2.	Even if I fail slightly in competition, for me, it is as bad as being a complete failure.	1	2	3	4	5
3.	I usually feel uncertain as to whether or not my training effectively prepares me for competition.	1	2	3	4	5
4.	My parents set very high standards for me in my sport.	1	2	3	4	5
5.	On the day of competition I have a routine that I try to follow.	1	2	3	4	5
6.	I feel like my coach criticizes me for doing things less than perfectly in competition.	1	2	3	4	5
7.	In competition, I never feel like I can quite meet my parents' expectations.	1	2	3	4	5
8.	I hate being less than the best at things in my sport.	1	2	3	4	5
9.	I have and follow a pre-competitive routine.	1	2	3	4	5
10.	If I fail in competition, I feel like a failure as a person.	1	2	3	4	5
11.	Only outstanding performance during competition is good enough in my family.	1	2	3	4	5
12.	I usually feel unsure about the adequacy of my pre-competition practices.	1	2	3	4	5
13.	Only outstanding performance in competition is good enough for my coach.	1	2	3	4	5
14.	I rarely feel that my training fully prepares me for competition.	1	2	3	4	5
15.	My parents have always had higher expectations for my future in sport than I have.	1	2	3	4	5
16.	The fewer mistakes I make in competition, the more people will like me.	1	2	3	4	5

Please complete the remaining items in this questionnaire on the next page. ☞

	To what extent do you agree or disagree with the following statements?	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
17.	It is important to me that I be thoroughly competent in everything I do in my sport.	1	2	3	4	5
18.	I follow pre-planned steps to prepare myself for competition.	1	2	3	4	5
19.	I feel like I am criticized by my parents for doing things less than perfectly in competition.	1	2	3	4	5
20.	Prior to competition, I rarely feel satisfied with my training.	1	2	3	4	5
21.	I think I expect higher performance and greater results in my daily sport-training than most players.	1	2	3	4	5
22.	I feel like I can never quite live up to my coach's standards.	1	2	3	4	5
23.	I feel that other players generally accept lower standards for themselves in sport than I do.	1	2	3	4	5
24.	I should be upset if I make a mistake in competition.	1	2	3	4	5
25.	In competition, I never feel like I can quite live up to my parents' standards.	1	2	3	4	5
26.	My coach sets very high standards for me in competition.	1	2	3	4	5
27.	I follow a routine to get myself into a good mindset going into competition.	1	2	3	4	5
28.	If a team-mate or opponent (who plays a similar position to me) plays better than me during competition, then I feel like I failed to some degree.	1	2	3	4	5
29.	My parents expect excellence from me in my sport.	1	2	3	4	5
30.	My coach expects excellence from me at all times: both in training and competition.	1	2	3	4	5
31.	I rarely feel that I have trained enough in preparation for a competition.	1	2	3	4	5
32.	If I do not do well all the time in competition, I feel that people will not respect me as an athlete.	1	2	3	4	5
33.	I have extremely high goals for myself in my sport.	1	2	3	4	5
34.	I develop plans that dictate how I want to perform during competition.	1	2	3	4	5
35.	I feel like my coach never tries to fully understand the mistakes I sometimes make.	1	2	3	4	5

Please complete the remaining items in this questionnaire on the next page. ☞

	To what extent do you agree or disagree with the following statements?	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
36.	I set higher achievement goals than most athletes who play my sport.	1	2	3	4	5
37.	I usually have trouble deciding when I have practiced enough heading into a competition.	1	2	3	4	5
38.	I feel like my parents never try to fully understand the mistakes I make in competition.	1	2	3	4	5
39.	People will probably think less of me if I make mistakes in competition.	1	2	3	4	5
40.	My parents want me to be better than all other players who play my sport.	1	2	3	4	5
41.	I set plans that highlight the strategies I want to use when I compete.	1	2	3	4	5
42.	If I play well but only make one obvious mistake in the entire game, I still feel disappointed with my performance.	1	2	3	4	5

Gotwals, J. K., & Dunn, J. G. H. (2009). A multi-method multi-analytic approach to establishing internal construct validity evidence: The Sport Multidimensional Perfectionism Scale 2. *Measurement in Physical Education and Exercise Science*, ***13***, 71-92.

