

How Does Pressure to be Perfect Impact Pre-Collegiate Gymnasts?

A Synthesis of the Research Literature

A Synthesis Project

Presented to the

Department of Kinesiology, Sport Studies, and Physical Education

The College at Brockport

State University of New York

In Partial Fulfillment

of the Requirements for the Degree

Master of Science in Physical Education

(Physical Education)

by

Caitlin Elsadek

May 13, 2019

THE COLLEGE AT BROCKPORT
STATE UNIVERSITY OF NEW YORK
BROCKPORT, NEW YORK

Department of Kinesiology, Sport Studies, and Physical Education

Title of Synthesis Project: How Does Pressure to be Perfect Impact Pre-Collegiate
Gymnasts?

Read and Approved by: *Susan C. Petersen*

Date: *5/13/2019*

Accepted by the Department of Kinesiology, Sport Studies, and Physical Education, The College at Brockport, State University of New York, in partial fulfillment of the requirements for the degree Master of Science in Education (Physical Education).

Cathy Houston-Wilson

Chairperson, Department of Kinesiology,
Sport Studies, and Physical Education

5/15/19
Date

Table of Contents

Title Page.....1

Signature Page.....2

Table of Contents.....3

Abstract.....4

Chapter 1.....5-8

Chapter 2.....9-11

Chapter 3.....12-23

Chapter 4.....24-27

Chapter 5.....28-30

Reference Page.....31-32

Appendix A.....33-70

Abstract

This synthesis highlights the available research of how pressure to be perfect impacts pre-collegiate gymnasts. With recent accusations of sexual assault from USA Gymnastics doctor, Larry Nassar and the idealism of looking aesthetically pleasing for success, this research was imperative.

The literature review examined evidence-based research in areas of body image and disordered eating issues, and pressure on young gymnasts. Specifically, this literature review used peer-reviews and scholarly articles to explore what kinds of pressure pre-collegiate gymnast encounter, from whom the pressure comes from, and the gymnast deals with the pressure. Results showed that coaches, parents, teammates, and the gymnast themselves instigate pressure associated with achieving a perfect body image, perfection in sport, and continued practice even through injury without complaining. In turn, gymnasts deal with these pressures through prompting eating disorders and the act of silence when guidance is needed most.

Keywords: Gymnastics, pressure, perfection in sport, parents, coaches, and eating disorders, body esteem, pressure to be thin, success, coaches, relationship, stress, and commitment.

Chapter One

Introduction

The concept of flipping and twisting in the air may already seem complex in the sport of gymnastics. As high-level performance demands increase, the expectation of being close to perfect rises. This expectation puts not only physical pressure on gymnasts but psychological pressure as well. There are many factors that contribute to physical and psychological pressure, including the athletes themselves. Who/what are the sources of pressure on gymnasts and how do the athletes handle that pressure to be “perfect”?

"Between 1990 and 2005, an estimated 425,900 children from six to seventeen years of age were treated for gymnastics-related injuries in U.S. emergency departments, representing an average of 4.8 injuries per 1,000 gymnasts per year" (Mahoney, 2008 pg. 54). When a gymnast has been complaining about his or her ankle, wrist, muscle or another injury the coach may continue to expect hard work and participation in practice. "It has been long established that coaches create stress in athletes when punitive behaviors are emphasized in their relationship" (Bower, 1978 pg. 43). This puts the gymnast in a mindset of "playing through the pain". Ultimately, a gymnast may grow into a repeated pattern of pushing through the pain because of fear of losing practice time or disapproval of the coach.

Other pressures weigh on gymnasts and those associated with them as well, often to the extent that they remain quiet in the face of abuse in order to retain a position on a high-level team. This coincides with the recent accusations of sexual assault from USA Gymnastics doctor,

Larry Nassar, who was sentenced to federal prison in December of 2017. "One hundred twenty-five women filed criminal complaints with police, more than 300 people — including victims, spouses, and parents — have filed civil suits against the doctor and the institutions that employed him for so long" (Kirby, 2018). There is a lot to be said about pressure to win and be successful within the sport.

“Athletes in aesthetic, weight – dependent, or endurance sports have been found to be more likely to utilize pathogenic weight-control methods than athletes from other sports” (Kosmidou, Prois, Giannitsopoulou, Siatras, Doganis, Prois, Douda & Fachantidou-Tsiligioglou, 2015, p1). That being said, appearance within gymnastics plays a huge roll in the overall idea of perfection. Pressure to look thin and aesthetically pleasing is the ideal image for young gymnasts, “Belief among athletes and coaches that a reduction in weight or body fat could enhance athletic performance, increased athlete’s risk in prevalence of eating disturbances (Kosmidou et al. 2015, p.2 particularly in judged sports where performance may be influenced by body, size, or weight” (Kosmidou et al. 2015, p.2) In fact, in a study by Kosmidou et al., (2015), of the twenty rhythmic gymnasts, thirteen of them had eating disorder symptoms and were actively dieting, all for the reason of improving their performance and/or appearance.

Not only can coaches put pressure on the gymnast to be perfect, but parents of gymnasts contribute as well. “Although parents want their child to enjoy the sport, they may also want her to become an Olympic Champion” (Smits, Jacobs, and Knoppers 2017, p.67). Considering all the time and finances parents devote to their child in order for them to compete and participate, a level of competitiveness between parents often develops and a form of ‘status’ is gained depending on the success of their child. “Many parents are influenced by the contemporary

sporting culture and establish standards of success in which victory is overemphasized, and, in some cases, they use their children's progress for their own status and personal objectives”(Smits, Jacobs, and Knoppers 2017 p. 67). This attitude can “cause physical and psychological damage that will last the entire lifetime of the athlete” (Doherty 1999)(Nunomura,& Oliveria 2013 p.2).

Statement of Purpose

The purpose of this study is to explore how the pressure to be perfect impacts pre-collegiate gymnasts. It will be guided by three specific research questions.

1. What kinds of pressures do pre-collegiate gymnasts encounter?
2. From whom does the pressure come?
3. How do gymnasts deal with pressure?

Operational Definitions

Perfectionism- “A network of cognitions, including expectations and interpretations of events and evaluations of oneself and others, characterized by the setting of unrealistic standards, rigid and indiscriminate adherence to these, and equating self-worth with performance” (Nordin, Harris and Cumming, 2003 p. 4)

Grooming- Grooming is a systematic process typically done over weeks, months or years to slowly lure and manipulate children into abuse. (USA Gymnastics)

Pre-Collegiate- occurring before college (Merriam Webster, 1828)

Body esteem- refers to self-evaluations of one's body or appearance (B. Mendelson, J. Mendelson, and White, 2010 p.1)

Assumptions

For the purpose of this study, the following assumptions were made:

1. Literature was exhaustive and comprehensive
2. Researchers used effective and reliable instruments honestly and truthfully.
3. All participants in the studies completed instruments honestly, truthfully, and to the best of their ability,

Delimitations

For the purpose of this study, the following delimitations were applied:

1. All athletes in this study were pre-collegiate, (i.e., up to eighteen years old)
2. All athletes in this study competed in various branches of gymnastics (artistic and rhythmic).
3. All studies were data-based, peer reviewed, and published after 1997 in a scholarly journal which was available in English.
4. There was no limit to the location of study. Studies from around the world were included except those that were not translated into English.
5. All studies may include male athletes.

Limitations

For the purpose of this study, the following limitations were applied:

1. Although limited, the number of participants in each study is large enough to be helpful but not generalizable.
2. Loss of participants during the course of study due to retirement, injuries, and absence.
3. Athletes were only studied during athletic year.

Chapter 2

Methods

The purpose of this chapter is to review the process used to collect articles regarding how pressure to be perfect impacts pre-collegiate gymnasts. The State University of New York College at Brockport Drake Memorial Library database was used for the primary research. The studies selected for this synthesis were located using EBSCO Host, as well as “backward searches” from the references of articles. Within the EBSCO Host database, SPORTDiscus was the primary database that was used. Twelve articles were found using these databases to support the purpose and research questions in the study.

The criteria for critical mass articles included data-based articles published in academic journals between the years 1997-2019. For an article to be included and used as part of the critical mass, additional criteria also had to be met but articles were not excluded if published outside the United States. Full-text English transcript had to be available and articles had to include athletes that were pre-collegiate.

Keywords and phrases relevant to the research questions were used to find articles and research studies. Keywords used were as follows: *gymnastics, pressure, perfection in sport, parents, coaches, and eating disorders, body esteem, pressure to be thin, success, coaches relationship, stress, and commitment*. Different combinations of words and phrases were used to generate as many articles as possible that correlated support for this study. Combinations included: (1) *Gymnastics AND pressure*, (2) *Gymnastics AND coaches*, (3) *Perfection in sport AND Gymnastics*, (4) *Perfection in sport AND coaches*, (5) *Perfection in sport AND pressure*, (6) *Pressure in sport AND perfection AND coaches*, (7) *Perfection in sport AND perfection AND parents*, (8) *Gymnastics AND coaches AND pressure*, (9) *Pressure AND gymnastics AND*

pressure in sport, (10) *Eating disorders AND gymnastics*, (11) *Eating disorders AND gymnastics AND pressure*, (12) *Pressure to be thin AND body esteem*, (13) *body esteem AND success*, (14) *coaches relationship AND stress*, (15) *coaches relationship AND stress AND commitment*, (16) *Grooming in sport*. This process was repeated until literature was exhausted and appropriate literature for the critical mass was found.

Keywords *pressure AND gymnastics* resulted in identification of ten articles. Of those ten reviewed, only one was used for the review of literature. Keywords *perfection in sport AND gymnastics* established four results. Of these articles, two articles were used for the review of literature. Keywords *eating disorders AND gymnastics* generated 52 results. To refine these results further, the keyword *AND pressure* limited the search to seven. Of these seven, three articles. Keywords *body esteem AND success* developed seven outcomes. Of those seven reviewed, one article was used for critical mass.

Keywords *gymnastics AND coaches* resulted in 282 results. To further refine these results, the keyword *AND pressure* was applied to which produced nine results. Of these nine results, two articles were chosen for review of literature because it best addressed the research question. Keywords *parents AND gymnastics* generated 66 results. Those 66 articles were reviewed and two met the criteria for the critical mass. Keywords *coaches relationship AND stress* produced 136 results. To refine these results further, the keyword *AND commitment* was added. This addition developed four results which one was used for review of literature.

