Spring 2018

Portion Control: An Examination of Organizational Control and Male Athlete Eating Disorders

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PORTION CONTROL: AN EXAMINATION OF ORGANIZATIONAL CONTROL AND MALE ATHLETE EATING DISORDERS

A Thesis
Presented to
The Faculty of the Organizational Communication Master's Program
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Master of Arts

By
Katie Lever

May 2018

PORTION CONTROL: AN EXAMINATION OF ORGANIZATIONAL CONTROL AND MALE ATHLETE EATING DISORDERS

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ACKNOWLEDGEMENTS

I dedicate this thesis to my many coaches and teammates, all of whom have greatly helped me reach my personal and athletic potential and who have taught me both the greatest and most difficult lessons in my life. I would like to thank my thesis committee for their assistance with this project. First to Dr. Holly Payne for her quantitative expertise and patience with me as a qualitative-minded scholar. Second to Dr. Angela Jerome for her initial and enduring confidence in me as a graduate student when I had none and for being the first to show me the link between athletics and communication research. Finally, to Dr. Blair Thompson for his valuable perspectives that have contributed to my research.

CONTENTS

PORTION CONTROL: AN EXAMINATION OF ORGANIZATIONAL CONTROL AND MALE ATHLETE EATING DISORDERS

Katie Lever May 2018 62 Pages

Directed by: Holly Payne, Angela Jerome, and Blair Thompson

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Eating disorders (EDs) are strikingly common among American adults. Past research has indicated that athletes in general are particularly vulnerable to developing EDs due to media pressure, athletic drive, and the population's proclivity to perfectionism. Most ED research, both in athletic and non-athletic populations, is female-focused, as women are more likely to develop EDs. However, men are still susceptible to develop EDs and are understudied.

Links between lack of autonomy and EDs exist in familial settings, but have yet to be applied in organizational settings. This quantitative thesis sought to bridge a research gap by assessing ED levels in male NCAA Division 1 athletes and examining the relationships with perceived levels of concertive, institutional, and simple control present in athletic settings. Findings indicated that although athletes perceived different forms of control in their sport, these forms of control did not negatively affect their eating habits. Implications and direction for future research are explored.

Chapter 1: Introduction

The notion of organizational control began to surface in organizations in the early 1900s when Henry Ford introduced the assembly line in order to ensure workplace efficiency, regulation, and standardization (Christiansen, Cheney, Zorn, & Ganesh, 2011) and has continued as a central theme of organizational communication research for decades. Mumby (2013) noted "one of the defining features of an organization is that it coordinates the behavior of its members so they can work collectively" (p. 4). All organizations must maintain some level of control in order to be successful and meet organizational goals. Mumby continued by contending that because goals within complex organizations often conflict, "various forms of control are necessary to achieve coordinated, goal-oriented behavior" (p. 8). Organizational control is inherent to all forms of organizational structure and, in effect, has on impact on organizational behaviors, efficiencies, and even resistance.

This study focuses on the impact of three levels of control which exist in different forms within an organization: institutional, simple, and concertive. Institutional and simple control are often built into traditional organizational structures particularly bureaucracies. Institutional control operates on a broad level in the form of formal policies and rules which direct employee and supervisor behaviors. Simple control features direct supervision, a clear workplace hierarchy, and personal control of employees (Edwards, 1981). Finally, concertive control occurs when teams pressure their members to adhere to articulated team rules and processes (Barker, 1993). Often, teams exert control at a level much greater than traditional management structures. Control is enacted communicatively, and these communication practices and routines serve to

impact employee behavior. Much research has addressed the connections between control and specific outcomes for employees including feelings of alienation (e.g., Etzioni, 1975), satisfaction, performance, turnover intentions (e.g., Ouchi, 1979), stress, and burnout (e.g., Leiter & Maslach, 2003). This study sought to explore the element of control within athletic organizations and its effect on athletes specifically with regard to eating disorders (EDs). Messages regarding diet and exercise are central to athlete training and supervision and directly impact an athlete's work and team success; however, little is known about whether these types of control messages have adverse effects. This study explored how different types of control relate to disordered eating among athletes.