Appendix C

How do you cope with events?

Everyone gets confronted with negative or unpleasant events now and then and everyone responds to them in his or her own way. By the following questions you are asked to indicate what you generally think, when you experience negative or unpleasant events.

	never (almost)	sometimes	regularly	often	always (almost)
1. 1 feel that I am the one to blame for it	1	2	3	4	5
2. I think that I have to accept that this has happened	1	2	3	4	5
3. I often think about how I feel about what I have experienced	1	2	3	4	5
4. I think of nicer things than what I have experienced	1	2	3	4	5
5. I think of what I can do best	1	2	3	4	5
6. I think I can learn something from the situation	1	2	3	4	5
7. I think that it all could have been much worse	1	2	3	4	5
8. I often think that what I have experienced is much worse than what others have experienced	1	2	3	4	5
9. I feel that others are to blame for it	1	2	3	4	5
10. I feel that I am the one who is responsible for what has happened	1	2	3	4	5
11. I think that I have to accept the situation	1	2	3	4	5
12. I am preoccupied with what I think and feel about what I have experienced	1	2	3	4	5
13. I think of pleasant things that have nothing to do with it	1	2	3	4	5
14. I think about how I can best cope with the situation	1	2	3	4	5
15. I think that I can become a stronger person as a result of what has happened	1	2	3	4	5
16. I think that other people go through much worse experiences	1	2	3	4	5
17. I keep thinking about how terrible it is what I have experienced	1	2	3	4	5
18. I feel that others are responsible for what has happened	1	2	3	4	5

OVER

	(almost) never	sometimes	regularly	often	(almost always)
19. I think about the mistakes I have made in this matter	1	2	3	4	5
20. I think that I cannot change anything about it	1	2	3	4	5
21. I want to understand why I feel the way I do about what I have experienced	1	2	3	4	5
22. I think of something nice instead of what has happened	1	2	3	4	5
23. I think about how to change the situation	1	2	3	4	5
24. I think that the situation also has its positive sides	1	2	3	4	5
25. I think that it hasn't been too bad compared to other things	1	2	3	4	5
26. I often think that what I have experienced is the worst that can happen to a person	1	2	3	4	5
27. I think about the mistakes others have made in this matter	1	2	3	4	5
28. I think that basically the cause must lie within myself	1	2	3	4	5
29. I think that I must learn to live with it	1	2	3	4	5
30. I dwell upon the feelings the situation has evoked in me	1	2	3	4	5
31. I think about pleasant experiences	1	2	3	4	5
32. I think about a plan of what I can do best	1	2	3	4	5
33. I look for the positive sides to the matter	1	2	3	4	5
34. I tell myself that there are worse things in life	1	2	3	4	5
35. I continually think how horrible the situation has been	1	2	3	4	5
36. I feel that basically the cause lies with others	1	2	3	4	5

Thank you for filling out the questionnaire!

EATING ATTITUDES TEST (EAT-26)

Height _____
Current Weight _____
Highest Weight (excluding pregnancy) _____
Lowest Adult Weight _____
Do you participate in athletics at any of the following level:

O Intramural
O Inter-Collegiate
O Recreational
O High School teams

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

Total Score (see below for scoring instructions) _____

EAT-26 David M. Garner & Paul E. Garfinkel (1979), David M. Garner et al., (1982)

PLEASE RESPOND TO EACH OF THE FOLLOWING QUESTIONS:

1) Have you gone on eating binges where you feel that you may not be able to stop? (Eating much more than most people would eat under the same circumstances)

No O Yes O How many times in the last 6 months? _____

2) Have you ever made yourself sick (vomited) to control your weight or shape?

No O Yes O How many times in the last 6 months? _____

3) Have you ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?

No O Yes O How many times in the last 6 months? _____

4) Have you ever been treated for an eating disorder?

No O Yes O When? _____

5) Have you recently thought of or attempted suicide?