Keywords *Pressure to be thin* generated 115 results. To refine this search, the keywords *AND body esteem* limited the search to seven results. After reviewing all seven articles, two articles were chosen and used for review of literature because they provided key content for my

research questions. Keywords *Grooming in sport* developed eleven results. Of those eleven reviewed, only one was used for review of literature.

The final five searches that were used for literature were achieved by backward searching from the references of other articles. Reoccurring authors from already chosen articles were noted and used to find the remaining articles that were used for the critical mass.

Articles included in this synthesis included both qualitative and quantitative methods. Five articles utilized qualitative methods, primarily interviews and questionnaires. ANOVA, Nvivo and standardized testing was used for analysis of five studies of quantitative data.

The smallest sample size was a phenomenological case study consisting of one participant. This study involved three unconstructed interviews that lasted between 30 and 120 minutes each. The largest study sample size consisted of 274 athletes in a quantitative study. A total of 915 gymnasts (118 males, and 797 females) were represented for the critical mass of this synthesis.

Chapter 3

Review of Literature

The purpose of this chapter is to review the literature that examines aspects of how the pressure to be perfect as a pre-collegiate athlete develops. Specifically, this chapter will review articles that describe the kinds of pressure pre-collegiate gymnasts encounter, from whom does the pressure come, and how the gymnast deals with that pressure. The review will be split into two categories; articles dealing with body image and disordered eating issues, and articles dealing with pressure on young gymnasts.

Body Image and Disordered Eating

A study by Kosmidou, Prois, Giannitsopoulou, Siatras, Doganis, Prois, Douda & Fachantidou- Tsiligioglou (2015) aimed to investigate the short-term effects of an intervention to enhance positive body esteem, positive eating attitudes and decrease perceived pressure to be thin by significant others. This study included 49 athletes within the sport of rhythmic gymnastics with a mean age of 12 years old. Twenty-nine athletes were part of the intervention group and 20 were a part of the control group.

Data was collected through three one-hour meetings/interviews with small groups of four to five athletes per group, as well as self-reported questionnaires distributed by the researcher on topics such as; body esteem, eating attitudes, self-esteem, pressure, and global self-esteem. Both groups completed self-reported questionnaires at baseline and after intervention. This intervention program contained information about self, esteem, bodies in sports, bodies in rhythmic gymnastics nowadays and in the past, eating disorders, dealing with marketing messages, goal setting, overcoming problems, anxiety, attention, concentration, positive self-talk, and imagery. Interviews were conducted in an isolated area within the gymnasium, not including

parents or coaches. Coaches were not involved and given specific instructions to not change routines during practice in any way.

Using SPSS 15 and one sample t-tests, the effectiveness of the intervention was analyzed. This study found that thirteen out of twenty athletes had eating disorder symptoms (five from intervention group (IG) and eight from control group (CG)). Intervention portrayed a positive effect with an increased body image in IG and a decrease in eating attitudes in general, dieting scale and bulimia and food preoccupation, and perceived pressure to be thin by experts and parents. Body esteem showed no difference in pre-test between control group (CG) and intervention group (IG). But, post-test IG had higher scores in post-test than pre-test while CG showed lower scores in post-test than pre-test. Thus, this program reduced pressure to be thin by young women in rhythmic gymnastics. “Elite athletes and elite dancers are at a greater risk for developing eating disorders, disorders were predicted mostly by body image dissatisfaction and parental influences” (Kosmidou et al. 2015 p 10).

A study by Nordin, S., Harris, G., & Cumming, J. (2003) sought to compare three different kinds of gymnastics disciplines (artistic, rhythmic and acrobatics) on the indices of eating disturbance and to explore the association between perfectionism and eating disturbance. Participants included for this study were 50 female gymnasts that participated in one of three forms of gymnastics (artistic (17), rhythmic (17), sports acrobatics (16)) and currently competing.

Data was collected through Likert scale formation of four subscales of Eating Disorder Inventory (EDI); Perfectionism, Drive for thinness, Bulimia, and Body Dissatisfaction. Questionnaires were completed during training sessions and away from coaches. This study found that rhythmic gymnastics scores were significantly higher in the Drive for Thinness (6.65)

and highest in the Total Eating Disturbance subscale (13.12), which was also the highest score within the whole study. Rhythmic gymnastics scored the lowest in the Bulimia subscale (1.00). Rhythmic gymnastics scored the highest in all EDI subscales. Artistic gymnasts scored highest in the perfectionism EDI subscale (4.06) but lower than rhythmic gymnastics (4.76). Sport acrobatics had the second highest score in the total eating disturbance subscale (6.13), and lowest scoring subscale in bulimia (0.44). 75% of the sample reported dieting because they believed their coach found them too fat or because they thought it would get them higher scores in competition by the judges.

“The result findings were the first to suggest that eating disorders were a significant problem in elite rhythmic gymnasts. Perhaps even more alarming is that the sample recruited for the present investigation was not elite in nature but consisted of young athletes who had just reached, or were about to reach, a critical point in their lives for physical and psychological development” (Nordin et al. 2003 p 9). The authors concluded that a gymnast that has developed a disordered eating attitude at a young age will surely be more vulnerable to developing further severe disturbances when puberty sets in.

A study by Neves, Meireles, Carvalho, Schubring, Barker-Ruchti., & Ferreira, (2016), sought to determine how gymnasts’ body dissatisfaction, risk factors for eating disorders, media internalization, perfectionism and mood state change during pre-competition, competition and post-competition seasons and to identify how these psychosocial indicators impact body dissatisfaction during the athletic season. All 20 participants in this study were female and between the ages of ten and eighteen years old.

This nine-month longitudinal study required participants to answer questions regarding body dissatisfaction, disordered eating and anthropometry measures. Completion of media

internalization, perfectionism, and state of mood questionnaires were also completed. Measurements took place before evening practice (second practice of the day). Each questionnaire had separate subscales that were in a form of a Likert scale. The same measures were applied at three different time periods throughout the competitive season: pre-competitive period (T1), competition period (T2), and post-competition period (T3).

Despite limitations such as small sample sizes, loss of participants throughout the study due to injuries, Neves et al. (2016) found that the average score for the disordered eating subscale was significantly higher during competition period than after competition. “During the competition period, 45% of the gymnast indicated being dissatisfied with their body”, Neves et al. (2016). This percentage decreased in pre and post- competition periods to 25%. Self-oriented perfectionism scored the highest in T1 (87.7), fluctuated in T2 (78.35), and increased again at T3 (79.60). Accordingly, a subscale within the BRUMS (Brunel Mood Scale), depression scored lowest at T1 (1.95), increased at T2 (2.80), and remained the same at T3 (2.80). “Thus, as research by Barker-Ruchti (2011) has shown, gymnasts are driven to be self-critical in their pursuit to perform flawlessly” (Neves et al. 2016, p.1749).

Bruin, Bakker, & Oudejans (2009) conducted a study to examine the relationship between disordered eating in female gymnasts and dancers and their perspective regarding achievement in sport and dance, with an emphasis on outperforming others (ego involvement). More disordered eating was expected than when personal progress (task involvement) was emphasized. The authors explained three different achievement goal theories (ego-oriented “performance climate”, task-oriented “mastery climate” and goal-oriented) that categorized each athlete and their methods of achieving success.

This study involved 14 coaches of the Royal Dutch Gymnastics Union (KNGU) and 94 aesthetic performers. Of the 94 aesthetic performers, 59 of them were gymnasts and 35 of them were dancers with an average mean age of 15 years old. Data was collected by completing questionnaires that measured ego and task involvement, dieting, self-esteem, perfectionism, and weight-related peer and coach pressure. Questionnaires took 30-40 minutes to complete and were done in the presence of the researcher.

Bruin et.,al (2009) found that dancers showed lower self-esteem ($SD=8.17$) than gymnasts ($SD=5.81$) and reported greater perfectionism scores (Dancers $SD=5.14$) than gymnasts ($SD= 4.64$). Results also showed that gymnasts (3.47) had a higher dieting frequency scores than dancers (3.26) did, but dancers specified a higher score (0.83) in the weight control index questionnaire than gymnasts (0.80). Gymnasts (9.26) scored significantly higher in the coach/teacher pressure category than dancers (7.79).

This study showed that "both ego and performance climate were related to more frequent dieting, using more pathogenic weight control methods, greater perfectionism and perceiving more weight-related peer pressure" (Bruin et.,al 2009, p. 5), confirms that having a high ego orientation means that a female aesthetic performer is significantly more likely to report indices of disordered eating" (Bruin et.,al 2009, p. 5). The authors came to a conclusion that "aesthetic athletes' and performers' eating attitudes and dieting behaviors seem to be specifically connected to their drive for performance" (Bruin et.,al 2009, p. 6). Therefore, in order to maximize performance and wellbeing, one should consider a mastery environment rather than performance climate.

A study done by Francisco, Narciso, & Alarcao (2012) conducted a qualitative study that aimed to explore potential specific contextual and individual variables related to disordered

eating in a sample of male and female gymnasts and ballet dancers from different competitive levels. The participants used in this study were 249 ballet dancers (n=113) and gymnasts (n=136) of both sexes (47 male and 202 female). The mean age of the participants was 15 years old. The dancers were split into two categories; Elite dancers group, and Non-elite dancers group, as were the gymnasts; Elite gymnastics group, and Non-elite gymnastics group. The group of gymnasts included all four gymnastics disciplines; Acrobatics (n=62); Trampoline gymnastics (n=28); Rhythmic gymnastics (n=27); and Artistic gymnastics (n=19).

Data collection was scheduled around training or class times and occurred in small groups while in the presence of a researcher and without the presence of coaches/teachers. Participants who were unable to participate in group sessions were given surveys by researcher or coach/teacher to complete at home. Completed surveys were handed in in a sealed envelope without any form of identification. Surveys took about 40 minutes to complete.