Athletes are particularly vulnerable to EDs due to high stress levels, demands of perfectionism, and intense goal-orientation (Sundgot-Borgen, Meyer, Lohman, Ackland, Maughan, Stewart, & Müller, 2013). Females are disproportionately affected by EDs and males are, consequently, vastly understudied. Furthermore, EDs are also understudied in communication research, especially in terms of organizational control. Like any organization, the National Collegiate Athletic Association (NCAA) exerts various levels of control on its members, but the effects have not yet been studied in terms of EDs. In the past, studies have correlated perceived loss of control with EDs at the family level (Baratta, 2011), but, thus far, have not explored the potential link between organizational control and EDs. Therefore, this study analyzed the controlling structures surrounding male NCAA athletes at the concertive, simple, and institutional level to discover if they are predictive of EDs in male NCAA athletes. This thesis research explored this relationship by answering the following research questions:

RQ1: What is the relationship between male athletes' perceptions of institutional control and disordered eating habits?

RQ2: What is the relationship between male athletes' perceptions of simple control and disordered eating habits?

RQ 3: What is the relationship between institutional control and disordered eating habits?

RQ4: What is the relationship between institutional, simple, and concertive control on male athletes' disordered eating habits?

Chapter Two will first review the literature regarding eating disorders, particularly their presence in athletics, and relevance to male audiences. The literature review will also cover control in organizations, including the NCAA, and will preview the research questions associated with this study. Chapter Three details the methods employed by the researcher and provides information about the scales used. Chapter Four discusses the results of data collection and synthesis. Finally, Chapter Five reviews the findings and discusses implications, conclusions, and future directions of this study.

Chapter 2: Literature Review

Eating disorders and disordered eating habits have become somewhat of an epidemic in American culture. Although statistics vary, it is estimated that 10-30 million Americans, or eight percent of the population, suffer from eating disorders (Avalon Hills Foundation, 2015; National Eating Disorder Association, 2016b). Eating disorders carry an array of negative health consequences, including, but not limited to, reduced heart rate, low blood pressure, muscle atrophy, dry skin, osteoporosis, hair loss, episodic fainting, prolonged fatigue, and kidney failure (National Eating Disorder Association, 2016c).

The three most common eating disorders are anorexia nervosa, bulimia, and binge eating disorder. Individuals struggling with anorexia typically have a distorted body image and starve themselves and/or exercise profusely in order to get or stay dangerously thin. Bulimic individuals typically eat excessive amounts of food (called a binge) and then purge their meals through various methods, including vomiting, laxatives, and/or extreme exercise. Binge eating disorder (BED) is characterized by the aforementioned binging episodes but those with BED do not purge to rid themselves of excess calories. A fourth and lesser known category of eating disorders is called Other Specified Feeding or Eating Disorder (OSFED), which is characterized by problematic eating habits which do not fit into the aforementioned eating disorder framework (American Psychological Association, 2017). Examples of OSFED include: anorexic tendencies at a healthy weight, limited duration of bulimia or BED, night eating disorder, and purging disorder (The Center for Eating Disorders, 2015). Subclinical eating disorders are similar to full-blown eating disorders, except individuals with subclinical eating disorders do not meet

all of the aforementioned criteria (ex. dangerously low body weight, distorted body image). However, subclinical eating disorders still carry many, if not all of the dangers associated with clinical-level eating disorders (Beals & Manore, 1994). Therefore, both clinical and subclinical instances of eating disorders (EDs) will be addressed in this paper.