No O Yes O When? _____

SCORING THE EATING ATTITUDES TEST

For all items **except #25**, each of the responses receives the following value:

Always = 3
Usually = 2
Often = 1
Sometimes = 0
Rarely = 0
Never = 0

For **item #25**, the responses receive these values:

Always = 0
Usually = 0
Often = 0
Sometimes = 1
Rarely = 2
Never = 3

- After scoring each item, add the scores for a total. If your score is over **20**, we recommend that you discuss your responses with a counselor (take your responses to the EAT with you to your first appointment).
- If you responded yes to any of the five YES/NO items on the bottom of the EAT, we also suggest that you discuss your responses with a counselor.

Appendix E

EATING QUESTIONNAIRE

Instructions: The following questions are concerned with the past four weeks (28 days) only. Please read each question carefully. Please answer all of the questions. Thank you.

Questions 1 to 12: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days) only.

	On how many of the past 28 days…	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
1	Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
2	Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?	0	1	2	3	4	5	6
3	Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
4	Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
5	Have you had a definite desire to have an empty stomach with the aim of influencing your shape or weight?	0	1	2	3	4	5	6
6	Have you had a definite desire to have a totally flat stomach?	0	1	2	3	4	5	6

7	Has thinking about <u>food, eating or calories</u> made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
8	Has thinking about <u>shape or weight</u> made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
9	Have you had a definite fear of losing control over eating?	0	1	2	3	4	5	6
10	Have you had a definite fear that you might gain weight?	0	1	2	3	4	5	6
11	Have you felt fat?	0	1	2	3	4	5	6
12	Have you had a strong desire to lose weight?	0	1	2	3	4	5	6

Questions 13 to 18: Please fill in the appropriate number in the boxes on the right. Remember that the questions only refer to the past four weeks (28 days) only.

Over the past four weeks (28 days)…		
13	Over the past 28 days, how many <u>times</u> have you eaten what other people would regard as an <u>unusually large amount of food</u> (given the circumstances)?	.....
14	… On how many of these times did you have a sense of having lost control over your eating (at the time that you were eating)?	.....
15	Over the past 28 days, on how many **<u>DAYS</u>** have such episodes of overeating occurred (i.e., you have eaten an unusually large amount of food <u>and</u> have had a sense of loss of control at the time)?	.....
16	Over the past 28 days, how many <u>times</u> have you made yourself sick (vomit) as a means of controlling your shape or weight?	.....

17	Over the past 28 days, how many <u>times</u> have you taken laxatives as a means of controlling your shape or weight?	.....
18	Over the past 28 days, how many <u>times</u> have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat, or to burn off calories?	.....

Questions 19 to 21: Please circle the appropriate number. <u>Please note that for these questions the term "binge eating" means</u> eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating.

19	Over the past 28 days, on how many days have you eaten in secret (ie, furtively)? … Do not count episodes of binge eating	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
		0	1	2	3	4	5	6
20	On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effect on your shape or weight? … Do not count episodes of binge eating	None of the times	A few of the times	Less than half	Half of the times	More than half	Most of the time	Every time
		0	1	2	3	4	5	6
21	Over the past 28 days, how concerned have you been about other people seeing you eat? … Do not count episodes of binge eating	Not al all		Slightly		Moderately		Markedly
		0	1	2	3	4	5	6

Questions 22 to 28: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days).

	Over the past 28 days…	Not at all		Slightly		Moderately		Markedly
22	Has your <u>weight</u> influenced how you thinking about (judge) yourself as a person?	0	1	2	3	4	5	6
23	Has your <u>shape</u> influenced how you thinking about (judge) yourself as a person?	0	1	2	3	4	5	6

24	How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less, often) for the next four weeks?	0	1	2	3	4	5	6
25	How dissatisfied have you been with your weight?	0	1	2	3	4	5	6
26	How dissatisfied have you been with your shape?	0	1	2	3	4	5	6
27	How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?	0	1	2	3	4	5	6
28	How uncomfortable have you felt about others seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)?	0	1	2	3	4	5	6

What is your weight at present? (Please give your best estimate.) .....

What is your height? (Please give your best estimate.) .....

If female: Over the past three-to-four months have you missed any menstrual periods? .....

If so, how many? .....