Questionnaires were in the form of a Likert scale and based on self-esteem, body image dissatisfaction (BID), disordered eating (DE) and involved choosing the participant's preferred body shape silhouette. Francisco et,al (2012) discovered that elite gymnasts had higher dissatisfaction with their body image than non-elite gymnasts but had similar general body dissatisfaction scores as elite female dancers. The authors suggest that "High pressure from gymnastics coaches in the contexts of high-level competitions and professional dance schools link such pressure to an increased risk for the development of eating disorders" (Francisco et.,al 2012, p. 497). The authors hypothesize that "most female ballet dancers and gymnasts feel physically quite well and thin enough in their daily lives, but they believe they need to present a thinner body for the practice of classical dance and gymnastics to coincide with the aesthetic ideals they think would enable them to achieve more success" (Francisco et.,al 2012, p. 496).

The authors concluded that “females seem to make a greater distinction between general and specific ideal body images” (Francisco et.,al 2012, p. 496). Every female group showed significant differences between the two indicators of BID establishing that athletes are always dissatisfied with their image.

Pressure on Young Gymnasts

Smits, Jacobs, & Knoppers, A. (2016) sought to explore/provide insights into how athletes and parents made sense of current emotional abusive practices in elite youth sport. In this study, 14 elite gymnasts between the ages of 14 and 30, as well as 12 parents between the ages of 36 and 51 participated in semi-structured interviews that were one to two hours long. Within these interviews, athletes and parents were told to describe three techniques that coaches used during interactions with athletes that reinforces obedience; isolation, regulation, and intimidation. The parents involved in the study were the parents of the participating elite gymnasts. Topics such as history of involvement, goals, contact with other female gymnasts/parents, and culture experience (overall view/opinion of the sport) of elite women's gymnastics were also explored.

Smits et al., (2016) found that gymnasts were intimidated by their coaches and feared when they would get angry as they would utter threats out loud for others to hear. “Some practices may violate the rights of children and the belief that youth sport should be a positive pedagogical site” (Smits et al. 2016, p.68). Athletes learned to carry on, despite an injury and ‘be tough’ because “assertiveness or disagreement was seen as ‘complaining’ or ‘whining’” (Smits et al. 2016, p.73), resulting in a normalized silence. “Female gymnasts had learned to ‘manage’ pain at an early age”(Smits et al. 2016, p.71).

Some of the words used by the gymnasts in the interview included; ‘manipulating’, ‘very mean’, being told you are a softie’, ‘swearing’, screaming at you’, and ‘making you look ridiculous in front of others’. “Coaches need to learn to listen and athletes and parents need to learn how to ensure their voice is heard and taken seriously” (Smits et al. 2016, p.80). Smits et al., (2016) concluded that protecting athletes from future harm is critical and necessary change that should be taken seriously. Changing the contextual frame/culture of the gym where these athletes practice can be the difference between psychological/physical harm and positive pedagogical practice.

A study by Nunomura,& Oliveria (2013) aimed to better understand how gymnasts perceive parental support and how their attitudes and behaviors can influence, positively or negatively, the process of the training of an athlete. Participants involved in this study consisted of 163 total gymnasts (40 boys and 123 girls), who competed in national and state competitions. Being a qualitative research approach, data collection involved semi-structured interviews that were conducted on site and analyzed in three steps: pre-analysis, study of material, and inference.

Nunomura et al.,(2013) discovered that “most children perceive their parents as major motivators, which is favorable to progress in the sports career” (p.5). While analyzing transcriptions, some positive examples frequently stated: “*always come to watch the competition*” (A157), “*they come to see the practices*” (A73). “Source of pressure” was included among the negative perceptions of parental support. Examples implied by the gymnasts include: “*do not let me quit because otherwise I will lose opportunities to do other things*” (A147), “*my father said that if I quit, it might not be a good action towards other people*” (A148). “some

parents relive their own ambitions on the sports field through the children as we identify in the interview of A60”, (Nunomura et al. 2013, p.9).

This study found that the “pressure exerted by parents is associated with low levels of motivation and the loss of enthusiasm for sports” (Nunomura et al. 2013, p.8). The authors also established that one participant did not appreciate her parents coming to her competitions because it was distracting, which was under the “encouraging” category. Nunomura et al.,(2013) came to the conclusion that “When parents hold high expectations, require too much and push their children to achieve certain results or to continue in the sport, it is very probable that the children will feel trapped and many will remain in the sports so to not disappoint their parents or for fear”(p.10) of letting them down.

Krane, Snow, & Greenleaf (1997) aimed to seek to understand and explain the behavior of an elite athlete, her coaches, and her parents and determine why the athlete behaved as she did. Being another qualitative study, the main participant was an American, former elite level gymnast “Susan” (a pseudonym) who was an Olympic hopeful. Data was collected through unstructured interviews, three separate times, that lasted up to two hours. The first interview involved asking the gymnast about her gymnastics career and experience as a gymnast. Follow up interviews asked “What drives an athlete to persist in sport under such extreme circumstances?” and a description of the role her parents, coaches, and peers play.

Krane et., al (1997) transcribed all interviews and had Susan review for correction. Using reflexivity and a feminist framework, axial coding resulted in three different dimensions; Motivational Climate, Evidence of an Ego Orientation, and Correlates of Ego Involvement. Results showed that "Feminist critiques of sport have deplored the high value placed on objectifying and alienating one's body by overtraining and ignoring pain and injury", (Krane et

al. 1997, p.68). Susan also announced how she would resort to extremely unhealthy practices that were scrutinized and reinforced by coaches and parents to get closer to her Olympic goals.

Susan's parents were also a contributor of pressure as they believed that the excessive techniques were also necessary to elite sports performance. They reinforced perfection even after several serious injuries including a neck injury and paralysis, disregarding recommendations by doctors to quit gymnastics. "Susan's parents perceived the environment as "normal" and required for success" (Krane et al. 1977, p.60). The authors concluded that Susan put success before her body rather than caring for it, she used her body as a tool. Therefore, "rather than stressing the importance of normative, outcome-based goals, a focus on personal improvement and long-term, healthy training techniques should be sought" (Krane et al. 1977, p.68).

A study done by Nicholls, Levy, Jones, Meir, Radcliffe & Perry (2016) sought to assess an a priori model that included perceptions of the coach, coach-athlete relationship, stress appraisals, and coping. This study included a total of 274 athletes from the United Kingdom (n=176), Australia (n=42), and Hong Kong (n=56). Participants were aged between 16 and 45 years old from team and individual sports, contact and non-contact sports. All participants competed in international competition.

Data was collected by handing out questionnaires that were in the form of a Likert scale and consisted of a Coaching Behavioral scale, a Coach Athlete Relationship Questionnaire (CART-Q), Appraisal Measure (SAM), and a Coping Inventory for Competitive Sport (CICS). Using Omega point estimate, results revealed that "all aspects of coach behavior correlated positively with the 3Cs (closeness, commitment, complementary) of the coach-athlete relationship with the exception of negative personal rapport, which correlated negatively with all aspects of the coach-athlete relationship" (Nicholls et.,al 2016, p. 20). Nicholls et.,al (2016) also

found that coach-athlete relationship was significantly associated with stress appraisal. Unsupportive coach behaviors positively predicted centrality and stressfulness. The authors concluded that “coaches should consider the impact of their behavior and the detrimental consequences of such unsupportive coaching” (Nicholls et al. 2016, p.24).

A study conducted by Owton, & Sparkes (2015) aimed to raise the awareness of sexual abuse in the sport and support change at the individual and group level while using a qualitative approach. The participant in this study was a 13-year-old, Bella (pseudonym), who wrote and released poems that reflected her pain and experience of being “groomed” and sexually assaulted by her coach. Data was collected and analyzed into three phases- grooming phase, abuse phase, resistance phase, and the recovery/survivorship phase. The main focus of this particular study was the grooming phase.

Bella stated numerous times that all she wanted was attention and approval from her male coach, Ray, who she also saw as ‘the god’. Bella also mentioned how she would get teased by her peers about being the ‘skinny little runt’ and how she wasn’t a ‘natural’ athlete. Healthwise, she would purposely make herself vomit to maintain her thin figure all in the hopes of pleasing and getting approval from her coach by (Owton, & Sparkes, 2015, p.735).

Owton, & Sparkes (2015) concluded upon Backenridge’s, (2009) three types of coaches in sport typology’ the flirting-charming coach, the seductive coach, and the authoritarian coach. The authors described how the elements of a triangulated relationship (sport opportunity, coach/authority figure inclination and athlete vulnerability) need to exist in order for a coach to act in their intent to abuse an athlete in their care. Therefore, “the structural conditions and power relationships, embedded in competitive sporting environments, specifically the power invested in

the coach, provide a unique socio-cultural context that offers a number of potentialities for sexual abuse and exploitation to take place” (Owton, & Sparkes, 2015, p.742).

Chapter 4

Discussion

The purpose of this chapter is to integrate the results of the articles mentioned in chapter three as well as answer the original research questions proposed in chapter one. This synthesis project examined ten articles with the anticipation of a better understanding of how pressure to be perfect impacts pre-collegiate gymnasts. Literature was divided into two categories: body image and disordered eating issues, and pressure on young gymnasts. This chapter will also discuss specific findings relating to the research question.

Research Question #1 What kinds of pressures do pre-collegiate gymnasts encounter?

The literature resulted in five articles that provided information on what kinds of pressure pre-collegiate athlete gymnastics encounter. The category of pressure encompassed research by Smits et al., (2017), Nunomura and Oliveria (2013), Krane et al., (1997), Nicholls et al., (2016) and Owton and Sparkes (2015). In a case study by Krane et.,al (1997), “Susan’s environment was rife with emphasizing winning, perfect performances, performing through pain, and exemplar body appearance” (Krane et al. 1997, p.58). Susan herself stated how her coaches would get mad if she got an injury because of ‘lack of concentration’. Additionally, her coaches would continue to push her to train no matter how serious the injury was.

Being as perfect as possible even during practices was extremely important as Susan states, "when perfection was not attained, coaches often resorted to physical punishments", "I was doing 300 push-ups without stopping, close to 200 to 250 sit-ups without stopping”(Krane et al. 1997, p.59). Excessive practice behaviors developed to which Susan would state “in my mind, practice made perfect. I had believed that pain is gain...And the more it hurt, the better it was” (Krane et al. 1997, p.65).