Athletes and Eating Disorders

Although anyone can develop an ED, athletes are at an increased risk to engage in disordered eating habits, which are much more prevalent in athletic populations than non-athletic populations. While approximately eight percent of the non-athletic population suffer from EDs, approximately 18% of female athletes suffer (Joy, Kussman, & Nattiv, 2016). Although men report EDs less commonly than females, the prevalence among male athletes is still higher than the general male population, as eight percent of male athletes report EDs as opposed to 0.5% of the general population (Joy, Kussman, & Nattiv, 2016). However, Joy, Kussman, and Nativ (2016) also indicated that athletes in general tend to under-report potential ED symptoms, regardless of gender.

It is estimated that overall, approximately one-third of NCAA female athletes reported anorexia symptoms. Furthermore, 31% of males competing in weight-class (ex. wrestling) and aesthetic sports (ex. gymnastics) reported disordered eating habits. The number of female weight-class and aesthetic sport athletes engaged in disordered eating behaviors was around 62% (National Eating Disorder Association, n.d,a). While reports on female athletes and EDs are widespread, general information on male athlete eating disorders is sparse and studies addressing male EDs, even in athletic settings, are hard to find.

What little information is known on male athlete EDs is eye-opening. One study by Chatterton and Petrie (2013) that focused exclusively on male athletes found that most EDs exhibited in male athletes were subclinical. Exercising and dieting were the most common disordered eating habits, and male athletes in weight class sports (such as wrestling) were more likely to engage in these habits. Petrie, Greenleaf, Reel, and Carter (2008) examined 203 male collegiate athletes and found that while almost 20% exhibited problematic eating habits including laxative use, fasting, and excessive exercise none of the respondents were clinically diagnosed with an eating disorder. This is likely because "in Western society, being a 'real man' means being tough (emotionally and physically) [and] not admitting pain or illness (particularly mental illness or something that would be considered a 'woman's problem,' such as an eating disorder)" (p. 267). Therefore, it is plausible that many cases of male eating disorders in both athletic and non-athletic populations are either subclinical or undiagnosed because men are not as inclined to ask for help or admit they have a health problem, especially one with a feminine connotation. Strother, Lemberg, Stanford, & Turberville, (2011) contended that "men with eating disorders are currently under-diagnosed, undertreated, and misunderstood by many clinicians who encounter them" (p. 346).

According to Sundgot-Borgen, et al. (2013), "factors specific to the athletic community, such as perfection and strong achievement orientation, the start of sport-specific training, competition, dieting and weight loss at early age, a desire to be lean to increase performance, pressure from coaches and the regulations in some sports" (p. 2) can all lead athletes to engage in weight-modifying habits. Bolles, Long, and Fiorentino (2015) also purport that "athletic drive is a key factor that leads athletes to experiment

with exercise and various dietary methods in order to enhance their performance" (p. 12). Athletes pride themselves on being driven, motivated, physically and mentally tough, and highly skilled. While these attributes are valuable in the pursuit of athletic success, they also contribute to unique athletic pressures, which may manifest in EDs. Furthermore, demands of perfectionism in and out of the classroom might also lead athletes to engage in disordered eating habits as motivation and perfectionism are indicators of eating disorder relapses even in non-athletes (Steele, Bergin, & Wade, 2011).

Athletes with EDs often believe that altering their body composition will positively impact sport performance. Thompson and Sherman (1999) note that often the traits present in eating disordered individuals are the same traits required to be a top-level athlete, thus preventing the ability to differentiate an eating disordered athlete from a committed and hardworking athlete, or a "good athlete." Thus, athletes in general are considered a higher-risk population in terms of engaging in disordered eating habits, as athletes are wired to strive for perfection.

College athletes are particularly vulnerable to high stress levels, as academic and athletic demands are compounded with living away from home often for the first time (Quatromoni, 2008). College athletes' success in sport is paramount to his or her athletic, academic, professional, and financial well-being. Thus, some athletes engage in disordered eating habits to alter their bodies and amplify athletic competency in order to maintain job and athletic security. In actuality, eating disorders can be detrimental to individual success in organizations, as many individuals who suffer from eating disorders experience lapses in quality and/or quantity of work, reduced concentration and problem-solving skills, absenteeism, social withdrawal, and missed deadlines (Tompkins, 2011).