Have you been taking the "pill"? .....

THANK YOU

Appendix F

Survey

1. Are you currently a varsity athlete at Bemidji State University? (circle one)

   Yes No

2. If yes, what sport do you play at BSU? _____

3. If no, what sport or type of exercise do you typically engage in during your workouts? _____

4. On average how many times do you work out in a one-week period? _____

5. Most of the time; how long is each work out session, in minutes? _____

6. What is your average level of intensity during each workout? (circle one)

1	2	3	4	5
Little/ No Fatigue after workout				Extreme fatigue after workout

7. Based on the following scale, identify how much social support you believe you have. (circle one)

1	2	3	4	5
No support				Extreme amount of support

8. Please indicate your age: _____

Appendix G

Informed Consent From
Department of Psychology
Bemidji State University

Thank you for volunteering to participate in this study. The purpose of this study is to evaluate the relationship between the personality trait of perfectionism and particular coping strategies. Your participation is voluntary and you may withdraw at anytime without penalty. You will only be granted extra credit in Psychology 1100 if you complete this study. You may earn extra credit by participating in another experiment or other means listed in your course syllabus.

The information that you give us will be completely confidential. You will create an identification code at the beginning of the study, which will remove all identifying information from your data and will be included on each of the questionnaires that you fill out. Your participation will consist of filling out a variety of questionnaires. Your participation should not take more than one hour. Because this is a research study, we will not provide you with information regarding your individual results or scores on any of the questionnaires. Nor will any individual results be published. You may, however, inquire about the results of the study at its conclusion by contacting Dr. Richard Hook or Dr. Marsha Driscoll in the Psychology Department.

This study is designed to evaluate the relationship between perfectionism and coping strategies that people use to deal with stress. Specifically you will be asked questions regarding eating disorder behaviors. Although it is unlikely that you will experience any ill effects from this study, it is possible that you will feel some discomfort discussing this topic or that discussing eating disorders will bring up concerns regarding your own health. If you have questions about the any of the psychological measures used in this study, or concerns regarding your reaction to this study, you may contact Dr. Guggenheimer or Mr. Hanus in the Counseling Center (1st Floor Birch Hall) for assistance.

I have read this letter and voluntarily agree to participate in this research.

Signature: ______________________________________ Date: __________

(tear here)

- -

Dr. Marsha Driscoll 218-755-2848 or mdriscoll@bemidjistate.edu

Dr. Richard Hook 218-755-2870 or rhook@bemidjistate.edu

Kirsten Hengstler; Kirsten.hengstler@st.bemidjistate.edu

Bemidji State University Counseling Center (1st floor Birch Hall) 218-755-2024

Appendix H

Debriefing for Perfectionism Study

The study you have just completed is evaluating the relationship between perfectionism and the particular coping strategies people use to deal with stress. I have collected data regarding your perfectionist tendencies, coping strategies you use to deal with stress, information regarding eating disorder behaviors, thoughts and tendencies, as well as information regarding your status as an athlete, and exercise behaviors. I am interested in finding out the relationships between these variables. I expect to find individual differences in perfectionism associated with different levels of eating disorder behaviors and coping strategies. Perfectionism can be both positive and negative. When levels of negative perfectionism are too high it is considered unhealthy, therefore I expect that individuals with higher negative perfectionism will have higher levels of disordered eating patterns, and less constructive coping strategies. All of the information collected here will remain confidential, and no individual results will be published.

You may have felt uncomfortable during any number of these questionnaires. It is not uncommon to feel this way when reflecting on personal matters such as eating behaviors, and coping strategies. If you continue to feel uncomfortable about your participation in this study, heightened anxiety about the way you handle perfectionism, or if you have concerns about having an eating disorder, please contact Dr. Guggenheimer or Mr. Hanus in the Counseling Center (1st floor Birch hall 755-2024) to discuss your questions or concerns.

If you have questions regarding the final publication of this research you may contact Dr. Richard Hook (Psychology department chair; 755-2870), or Dr. Marsha Driscoll (Faculty supervisor; 755-2848) regarding the results of the experiment at its conclusion.

Do you have any questions?