Pressure to be thin was found to be another kind of pressure as Susan stated “We had to tell coach everything we ate every single day. We had a diary and if we ate something that he (coach) did not approve of, he would tell our parents, he would make us feel so ashamed in front of everybody, he used public humiliation” (Krane et al. 1997, p.60). The fear of not looking thin and not gaining that approval gymnasts crave from their coach can be extremely detrimental, making it seem like the gymnast will do anything to achieve it. Findings from a study by Smits et.,al (2017) indicate that weight monitoring, both directly and indirectly, was an ongoing activity for gymnasts in the Netherlands.

In another study by Owton & Parks, 2017, Bella (pseudonym) stated how her coach would keep pressuring her to maintain her weight if she wanted to compete internationally. Bella struggled to keep her weight down to her coach’s likings so she desperately decided to self-induce herself to vomit because she was scared her coach would get angry at her for not losing weight and maintaining a thin appearance.

Research Question #2 From whom does the pressure come?

The literature presented results that provided information regarding who the pressure comes from. Findings advocate that pressure comes from coaches, parents, teammates, and themselves. Nicholls et.,al(2016) suggests that “how a coach behaves can influence aggressive behaviors, thoughts, and anxiety among his or her athletes”(p17). “Unsupportive coaching occurs when coaches shout, manipulate, threaten, or upset the athlete, which is likely to be perceived as the coach exerting unwanted pressure” (Nicholls et al. 2016, p.17). Athletes, although, will continue to work with their coach despite feeling unsupported because “athletes who want to achieve success need specialized knowledge and skills that coaches are assumed to possess”

(Smits et al. 2016, p.66). This meaning that gymnasts see their coach's as a "God", essentially taking everything they say or advise to the extreme with self-assurance of potential success.

Parents were another indicator of pressure towards pre-collegiate gymnasts. "Social and cultural factors and parental support are essential to achieve the sport's high level of performance"(Nunomura et al. 2013, p.3). Athletes depend on their parents to transport them to practices, encourage good eating habits, be emotionally supportive, and to cover costs to train and compete. "Some parents require results, impose strict diet rules and interfere with the work of the coaches" (Nunomura et al. 2013, p.2). "Parents with this over-involved behavior want to make the decisions and play the role of 'coach'" (Nunomura et al. 2013, p.5). Pressure parents can also possess is the expectation of receiving financial and/or educational opportunities (such as scholarships).

Teammates were also a factor that contributed to pressure on pre-collegiate gymnasts. According, a qualitative study by Krane et.,al (1997) suggests that "athletes tend to judge their own success through demonstrating superior ability, especially while making it appear effortless"(p.62). Susan stated how she would have to prove her superiority by manifesting a need to "conquer" her opponents and hold a position over them (teammates). This translates the gymnast into being their own worst enemy and putting pressure on themselves. According to Neves et.,al (2017), "gymnasts are driven to be self-critical in their pursuit to perform flawlessly"(p.1749). Furthermore, "gymnasts scrutinize themselves more during times of learning as such periods directly focus on movement execution" (Neves et al. 2017, p.1749).

Research Question #3 How do gymnasts deal with pressure?

The literature resulted in five articles that provided information on how gymnasts deal with pressure. The category of body image encompassed research by Neves et al., (2017),

Kosmidou et al.,(2015), Nordin et al., (2003), Franciso et al., (2006), and Bruim et al.,(2009).

Bruin et.,al (2009) states that "female gymnasts and dancers are known as high-risk groups for the development of eating disorders"(p.72). Attaining the ideal thinner/leaner body appearance is thought to "enhance performance or render better judgments and scores", "thus, disordered eating is at least partly related to the drive to perform well" (Bruim et al. 2009, p.72). Athletes will further their efforts of dealing with pressure of achieving the ideal, perfect body by "using drugs, and participating in several weight control and dieting behaviors" (Bruim et al. 2009, p.73). Dieting behaviors can include self-induced vomiting (bulimia) which can eventually lead to anorexia. Additionally, "gymnasts reported that their reasoning for doing so (actively dieting) was to improve performance and/or appearance, both of which may be considered to be the result from pressures specific to their sports participation"(Nordin et al. 2003, p.2).

A study by Francisco et at .,(2006) states that "elite athletes present higher levels of eating disorders compared to non-elite athletes"(p.479). Furthermore, this study "revealed similarities in physiques of elite rhythmic gymnasts and anorexia nervosa patients"(Francisco et al. 2006, p.482). Nordin et.,al(2003) found that "athletes participating in aesthetic sports report more anorexic indices than athletes participating in either ball games or endurance sports"(p.2). The authors concluded that "perfectionism was positively and significantly related to eating disturbances"(Nordin et al. 2003, p.6).

Chapter 5

Conclusion and Future Research Recommendations

The purpose of this chapter is to present conclusions for how pressure to be perfect impacts pre-collegiate gymnasts and make recommendations for future research.

Conclusion

The articles discussed within the categories of literature review indicate the many predicaments a gymnast may face when it comes to pressure. Specifically, the literature pointed out what kinds of pressure a pre-collegiate gymnast may face, who this pressure may come from, and how the gymnast manages to deal with the perceived pressure.

It is clear that gymnasts face numerous obstacles in the hopes of being remotely successful. But, when all is said and done, the importance of taking care of themselves and their body as a whole may come second after winning, and without even knowing, the gymnast is only hurting themselves and becoming their own source of stress. Consequently, partaking in acts of drug usage and eating disorders such as bulimia to achieve the ideal thin body.

Coaches should be more mindful of how they speak and act around their athletes. One action or comment could send the athlete into a really dark future of pain and agony. Gymnasts perceive their coach as a crutch to their greatest potential, meaning everything the coach says to the athlete is taken seriously. This could be a win or lose situation depending on the coach-athlete relationship, which even that could get tricky. ‘Grooming’ has been a huge topic of disappointment within the gymnastics world after previous American team Olympic champions came out of hiding to announce their sexual harassment from the world renown, Larry Nassar, USA Gymnastics national team doctor. The gymnasts trusted him to fix their aches and pain to

continue pursuing their dream in representing their county within the sport, all the while these “treatments” were a simple act of sexual abuse.

Parents can be overwhelming and supportive at the same time. They are essential in the success of the gymnast in relation to costs, transportation, and support. Parents may step over the boundary of becoming a second coach per se, which translates the gymnast into the pressure of pleasing not only the coach, but the parent as well. This could be overwhelming making the sport not seem as “fun” as it was when they first started because the parent rides on their child’s success as a form of status or a way of living through their child's experiences.

Future Research Needs

In the future, more research needs to be done on parents of competitive young gymnasts, especially their ideas and thoughts as to where they stand between being a parent and a coach and when to step back from a situation versus the appropriate time to involve themselves in a situation. Available research was very limited when pertaining to this specific sport. Likewise, it would be of interest to study how parents of young competitive gymnasts perceive themselves and their status quo.

Another possible recommendation for the future is to strictly study the fears and pressures of projected Olympic national team members as they practice day in and day out exactly a year before the Olympics. Being the best of the best within women's gymnasts and competing for a spot on the national team, it would be interesting to explore their experience and mindset as they work to being as close to perfection as possible before representing their nation for the world to see.

A final recommendation for future research includes how pressure to be perfect impacts collegiate gymnastics and comparing it to all three college divisions. While researching articles

for this synthesis, there weren't many articles that directly related to collegiate gymnastics and how they perceive pressure in being both a high-level competitive athlete while attaining a college degree.

References

- Bruin, A. (., Bakker, F. C., & Oudejans, R. R. (2009). Achievement goal theory and disordered eating: Relationships of disordered eating with goal orientations and motivational climate in female gymnasts and dancers. *Psychology of Sport and Exercise, 10*(1), 72-79. doi:10.1016/j.psychsport.2008.07.002
- Francisco, R., Narciso, I., & Alarcao, M. (2012). Specific predictors of disordered eating among elite and non-elite gymnasts and ballet dancers. *International Journal of Sport Psychology, 43*(6), 479. doi:10.7352/IJSP2012.43.015
- Kirby, J. (2018, May 16). The sex abuse scandal surrounding USA Gymnastics team doctor Larry Nassar, explained. Retrieved from <https://www.vox.com/identities/2018/1/19/16897722/sexual-abuse-usa-gymnastics-larry-nassar-explained>
- Kosmidou, E., Proios, M., Giannitsopoulou, E., Siatras, T., Doganis, G., Proios, M., . . . Fachantidou-Tsiligioglou, A. (2015). Evaluation of an Intervention Program on Body Esteem, Eating Attitudes and Pressure to be Thin in Rhythmic Gymnastics Athletes. *Science of Gymnastics Journal, 7*(3). Retrieved from d. <https://brockport.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=114085612&site=ehost-live>
- Krane, V., Snow, J., & Greenleaf, C. A. (1997). Reaching for Gold and the Price of Glory: A Motivational Case Study of an Elite Gymnast. *The Sport Psychologist, 11*(1), 53-71. doi:10.1123/tsp.11.1.53
- Mahoney, M. J., & Avenier, M. (1977). Psychology of the elite athletes: an exploratory study. *Cognitive Therapy & Research, 1*(2), 135-141. Retrieved from <http://search.ebscohost.com.brockport.idm.oclc.org/login.aspx?direct=true&db=s3h&AN=SPH46206&site=ehost-live>
- Neves, C. M., Meireles, J. F., Carvalho, P. H., Schubring, A., Barker-Ruchti, N., & Ferreira, M. E. (2016). Body dissatisfaction in women's artistic gymnastics: A longitudinal study of psychosocial indicators. *Journal of Sports Sciences, 35*(17), 1745-1751. doi:10.1080/02640414.2016.1235794
- Nicholls, A. R., Levy, A. R., Jones, L., Meir, R., Radcliffe, J. N., & Perry, J. L. (2016). Committed relationships and enhanced threat levels: Perceptions of coach behavior, the coach-athlete relationship, stress appraisals, and coping among athletes. *International Journal of Sports Science & Coaching, 11*(1), 16-26. doi:10.1177/1747954115624825
- Nordin, S., Harris, G., & Cumming, J. (2003). Disturbed eating in young, competitive gymnasts: Differences between three gymnastics disciplines. *European Journal of Sport Science, 3*(5), 1-14. doi:10.1080/17461390300073502