This pursuit of perfectionism drives athletes to strive for an unrealistic body image. Fueled by the media, both men and women are subjected to unrealistic body image standards, and what constitutes a "perfect body" varies between men and women. Yet, male body image and the impact on disordered eating is understudied.

Male Body Image and Disordered Eating

Although a plethora of research addresses societal influence on female body image, there is a paucity of information on its influence on male body image. McCabe and Ricciardelli (2001) acknowledged that "there has been an inadequate conceptualization and assessment of body image and associated behavioral problems among males. By focusing on the same areas that concern females, many problem areas for males have been neglected" (p. 225). To bridge this research gap, McCabe and Ricciardelli (2001) conducted a study that focused on parent, peer, and media influence on the body images of both males and females. Their findings indicated that weight-related media and parental influence to alter one's body composition was higher for females than males, but males still felt media pressure to alter their bodies in accordance to societal standards. However, whereas females typically felt pressured to reduce their body size, males felt pressure to increase body size. Consequently, males undertook fewer body-reducing behaviors, as this would increase the theoretical distance between their current body and their societally-pleasing body and aimed instead, to not only lose fat but also gain muscle mass. A study by Galli, Petrie, and Reel (2009) found that "male body dissatisfaction associated with feeling too small can lead to negative feelings similar to those felt by females who feel that they are too big" (p. 96).

The media may also be a contributing factor to poor body image. The ideological role of mediated images is regularly scrutinized, especially in terms of the relationship between media images and self-identity. A meta-analysis on body image dissatisfaction and media exposure showed that "as men felt pressure from the mass media… they felt worse about their bodies" and that this pressure "was related to body satisfaction, body esteem, self–esteem, psychological disorders (e.g., depression), and behavioral outcomes (e.g., excessive exercising)" (Barlett, Vowels, & Saucier, 2008, p. 279).

As the media constantly communicate messages regarding body standards of both individual competency and societal attractiveness, it is widely recognized that media proliferation of unrealistic body images can have negative consequences. Exposure to these images can manifest in disordered eating behaviors and full-blown eating disorders (Wykes & Gunter, 2008). Unlike women, who are bombarded by thin-idealistic media messages, men are often portrayed in the media as hypermasculine, lean, and muscular, but this different body-ideal has similarly detrimental effects. Because male athletes are viewed as the prototype of athletic dominance, they are subject to what Galli and Reel (2009) described as "hegemonic masculinity and the muscular ideal" (p. 96), a mindset which Gerschick and Miller (1994) defined as "the socially dominant conceptions, cultural ideals, and ideological constructions of what is appropriate masculinity" (as cited in Galli & Reel, 2009, p. 96). Because sports "amplify masculinity," males are especially susceptible to the constraints of masculine body image in ways women are not (Messner & Stevens, 2002, p. 226).

Although being a college athlete does not necessarily increase media exposure to unrealistic body image standards, NCAA athletes are constantly thrust in the media

spotlight both at the local and mainstream level. A staggering 81% of the NCAA's revenue comes from media partnerships (National Collegiate Athletic Association, n.d.), which entails that student-athletes are increasingly becoming an integral part of the sports media environment. Increased personal exposure paired with athletic body stereotypes may lead athletes to engage in unhealthy eating habits to maintain their weight and fit this media image. Furthermore, under NCAA amateurism jurisdiction, athletes do not own their athletic image and the NCAA is at liberty to disseminate its members' images without athletes' knowledge or consent (Stauffer, 2014). The NCAA's image policy is one of many ways college athletes may be controlled. Control is central aspect of EDs as sufferers experience a loss of control over various aspects of their lives and then seek to assert control through eating habits.

Control and EDs

For men and women suffering from EDs, stress and distorted ideas of body image contribute to a lack of control. Baratta (2011) asserts that adolescents often use eating disorders to cope with the lack of control they feel over their changing bodies and strict parents. Control is a highly desirable asset for individuals with EDs. According to the Centre for Clinical Interventions (2016), "people with eating disorders tend to judge themselves and their worth largely, or even solely, in terms of their eating habits, shape and weight, and their ability to control these" (p. 2). Although some ED habits (such as bingeing) entail a loss of control, Dolhanthy (2017) notes that if "an individual with an eating disorder generally feels very out of control of their body and of their life, they will often have a sense that the eating disorder is their one chance at control, or they may fear that to give it up will render them more out of control than ever" (para. 9).

Within the organizational context, a lack of control over work processes or misuses of power contribute to EDs. For example, a study by King, Vidourek, and Schwiebert (2009) revealed that stress in the workplace can contribute to eating disorders. Correlations between sexual harassment and eating disorders also exist, as victims have employed disordered eating behaviors as a coping strategy in light of their emotional distress (Harned, 2000). Employees are likely to experience stress due to the competitive natures of many workplaces and this stress serves as a potential trigger for EDs (The National Eating Disorder Association, 2016c).

The relationship between control and eating disorders has not been assessed within athletic organizations. Power and control are necessary for organizations to maintain function and order. Although these two concepts are inextricably linked, they are not synonymous. According to Tompkins and Cheney (1985), organizational power is "the ability or capacity to achieve some goal" whereas control is "the exercise or act of achieving a goal" (p. 181). Athletes experience different levels of organizational control within their teams that may affect disordered eating. Trethewey (2006) asserts that several different types of workplace control contribute to "the ways in which members' material bodies are…harnessed for instrumental purposes" (p. 111) and that workplaces assert control over their employees to discipline them. Trethewey (2006) argues that women, in particular are susceptible to workplace discipline. Organizations as gendered institutions promote the ideals of professionalism and rationality, which for women translates into being physically fit, suppressing emotion, and hiding normal female body functions such as pregnancy and menstruation. Organizations and their members send the message that "in order for you to be successful, you have to be fit, both physically

and emotionally," which are traits highly valued in athletes as well. Although Trethewey's (2006) study focused solely on female employees, it is reasonable to conclude that male NCAA athletes are similarly susceptible to the "fit body as professional body" mindset within the hypercompetitive environment of the NCAA. Power and control within any organization, including athletic teams, manifest in a number of ways including: institutional control, simple control, and concertive control.

Institutional control. Like any other organization, the NCAA exerts different forms of control over its members. Ouchi (1977) defines the process of organizational control as "a process of monitoring something, comparing it with some standard, and then providing selective rewards and adjustments" (p. 97). The NCAA values a climate of control as evident in the NCAA's Division 1 Manual (2016) which specifically lists institutional control as one of its "Commitments to the Division 1 Model" (p. ix), which guide its legislative and organizational practices.

The NCAA upholds institutional control as a core value. The NCAA's website notes that their role is enforcing rules for recruiting, compliance to academics, and championships for member institutions. The central control agent for the NCAA at each university is the Athletic Director. Institutional control trickles down from the NCAA level to the individual team level. A plethora of examples regarding team-level control exists within the NCAA, including communication restraints, employment limitations, strict team rules, scholarship constraints, restrictive transfer policies, and control of media images, all of which are enacted at both the institutional and team level. Although the NCAA does not require coaches to take extensive controlling measures over their teams, the organizational environment of the NCAA all but necessitates strong team control. The

case of Pittsburgh basketball player, Cameron Johnson demonstrates the amount of institutional control present in situations involving athletes transferring to other schools. In 2017, Johnson announced he wanted to transfer from the University of Pittsburgh and eventually, it was rumored he wanted to transfer to the University of North Carolina. After this information was released, the University of Pittsburgh placed a transfer restriction on him, which would require him to sit out a year if he transferred to a rival ACC school such as UNC (Kirshner, 2017). NCAA critics have also suggested that renewable scholarships (as opposed to guaranteed multi-year scholarships) allow coaches to apply an undue level of control to NCAA athletes. Solomon (2014) posited that the coaches desire a "carrot-and-stick" motivation system to ensure top athletic performance.