- Nunomura, M., & Oliveria, M. S. (2013). Parents' Support in the Sports Career of Young Gymnasts. *Science of Gymnastics*, 5(1), 5-17. Retrieved from <https://brockport.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=88906294&site=ehost-live>
- Owton, H., & Sparkes, A. C. (2015). Sexual abuse and the grooming process in sport: Learning from Bellas story. *Sport, Education and Society*, 22(6), 732-743. doi:10.1080/13573322.2015.1063484
- Smits, F., Jacobs, F., & Knoppers, A. (2016). 'Everything revolves around gymnastics': Athletes and parents make sense of elite youth sport. *Sport in Society*, 20(1), 66-83. doi:10.1080/17430437.2015.1124564
- Webb, R. W., & Mitchell, J. W. (2012). Commitment to Personal Safety: Understanding the Grooming Process. *USA Gymnastics*, 41(6), 36-38. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=83377904&site=ehost-live>

Appendix A

Article Grid

Theme	APA Citation	Purpose	Methods & Procedures	Analysis	Findings	Discussion/ Conclusion	Research Notes – Recommendations
Body Image and Disordered Eating	Kosmidou, E., Proios, M., Giannitsoyopoulou, E., Siatras, T., Doganis, G., Proios, M., . . . Fachantidou-Tsiligiorglou, A. (2015). Evaluation of an Intervention Program on Body Esteem, Eating Attitudes and Pressure to be Thin in Rhythmic	The purpose of this study was to evaluate the short-term effects of an intervention to enhance positive body esteem, positive eating attitudes and decrease perceived pressure to be thin by significant others.	Participants: 49 athletes within the sport of rhythmic gymnastics (29 in the intervention group and 20 in the control group). Mean age=12.35 years Intervention consisted of three one-hour meetings throughout the three weeks Athletes were organized into small groups of four to five athletes per group. Methods: Ten-week intervention program Using self-reported questionnaires on Body esteem,	- All calculated by SPSS 15 to examine effectiveness of intervention - One sample t-test was used to evaluate perceived effectiveness of intervention	-Thirteen out of twenty athletes had eating disorder symptoms (five from Intervention group (IG) and eight from control group (CG)) Intervention increased in body esteem in IG and decreased eating attitudes and pressure to be thin by experts and parents -Body esteem	-Intervention had positive effect -the program included multiple teaching methods and approaches focusing on specific age of rhythmic gymnasts. “Rhythmic gymnastics (RG)athletes seem to be at risk for eating disorders, even among other gymnastics disciplines (Nordin, Harris, & Cumming, 2003) -program reduced pressure to be thin by RG experts “elite athletes and elite dancers are in a greater risk for developing eating disorders, disorders were predicted mostly by body image dissatisfaction and parental influences (Francisco, Narciso, & Alarcao, 2013)	Recommendations : Similar studies should include qualitative components, as it is proposed also by Smith and Petrie (2008).

	<p>Gymnas tics Athletes . <i>Scienc e of Gymnas tics Journal</i>, 7(3). Retrieve d from d. https://b rockport .idm.oclc.org/lo gin?url= http://se arch.ebs cohost.c om/logi n.aspx?d irect=tru e&db=s 3h&AN =11408 5612&si te=ehost -live</p>		<p>eating attitude, self-esteem, pressure, and global self- esteem -The intervention group practiced in different gymnasium. Questionnaires were given to participants by researcher. -Meetings were conducted in an isolated area within the gymnasium -Wording and content were adjusted based on age of participants -Program contained information about self, esteem, bodies in sports, bodies in rhythmic gymnastics nowadays and in the past, eating disorders, dealing with marketing messages, goal setting, overcoming problems, anxiety, attention, concentration, positive self-</p>		<p>category showed no difference in pre-test between control group (CG) and interventi on group (IG). But, post-test IG had higher scores in post -test than pre- test while CG showed lower scores in post-test than pre- test. -Eating attitudes category had no difference in between groups for pre-test. However, IG post- test had lower eating attitudes than CG which showed higher scores.</p>		
--	---	--	--	--	---	--	--

			<p>talk, and imagery. -Parents were involved after fourth session. -Coaches were not involved and given specific instructions to not change routines during practice in anyway.</p>		<p>-Dieting scale category showed no difference between groups in pre-test. Post-test IG had lower means scores than CG. CG showed higher score in post-test than pre-test. -Bulimia and Food Preoccupation category revealed lower means in IG post test than CG. IG had lower scores in post-test than pre-test. No difference in post/pre-test for CG. -Self-esteem of body</p>		
--	--	--	---	--	--	--	--

					<p>image showed significant difference IG and CG while having no significant difference in post-test. CG pre-test mean was much higher than post-test mean. -Pressure to be thin (by coaches) showed significant difference in pre-test between IG and CG with no significant difference in post-test. CG pre-test means was significantly higher than post-test mean -Pressure to be thin (by parents) revealed that IG</p>		
--	--	--	--	--	--	--	--

					displayed significantly higher mean in pre-test than post-test.		
Body Image and Disordered Eating	Nordin, S., Harris, G., & Cumming, J. (2003). <i>Disturbed eating in young, competitive gymnasts: Differences between three gymnastics disciplines.</i> <i>Euro pean Journal of Sport Science</i> , 3(5), 1-14. doi:10.1080/17461390300073502	Purposes of this study (three-fold) 1. To compare three different kinds of gymnastics on the indices of eating disturbance. 2. To explore differences in age between those gymnasts reporting higher and lower scores for eating disturbances . 3. To explore the association between perfectionism and eating disturbance.	Participants: -50 female gymnasts who participated in one of three different forms of gymnastics and currently competing. -Artistic (17), rhythmic (17), sports acrobatics (16). -Mean age= 11.64 Methods: Likert scale was used on four subscales of Eating Disorder Inventory; Perfectionism, Drive for thinness, Bulimia, and Body Dissatisfaction. -questionnaires were completed during training sessions and away from coaches	ANOVA -Four subscales were used; Perfection (P), Drive for Thinness (DT), Bulimia (B), and Body Dissatisfaction(BD). -Items were assessed using a Likert scale. - Participants also asked for date of birth, hours of training per session, and number of training sessions per week.	-Drive for Thinness-Artistic (1.75), Rhythmic (6.65), Acrobatics (3.16) -Bulimia-Artistic (1.07), Rhythmic (1.70), Acrobatics (1.03). -Body dissatisfaction-Artistic (2.67), Rhythmic (5.83), Acrobatics (4.13) -Total eating disturbances-Artistic (3.88), Rhythmic (13.12), Acrobatics (6.13) - Perfectionism-Artistic (4.06),	-Bulimia and Body Dissatisfaction scores were highest for artistic gymnasts. - “If a gymnast has developed a discorded attitude towards eating already at a young age, she will certainly be more vulnerable to be development of a more severe disturbance when puberty sets in” “Another perhaps more important factor associating gymnastics participation with eating disturbances can be the motivational climate created by the coach”	Recommendations : Future research should consider younger samples of gymnasts representing different gymnastics disciplines. Qualitative research can be used to gain deeper insight onto what pressures are present as well as their sources, such as coaches, teammates, judges,

					<p>Rhythmic (4.76), Acrobatics (2.88)</p> <p>-Rhythmic gymnastics scores significantly higher in the Drive for Thinness and highest in the Total eating Disturbance subscale.</p> <p>Rhythmic gymnastics scored the lowest in the Bulimia subscale.</p> <p>-Artistic gymnastics highest scoring subscale was Perfectionism and lowest scoring subscale was Bulimia.</p> <p>-Of all four disciplines, rhythmic gymnastics scored the</p>	and others.
--	--	--	--	--	---	-------------

					<p>highest in the Total eating disturbance subscale.</p> <ul style="list-style-type: none">-Of all four disciplines, sports acrobatics scored the lowest in the Bulimia subscale.-Artistic gymnasts trained significantly more than rhythmic gymnasts-Drive for thinness, bulimia, and body dissatisfaction were all positively and significantly related to eating disturbance“Perfectionism was positively and significantly related to total		
--	--	--	--	--	--	--	--

					<p>eating disturbances” (North, Harris, and Cumming 2003 pg. 6)</p> <p>-Hours of training unrelated to eating disturbance</p> <p>-Rhythmic gymnasts scored higher for total eating disturbances</p>		
<p>Body Image and Disordered Eating</p>	<p>Neves, C. M., Meireles, J. F., Carvalho, P. H., Schubring, A., Barker-Ruchti, N., & Ferreira, M. E. (2016). Body dissatisfaction in women’s artistic gymnastics: A longitudinal</p>	<p>To determine how gymnasts’ body dissatisfaction, risk factors for eating disorders, media internalization, perfectionism and mood state change during pre-competition, competition and post-competition seasons and to identify</p>	<p>Participants: -20 gymnasts -Between ten and 18 years old -train 30-34 h/week</p> <p>Procedure: Measurements performed on two consecutive days. Day one consisted of gymnasts answering body dissatisfaction questionnaire and disordered eating measures as well as anthropometry measures. Day two consisted of</p>	<p>SPSS 19.0 and ANOVA -Nine-month longitudinal investigation -Body dissatisfaction was analyzed by using the Body Shape questionnaire (BSQ) which was answered through a</p>	<p>Only disordered eating remained as an explanatory variable for body dissatisfaction.</p> <p>-T1= April 2013 (pre-competitive period) - T2=August 2013 (competition period) - T3=December</p>	<p>- “During the competition period, 45% of the gymnasts indicated being dissatisfied with their body” (pg. 1749)</p> <p>-The average score for the disordered eating subscale was significantly higher during competition period than after competition.</p> <p>-“Martinsen, Bratland-Sandra, Eriksson, and Sundgot-Borgen (2010) concluded that losing weight to enhance performance is a commonly accepted measure among adolescent elite athletes. This behavior deserves attention mainly from parents and coaches because it may trigger eating disorders” (pg. 1749)</p>	<p>Further research should consider looking into the influence of athletic seasons on the psychological well-being of elite gymnasts and evaluate psychological variables adopting</p>