According to Taylor Branch, who testified against the 1973 ruling by the NCAA to abolish multi-year scholarships:

> The 1973 rule to eliminate multiyear scholarships 'was driven by the coaches at the biggest universities … because they wanted more control over their athletes. They were driven to win. You have a better chance of winning if you control the athlete and what time he gets up and how much time he spends in the weight room. (Solomon, 2014, p. 12)

The revocation of four-year scholarships, according to Branch, was driven by a desire for institutional control over athletes and the legal appeal over this legislature shows the influence incentives have over sport. Although the ban was overturned, the NCAA still does not *require* coaches to guarantee four-year scholarships. Furthermore, coaches, under NCAA regulations, can revoke scholarships for virtually any reason. These "reasons" are sometimes unclear or unstated and privacy rules protect coaches from

revealing scholarship-based information (Bishop, 2013). Studies have demonstrated the link between both EDs and stress (King, Vidourek, & Schwiebert, 2009) and athletic performance demands and stress (Crocker & Graham, 1995). Performance-based athletic scholarships add a dimension of athletic pressure while robbing the athlete of a measure of control, as scholarship allocation falls into the hands of coaches and the athletic directors based on the budgets of institutions. Thus, NCAA scholarship and transfer rules serve as mechanisms of control that limit athletes' autonomy and increases performance pressure and stress.

The controlling structure of the NCAA not only enables, but requires coaches to exert some form of control over their athletes. If athletes are not working other jobs, they will be more focused on their sport. If athletes are not on social media sites during the playoffs, they will be more focused on winning. If an athlete cannot transfer to a rival school, the team will be more likely to win a conference championship. If an athlete is afraid of losing a scholarship due to low performance, he/she will be more dedicated to athletic success. Successful and hypercompetitive athletes provide more entertainment value than other levels of amateur athletics (ex. high school, NCAA Division II, or Division III teams), and therefore ultimately provide a means for the NCAA's bottom line: revenue. Thus, the NCAA's emphasis on institutional control is rooted in profit and maintained by adherence to a controlling organizational climate.

Although lack of autonomy has been linked to EDs in familial settings (Baratta, 2011), the potential link between institutional control and EDs has not yet been explored. Thus, my first research question posed the following:

RQ1: What is the relationship between male athletes' perceptions of institutional control and disordered eating habits?

Simple Control. Although the NCAA enacts policies and encourages athletic directors to maintain control at the institutional level, adherence to the NCAA's framework has a trickle-down effect. Previously mentioned examples of Geno Auriemma's social media policy and the Cameron Johnson transfer situation demonstrate that institutional policies enable coaches to maintain organizational control at the team level. Beyond the control that sports organizations exert on student athletes, the simple control exerted by coaches is likely to have an effect on disordered eating as coaches convey many messages about athletic ability, wellness, and other health indicators which influence players. Christiansen, Cheney, Zorn, and Ganesh (2011) define simple control as "a direct relationship between a supervisor (manager or owner) and her employees" (p. 274) and is typified by direct supervision and monitoring of work processes. Authority figures in simple control systems also have power over who receives rewards and punishment for their work. Under the framework of the NCAA, coaches possess huge amounts of simple control within the NCAA's legislative boundaries. Furthermore, the NCAA's emphasis on institutional control indicated in its bylaws and legislative framework ultimately has a trickle-down effect on its coaches. Thus, coaches control their athletes because the NCAA allows them, and even encourages them, to do so. For example, the University of Northwestern football team's players must sign a social media policy, are not allowed to provide interviews to non-athletic department-approved media, must have their apartment leases approved by coaches, and are required to obtain their coaches' permission to accept an off-campus job (Crouch, 2014). Geno Auriemma, head