<p>study of psychosocial indicators. <i>Journal of Sports Sciences</i>, 35(17), 1745-1751. doi:10.1080/02640414.2016.1235794</p>	<p>how these psychosocial indicators impact on body dissatisfaction during the athletic year,</p>	<p>completion of media internalization, perfectionism and state of mood questionnaire. -Measurements took place before evening practice (second practice)</p>	<p>five-point Likert scale. - Disordered eating questionnaire was divided into three areas: (1) dieting, (2) bulimia, and (3) oral self-control. Questionnaire was answered in the form of a three-point Likert scale. -Media internalization was measured using the Sociocultural Attitudes Towards Appearance questionnaire (SATAQ). This questionnaire covered</p>	<p>number 2013 (post-competition period) -Diet T1=11.5, T2=13.25, T3=10.45. Max 78 -Self-oriented perfectionism T1=87.7, T2=78.35, T3=79.60. Max 126 - Perfection oriented by others T1=38.45, T2=40.75, T3=38.4. Max 63</p>	<p>-“Gymnasts may scrutinize themselves more during times of learning as such periods directly focus on movement execution”(pg. 1749) -“Thus, as research by Barker-Ruchti (2011) has shown, gymnasts are driven to be self-critical in their pursuit to perform flawlessly” (pg. 1749) -“Factors specific to WAG, including extrinsic pressure regarding body weight and body shape-enhancing”(pg. 1750) Limitations: -small sample limited generalizability of results -Loss or participants during the course of the study due to retirement, injuries, and absence during assessed periods -Athletes were only studied during one athletic year.</p>	<p>different methods.</p>
--	---	---	---	--	--	---------------------------

				<p>topics such as; athletic body ideals, pre, socially established appearance patterns, and pressure to conform to social ideas. questionnaire was answered in a five-point Likert scale.</p> <p>- Perfectionism assessed the participants perfectionism levels divided into three dimensions; self-oriented perfectionism, social prescribed perfectionism</p>			
--	--	--	--	---	--	--	--

				<p>n, and perfectionism divided by others. questionnaire was answered using a seven-point Likert scale.</p> <ul style="list-style-type: none"> - State of mood was measure using a four-point Likert scale. Questions were divided into six subscales ; anger, mental confusion, depression, fatigue, and tension. One positive dimension was, vigor. - Anthropometry was 			
--	--	--	--	---	--	--	--

				assessed by measuring gymnasts' skinfolds using a manual caliper to estimate body fat percentage			
Pressure on Young Gymnasts	Smits, F., Jacobs, F., & Knoppers, A. (2016). 'Everything revolves around gymnastics': Athletes and parents make sense of elite youth sport. <i>Sport in Society</i> , 20(1), 66-83. doi:10.1080/17430437.2015.1124564	To provide insights into how athletes and parents made sense of current emotional abusive practices in elite youth sport	Participants: 14 elite gymnasts (ages 14-30 years) and 12 parents (ages 36-51 years). Method: Semi-structured recorded interviews that were an hour to two and a half hours. Sense-making process Athletes and parents were told to describe three techniques that coaches used during interactions with athletes that reinforces obedience; isolation, regulation and intimidation.	Qualitative Nvivo Software and coded transcripts	-Isolation was described by a parent as 'The doors and windows of the gym are closed so that nobody can view a training session and only the athletes and coach know what is happening'. Regulation was described as weight monitorin	Discussion: "Coaches need to learn to listen and athletes and parents need to learn how to ensure their voice is heard and taken seriously" (pg.80) "various studies by Stirling and Kerr (2009, 2013) and Barker- Ruchti (2009) found that an asymmetric coach-athlete dependency relationship negatively influenced the ability of athletes to report incidents that were incongruent with positive pedagogy" (pg. 67). This research and its accompanying theoretical framework have also yielded insights into processes including those of grooming for sexual abuse that rely on a gradual internalization of such practices (Brackenridge and Fasting 2005) (pg. 67).	Recommendations : To explore and understand what needs to be done for parents and athletes to enable them to question the status quo in youth sport

					g was practices indirectly and directly. -Athletes learned to carry on, despite an injury. 'Female gymnasts had learned to 'manage' pain. Intimidation was described as 'fear of the anger of the coach and the threats they heard the coach utter by doing as they are told'		
Pressure on Young Gymnasts	Nunomura, M., & Oliveria, M. S. (2013). Parents' Support in the Sports Career of Young Gymnasts. <i>Scien</i>	The aim of this study was to better understand how the gymnasts perceive parental support and how their attitudes and behaviors can	Participants: 163 gymnasts total (40 boys and 123 girls) -competed in state and national competitions -Range of the study was restricted to the State of São Paulo and the cities of Rio de Janeiro, Curitiba,	Semi-structured interviews conducted on site. - Collected data was organized/analyzed in three steps:	"most children perceive their parents as major motivators, which is favorable to progress in the sports career" (pg.5).	"Weiss and Hayashi(1995) show that parents of the children involved with artistic gymnastics dedicate five to 25 percent of the family budget to pay for the gymnastics activities of their children" (pg.6). "Pressure exerted by parents is associated with the low levels of motivation and the loss of enthusiasm" (pg.6) -Some parents discouraged their children from participating in the sport	"Nash(1987) cites that is common for parents to require their children to increasingly try to strive for perfection and

<p><i>ce of Gymnastics</i>,5(1), 5-17. Retrieved from https://brockport.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=88906294&site=ehost-live</p>	<p>influence, positively or negatively, the process of the training of their athlete.</p>	<p>and Porto Alegre due to competitive representatives</p>	<p>pre-analysis, study of material, and inference .</p>	<p>-one gymnasts did not appreciate her parents coming to competitions because it is distracting . -parents engage in any opportunity that seeks sponsorship to minimize burden financially on family - “Although parental expectation is beneficial, this can become a source of pressure because some parents relive their own ambitions on the sports field through the</p>	<p>because they themselves was too scared or thought it was too much for their child to handle. -“Parents who are under-involved are characterized by the lack of functional support, both emotional and financial”(pg.5). -“Moderate parents are characterized by flexibility, but also direct the sports career of their children with much firmness”(pg.5) -“Unlike the parents that are under-involved, moderates seek feedback on the coaches on the development of their children in the sport and they can distinguish their roles parents from that of the coach”(pg.6) -“Parents who demonstrate excessive involvement overemphasize victory and exhibit characteristics of those who cannot distinguish between their needs from those of their children”(pg.6) -“Part of their own self-esteem (excessive parents) is related to the success of their children and they seek to realize their unfulfilled expectations, dreams and desires through their children by setting goals that, in most cases, are unrealistic”(pg.6).</p>	<p>that this pressure, perhaps, is responsible for physical and psychological illness”(pg.7). -“Brustad (1988) and Anderson , Funk and Smith (2003), state that the pressure exerted by parents is associated with low levels of motivation and the loss of enthusiasm for sports” (pg. 8). -“When parents hold high expectations, require too much and push their</p>
---	---	--	---	--	--	--

				<p>children as we identify in the interview of A60” (pg.7). -Pre-infant category revealed gymnasts A5 and A50 mentioned that their parents accompany the development of their athletic career by asking them if they feel good about practice and if this is really what they want to do. -Pre-infant category also had report about “Concerned with health issues” with</p>		<p>children to achieve certain results or to continue in the sport, it is very probable that the children will feel trapped and many will remain the sports so to not disappoint their parents or for fear” (pg. 10).</p>
--	--	--	--	--	--	---

					<p>emphasis on gymnast's diet "they say I need to eat well to be able to do the things (skills)" (A75) -Another form of support reported by the gymnasts is related to the need for financial resources to stay involved in the sport. -"In the interviews , this aspect emerged in the categories Pre-Infant and Juvenile, in which the gymnasts mention that parents "seek for sponsorship" (A33), "helped</p>		
--	--	--	--	--	--	--	--

					<p>them arrange sponsorshi p” (A3)”(pg. 6). -Some reports demonstra ted parental support through “comfort” -“when I fail they support me” (A130) “If you lose, don’t be upset, do not get discourag ed, keep looking forward” (A120). - “Logistics ”- “They come get me (after practices) ”, “pay for everything I need”(pg. 6). - Gymnasts relates “expectati on” as another form of</p>		
--	--	--	--	--	---	--	--

					<p>support. Athletes reported, “know that I can be something in life” (A147), “keeps saying that I’ll earn medals and be able to do things” (A18) (pg. 6). -“Source of pressure” was included among the negative perceptions of parental support- “Gymnasts reveal that parents: “do not let me quit because otherwise I will lose opportunities to do other things (A147), “tell me to strive</p>	
--	--	--	--	--	--	--

					<p>harder, bring back a medal, they tell me that I cannot miss (a practices) even when I am tired” (A117), “My father says that I must stay here (training) until I am 18 and I do not know why” (A22), “my father said that if I quit, it might not be a good action towards other people” (A148) (pg. 7). -Another recording unit associate with pressure is “concerned with health issues”</p>		
--	--	--	--	--	---	--	--

					<p>relating to fatigue, sacrifices and risks: “My father thinks it is tiring” (A61), “My father gets nervous, he is afraid that I fall” (A64) “they think that what I do in practice is too much (A63), “my mother cannot watch me because she is afraid; she gets sick” (A52) (pg. 8).</p>		
<p>Body Image and Disordered Eating</p>	<p>Bruin, A. (., Bakker, F. C., & Oudejans, R. R. (2009). Achievement goal theory and disorder</p>	<p>To examine the relationship between <u>disordered eating</u> in female gymnasts and dancers and their perspective towards</p>	<p>Participants: 14 coaches of the Royal Dutch Gymnastics Union (KNGU). 94 aesthetic performers (59 from gymnastics and 35 in dance) -Average age mean of 15.1 years</p>	<p>-Five-point Likert Scale - ANOVA -Task and ego orientation in sport questionn</p>	<p>-Dancers showed lower self-esteem (SD=8.17) than gymnasts (SD=5.81 and reported greater perfection</p>	<p>“The present study showed that both ego and performance climate were related to more frequent dieting, using more pathogenic weigh control methods, greater perfectionism and perceiving more weight-related peer pressure” (pg.5). -Ego-oriented athletes=” win at all costs”</p>	<p>- Performance climate= additional relationships were found with more coach pressure.</p>

<p>ed eating: Relationships of disordered eating with goal orientations and motivational climate in female gymnasts and dancers. <i>Psychology of Sport and Exercise</i>, 10(1), 72-79. doi:10.1016/j.psychsport.2008.07.002</p>	<p>achievement in sport and dance, respectively. With an emphasis on outperforming others (ego involvement), more disordered eating was expected than when personal progress (task involvement) was emphasized.</p>	<p>-participants under the age of 18 handed in a written parental permission allowing participation. -Only high-level aesthetic performers who did not participate in additional competitive sport activities were included. -data collection was scheduled around training hours and in the presence of the researcher. -completed questionnaires took around 30-40 minutes to complete -complete questionnaire measuring ego and task involvement, dieting, self-esteem, perfectionism, and weight-related peer and coach pressure</p>	<p>aire (TEOSQ) - Perceived motivational climate in sport questionnaire (PMCSQ) -Task and ego orientation in sport questionnaire measures 'how individuals typically define success in sport'. - Perceived motivational climate in sport questionnaire measured 'athletes' perceptions of the degree to which their coaches</p>	<p>ism (Dancers SD=5.14) than gymnasts (SD=4.64) -Dieting Frequency average scores; Gymnasts = 3.47, Dancers= 3.26. -Weight control index average scores, Gymnasts =.80, Dancers=.83 -Self-esteem average scores; Gymnasts =38.46, Dancers= 33.66 - Perfectionism average scores; Gymnasts = 13.21; Dancers= 16.31. -Peer pressure average scores; Gymnasts</p>	<p>-Strong ego-orientated athletes=believe illegal advantage & harmful tactics brings high success. - "Competitive thinness" between peers -"The present study, therefore, confirms that having a high ego orientation means that a female aesthetic performer is significantly more likely to report indices of disordered eating" (pg. 5)</p>	<p>Recommendations : Further investigate if high ego orientation is particularly detrimental if accompanied by low task orientation for disordered eating.</p>
--	---	--	---	---	---	--

				<p>created mastery and/or performance climates.’</p> <p>-Dieting behaviors and weigh characteristics measured the use of weight control practices such as; exercising in order to burn calories, fasting/strict diets, self-induced vomiting, use of diuretics/diet pills, and use of laxatives/suppositories. -</p> <p>Participants were also asked to report their current height and weight to which</p>	<p>=9.43, Dancers= 10.47. Coach/Teacher pressure average scores; Gymnasts =9.26, Dancers= 7.79.</p> <p>-Task orientation average scores; Gymnasts =4.03, Dancers= 4.13</p> <p>- Performance climate average scores; Gymnasts =2.53, Dancers= 2.80.</p> <p>-Mastery climate average scores; Gymnasts =3.86, Dancers= 3.88</p> <p>- Achievement variables-antithetic performers perceived</p>		
--	--	--	--	---	---	--	--

				<p>BMI was calculated.</p> <ul style="list-style-type: none"> - Rosenberg self-esteem scale measured self-acceptance and self-worth. -Eating Disorder Inventory-2 (subscale perfectionism) was used to measure perfectionism. -Weight-related coach and peer pressure questionnaire measured “weight-related peer pressure”, “peer pressure” consisted of; “girls talk regularly about dieting”, 	<p>themselves as more task-oriented than ego-oriented as well as regards to motivational climate, aesthetic performs perceiving to be mastery-oriented than performance-oriented.</p> <ul style="list-style-type: none"> -Ego orientation was significantly and positively correlated with dieting frequency, weight control, perfectionism, and peer pressure. (table 2). -Strong relationships were found with coach pressure 		
--	--	--	--	---	---	--	--

				<p>“girls judge each other on appearance, “girls talk over each other’s bad eating habits”, “girls are pestered about being unattractive or being fat”, teams/classmates use unhealthy weight control methods”</p> <p>-The coach pressure scale consisted of example items such as “coaches are urging girls to diet and “coaches attribute failure to</p>	<p>peer pressure.</p> <p>-Moderate relationships were correlated with perfectionism and self-esteem</p> <p>-Weak relationships correlated with dieting and weight control.</p> <p>-Stronger ego orientation was related to more dieting, greater perfectionism, more weight related peer pressure, and lower self-esteem, similarly with performance climate</p> <p>-Mastery climate was negatively</p>		
--	--	--	--	--	---	--	--

				girls' weight".	related to dieting and coach and peer pressure. -No relationship between task orientation and disordered eating	
Pressure on Young Gymnasts	Krane, V., Snow, J., & Greenleaf, C. A. (1997). <i>Reaching for Gold and the Price of Glory: A Motivational Case Study of an Elite Gymnast. The Sport Psychologist, 11</i> (1), 53-71. doi:10.1123/tsp.11.1.53	The aim of this study was to seek to understand and explain behavior of an elite athlete, her coaches, and her parents and why the athlete behaved as she did.	<p>Participants: American former elite level gymnast, "Susan" (a pseudonym) -began classes at age of three -Olympic hopeful</p> <p>Procedure: -The gymnasts and authors met on three separate occasions for unstructured interviews lasting approximately 30 to 120 minutes. -First interview involved asking gymnast about her gymnastics career and experiences as a gymnast. -Follow up interviews asked "What drives an</p>	<p>Unstructured interviews</p> <ul style="list-style-type: none"> - Reflexivity by researcher -Open coding & axial coding - Interviews were grounded in a feminist view. -Axial coding in data resulted in three dimensions: Motivational Climate, Evidence of and 	<p>-Most experiences described by gymnasts could be framed with achievement motivation theory</p> <ul style="list-style-type: none"> -Susan was very ego-involved - "Focused on demonstrating her competence and superior skill in relationship to her teammates and competitors 	<p>- "Feminist critiques of sport have deplored the high value placed on objectifying and alienating one's body by overtraining and ignoring pain and injury "(e.g., Duquin, 1994; Messner, 1990).</p> <ul style="list-style-type: none"> - "In this study, Susan resorted to acting out behaviors, practicing and competing while seriously injured, employing unhealthy eating practices, overtraining, and refusing to listen to medical advice in order to continue her quest toward the Olympic team" (pg. 68). - "Susan was willing to resort to unhealthy training practices, and her training practices were rationalized and reinforced by her coaches and her parents as important methods toward the attainment of her Olympic goals" (Pg. 68).

			<p>athlete to persist in sport under such extreme circumstances?" As well as the role of her coaches, family, and peers -A transcription was processed after each interview and Susan would review and make any corrections</p>	<p>Ego Orientation, and Correlates of Ego Involvement. -Ego-Involved Goal Orientation comprised of two themes: Social comparison and External feedback and rewards. - Correlates of Ego Involvement comprised of two themes: Psychological correlates (Need to show superiority, need for perfection, self-worth, and transitioning) and Behavioral</p>	<p>rs" (pg. 58).</p>		
--	--	--	--	---	----------------------	--	--

				<p>correlates (Interactions with teammates, excessive practice behaviors, acting out behaviors, participation through injury, and unhealthy eating).</p>			
<p>Pressure on Young Gymnasts</p>	<p>Nicholls, A. R., Levy, A. R., Jones, L., Meir, R., Radcliffe, J. N., & Perry, J. L. (2016). Committed relationships and enhanced threat levels: Perceptions of coach behavior, the coach-athlete</p>	<p>The purpose of this study was to assess an a priori model that included perceptions of coach, coach-athlete relationship, stress appraisals, and coping</p>	<p>Participants: -274 athletes -Ages between 16 and 45 years old -From team and individual sports, contact and non-contact sports -Competed up to international competition</p> <p>Procedure: Letters distributed to coaches and participants including questionnaires pack -Participants asked to complete assent form</p>	<p>Omega point estimates and confidence intervals were calculated using the MBESS package in R with 1000 bootstrap samples</p> <p>Seven-point Likert scale</p> <p>Measures: -47-item CB</p>	<p>-Coach behavior max score per subject =7; Physical training=5.08; Technical skills=5.39; Mental preparation=4.54; Goal setting=4.22; Competition strategies =5.31; Personal rapport=5.01; Negative personal</p>	<p>- “Coaches should consider the impact of their behavior and the detrimental consequences of such unsupportive behavior. Threat is associated with undesirable consequences such as increased anxiety” (Pg. 24).</p> <p>-“Further, aspects of an athlete’s perception of the coach-athlete relationship are related to appraisals and coping”(pg. 25).</p> <p>-One of the first studies suggesting that strong coach-athlete relationship might have some undesirable consequences, given that commitment was positively associated with threat.</p>	<p>Recommendations : To compare the effects of unsupportive coach behaviors among team versus individual sport athletes.</p>

	<p>relationships, stress appraisals, and coping among athletes. <i>International Journal of Sports Science & Coaching</i>, 11(1), 16-26. doi:10.1177/1747954115624825</p>		<p>-Questionnaires to be completed in clubhouse of sports clubs in the presence of a trained research assistant, and within three hours of a competition starting.</p>	<p>(Coaching Behavioral Scale) – Seven-point Likert scale -11-item Coach Athlete Relationship questionnaire (CART-Q) -Stress Appraisal Measure (SAM) -Coping Inventory for Competitive Sport (CICS)</p>	<p>rapport=2.42 -Coach-athlete relationship max score per subject=7; Closeness =5.47; Commitment=5.14; Complementarity=5.37 -Stress appraisal max score per subject; Threat (max score 4.25)=2.26; Challenge (max score 5)=3.48; Centrality (max score 5)=2.95; Control-self (max score 5)=3.86; Control-others (max score 5)=3.41; Uncontrollable (max</p>		
--	---	--	--	---	---	--	--

					<p>score 4.75)= 2.18; Stressfuln ess (max score 4.25)=2.5 9.</p> <p>-Coping strategies max score per subject= 5); Mental imagery= 3.57; Effort expenditur e= 3.97; Thought of control=3. 45; Seeking support=2 .89; Relaxatio n=3.13; Logical analysis=3 .33; Task.</p> <p>Distractio n-oriented coping; Distancin g (max score 4.5)=2.33; Distancin g (max score 4.75)=2.5 9; Mental</p>	
--	--	--	--	--	---	--

					<p>distraction (max score 5)=2.35; Disengagement-oriented coping(max score 4)=2.22; Venting unpleasant emotions(max score 5)= 2.7; Resignation/disengagement(max score 4)=1.74.</p> <p>-All 3Cs of coach-athlete relationship correlated positively with aspects of coach behavior with exception of negative personal rapport -Negative personal rapport correlated negatively with all aspects of the coach-</p>	
--	--	--	--	--	--	--

					<p>athlete behavior. -All positive coach behaviors showed a low positive correlation with task-coping. -Coach-athlete relationship was significantly associated with stress appraisal. Unsupportive coach behaviors positively predicted centrality and stressfulness.</p>	
<p>Pressure on Young Gymnasts</p>	<p>Owton, H., & Sparkes, A. C. (2015). Sexual abuse and the grooming process in sport: Learning from Bellas</p>	<p>The purpose of this study was to use Bella's story as clear intention of raising the awareness of sexual abuse in the sport and supporting change at the</p>	<p>-Poems released by assaulted victim reflecting on abuse experience with coach -Interview by researchers. (project) -Collaborative autoethnography -Participants:</p>	<p>Phases of Analysis: (1) Grooming phase, (2) Abuse phase, (3) resistance phase, (3)Exit phase, (4) Recovery</p>	<p>- QUALITATIVE -"It took years to realize what happened was wrong. I was in so much pain. Initially, I</p>	<p>-"Ray, the Instructor, 'the god'" (pg. 735). -Abuse between Bella and Ray (coach) continued for -Leachy (2010, 2011) suggests an association between sexual abuse in athletes and long-term post-traumatic symptomology, with core symptoms including re-experiencing, avoidance and hyper-arousal.</p>

<p>story. <i>Sport, Education and Society</i>, 22(6), 732-743. doi:10.1080/13573322.2015.1063484</p>	<p>individual and group level.</p>	<p>Bella (pseudonym) 13 years of age</p>	<p>/survivor ship phase. -Main focus was grooming phase</p>	<p>tried to think of ways to end the pain that muted me and my existence” (pg. 733). - “I get teased about being a ‘skinny little runt’ and I’m not a ‘natural’ athlete” (pg. 735). -“look up to him(coach) as my instructor, coach, and father figure”(pg . 735). -“I start to desperately seek his (coaches) approval” (pg. 736). -“I do the best I can to try and impress him (coach)” (pg. 737).</p>	<p>-“Disclosing or re-counting sexual abuse experience can cause an aftermath of intense ruptured in day-to-day life” (pg. 733). -Abuse continued for numerous years between coach and athlete. -Three types of coaches in sport typology (Fasting and Backenridge, 2009) (1) The flirting-charming coach, (2) The seductive coach, (3) The authoritarian coach</p>	
--	------------------------------------	--	--	---	---	--

-Coach offering private tuition
-“I had to stop going to class for a few months when I injured myself after being pushed and pushed too hard in the class by him(coach”(pg. 738).

-“it’s a nervous excitement, because my instructor, my coach thinks that I am clever and important”(pg. 738).

-“He keeps pressuring me to keep my weight down if I

					<p>want to compete internationally” (pg. 738).</p> <p>-“I’m so desperate to lose the weight and impress him that I’ve started throwing up to try and control it”(pg. 739).</p> <p>-“I’m more sacred of not losing the weight in case I get dropped from the team and in case he gets angry with me”(pg. 739).</p> <p>-“Nothing seems to be enough. Even when I win, my performan</p>		
--	--	--	--	--	--	--	--

					<p>ce is never good enough” (pg. 739).</p> <p>-I sit quietly and start worrying anxiously about how much ‘lunch’ will affect my weight” (pg. 739).</p> <p>-“Ray (coach) makes everything seem normal”(p g. 740).</p> <p>-“I’m used to handling the discomfort and doing things I don’t really want to do”(pg. 740).</p>		
Body Image and Disordered Eating	Francisco, R., Narciso, I., & Alarcao, M. (2012).	The purpose of this quantitative study was to explore potential specific	Participants: -249 aesthetic performers-ballet dancers (n=113) and gymnasts	- Demographics consisted of -sex, age, height,	-BMI (Gymnastics)- Elite females (20.16), Non-elite (19.94)	-“High pressure from the gymnastics coaches in the contexts of high level competitions and professional dance schools link such pressure to and increased risk for the	Recommendations : -Future studies should investigate

<p>Specific predictors of disordered eating among elite and non-elite gymnasts and ballet dancers. <i>International Journal of Sport Psychology</i>, 43(6), 479. doi:10.7352/IJS P2012.43.015</p>	<p>contextual and individual variables related to disordered eating in a sample of male and female gymnasts and ballet dancers from different competitive levels.</p>	<p>(n=136) of both sexes. -Mean age= 15.41 -Elite dancers' group =66 students (53 females and 13 males) mean age = 14.53. -Non-elite dancers' group= only females (n=47) mean age= 14.57. -Group of gymnasts included all four disciplines (Acrobatics (n=62); Trampoline gymnastics (n=28); Rhythmic gymnastics (n=27); and Artistic gymnastics (n=19) -Elite Gymnastics group (n=69) participated in international gymnastics competitions (high level competitions). 50 females and 19 males. Mean age =16.33</p>	<p>weight and competitive level. BMI was calculated by self-reported data. -Pressure to be thin and social support (Subscale s; pressure to be thin, support, and climate in sports setting)- calculated by assessing perceptions of behaviors, attitudes, negative beliefs and pressures regarding weight control in gymnastics clubs/dance schools, as well as perceptio</p>	<p>-Self-esteem (Gymnasts)- Elite females (4.52), Non-elite (4.64) -General BID (Gymnasts)- Elite female (-0.84), Non-elite (-0.75) -Specific BID (Gymnasts)- Elite female (-1.20), Non-elite (-1.00). -Pressure Thin (Gymnasts)- Elite female (2.40), Non-elite (3.02) -Social Support (Gymnasts)- Elite female (2.37), Non-elite (2.23)</p>	<p>development of eating disorders” (pg. 497). -“Elite and non-elite aesthetic performers (ballet dancers or gymnasts) showed similar levels of self-esteem” (pg. 495). -“For gymnasts, levels of BID seem to be more similar, as only females (both elite and non-elite) present themselves as more dissatisfied than non-elite male gymnasts” (pg. 469). -“Overall, females seem to make a greater distinction between general and specific ideal body image because in every female group there are significant differences between the two indicators of BID (general and specific), always showing more dissatisfaction with their image as athletes” (pg. 496). -“We hypothesize that most female ballet dancers and gymnasts feel physically quite well and thin enough in their daily lives, but they believe they need to present a thinner body for the practice of classical dance and gymnastics to coincide with the aesthetic ideals they think would enable them to achieve more success” (pg. 496). -“Social support was not proved to a contextual</p>	<p>e and compare larger samples of different disciplines to identify which of them constitute higher-risk groups for the development of eating disorders. -Future studies with larger samples (including non-dancers) should explore the hypothesis that the practice of recreational classical dance is protective against the development of eating disorders</p>
---	---	--	--	---	--	---

			<p>-Non-elite gymnasts' group= 52 female and 15 males. Mean age= 15.27.</p> <p>Procedure</p> <p>-Parental and adolescent informed consent obtainment</p> <p>-Data collection scheduled around training or class times and occurred in small groups.</p> <p>-Presence of researcher.</p> <p>-Without presence of coaches/teachers .</p> <p>-Participants unable to participate in groups sessions were given surveys by researcher of coach/teacher to complete at home.</p> <p>Completed surveys were handed in in a sealed envelope without any form of identification.</p> <p>-Surveys took about 40 minutes to complete</p>	<p>ns of social support received by or provided to aesthetic performers in those contexts by coach/teacher or parents. (Likert Scale)</p> <p>-Self-Esteem- assessed participants global self-esteem. Using self-report measure consisting of ten statements relates to self-esteem. Six-point Likert scale.</p> <p>-Body Image Dissatisfaction (BID)- evaluated using the</p>	<p>-Eating Disorder Examination Questionnaire (Gymnasts)- Elite female (1.80), non-elite (1.30)</p> <p>-General BID Elite female gymnasts (-0.84), Elite female dancers (-0.89)</p> <p>-Specific BID Elite female gymnasts (-1.20), Elite female dancers (-1.45)</p> <p>-Pressure to be Thin Female non-elite gymnasts (3.02), Female Non-elite dancers (3.42)</p>	<p>predictor for aesthetic performers DE” (pg. 497).</p> <p>-“As such, it is possible that, more than belonging to the elite group, it is the level of perceived pressure to be thin that increases the risk for DE” (pg. 497).</p> <p>-“It aesthetic performers perceive pressure to remain thin in their environments, they are more likely to engage in unhealthy eating behaviors, especially if they also present low self-esteem and are dissatisfied with their body image in relation to their activity (both of which seem to be influenced by the perception of the pressure to be thin)” (pg. 497).</p> <p>-“focus on promoting your aesthetic performers’ self-esteem and satisfaction with their activity -specific body image, which is essential to reducing the impact of pressure to be thin on their eating and weight- control behaviors” (pg. 498).</p> <p>-Specifically, coaches and teachers should understand the impact of their behaviors and comments that lead aesthetic performers to adopt unhealthy practices (Buchholz, et al., 2008; Kerr, et al., 2006) and should try to adjust their demands to healthier ideal body requirements for the practice</p>	<p>in young females.</p> <p>-Future qualitative studies would be useful in understanding the domains of global self-esteem that better contribute to aesthetic performers feeling good about who they are and what they could do in all their individual roles and contexts.</p> <p>-Future studies should seek to evaluate the perceived pressure to be thin on the aesthetic</p>
--	--	--	--	---	--	---	--

				<p>Contour Drawing Rating Scale, Thompson & Gray, 1995)- consisted of a sequence of nine silhouettes, ordered from very thin to very large. Participants are to select a representation of their current and ideal body size.</p> <p>- Disorder ed Eating (DE)- this questionn aire assessed continuu m of disordere d eating. Seven- point Likert scale</p>		<p>of classical dance and gymnastics” (pg. 498).</p>	<p>performe rs.</p>
--	--	--	--	--	--	--	---------------------