coach of University of Connecticut women's basketball team, requires his athletes to abstain from social media during post-season play (Casey, 2015). The NCAA's renewable scholarship policy also gives coaches immense control over the structure of their team. Coaches are therefore, free to cut athletes for virtually any reason, including injuries, or to make fiscal room for promising recruits. In the case of a coaching change, if a new coach does not like an athlete, he/she is at perfect liberty to cut that athlete per NCAA regulations as well (Solomon, 2014). According to Ouchi (1977), "in order to apply behavior control, the organization must possess at least agreement, if not true knowledge, about means-ends relationships" (p. 97), which for NCAA coaches, is athletic success.

Simple control is considered the most intrusive form of control and while organizations are increasingly moving away from overarching patterns of simple control, such structures still exist in many organizations, including NCAA athletic teams. At the individual team level, much of collegiate athletics is guided by simple control. Coaches can exert much control over their athletes in terms of team rules, procedures, and penalties. Coaches also have the power to control team resources, both tangible (ex. employment opportunities, social media use, scholarships) and intangible (ex. praise, respect). The power coaches hold over resources can lead to imbalances of these resources. In the NCAA, where transactions of tangible resources are strictly monitored, resource imbalances are largely intangible, particularly in terms of interpersonal communication between coaches and athletes, which may be linked to EDs in athletes.

Unfortunately, Trattner, Sherman, Thompson, DeHass, and Wilfert (2005) noted "coaches have most often been associated with precipitating disordered eating in an

athlete or exacerbating an existing eating disorder in an athlete through their training practices and recommendations" (p. 448). This phenomenon emphasizes the importance of assessing interpersonal relationships in relation to eating disorders. Coaches do not need to actively encourage eating disorders or disordered eating habits to create a diet culture within a team. A passing body-image critique from a coach or casual mentioning of a fad diet could very easily trigger an athlete to engage in unhealthy behaviors due to the communicative influence of interpersonal relationships shared among athletes and coaches. It is important to note that interpersonal relationships are also not always positive in nature. Using peer pressure as an example, Cline (2003) pointed out that interpersonal relationships can be inherently persuasive and "communication with those closest to us sometimes endangers well-being…in social contexts, communication can serve to recruit others to engage in risky behaviors" (p. 287). Thus, even flippant or well-intended health-related comments can be a dangerous form of pressure.

Coaches are sources of interpersonal influence as they impact athletes' self-esteem, motivation, perceptions of confidence, and overall body image (Rocca, Martin, & Toale, 1999). Coaches "encourage affective, cognitive, and behavioral learning of a sport" (p. 445), all of which have the potential to perpetuate eating disorders. A study by Becker and Record (2016) revealed that "coaches' communication about body image and health choices had a vital impact on how…athletes perceived their athletic abilities" (p. 367). However, the same study revealed that "when communicating about health choices or body image, [coaches] would provide little to no guidance for them about how to go about making healthy choices" (p. 369), highlighting a key gap in health-related interpersonal communication between coaches and athletes. Regardless of this

communication gap, athletes in this study used “diet and exercise as coach-encouraged behaviors to maintain or improve their health and current body image” (p. 370).

Coaches can also be a key source of memorable messages, or “brief oral injunctions…regarding important issues in people's lives and [occurring] at equivocal and often difficult points in time” (Stohl, 1989, p. 232). Memorable messages are typically delivered from higher-status organizational members to new members as a part of organizational enculturation. Such messages are common in the workplace and in athletic settings as well. A study by Dunleavy and Yang (2015) examined memorable messages internalized by college freshman, sorority members, and athletes and found that the collegiate athletes first recalled memorable messages regarding diet followed by motivational and exercise-based advice and that athletes received over half of their memorable messages from coaches. Although memorable messages tend to be rule-based in nature (Stohl, 1989), they demonstrate the intersectionality of interpersonal and organizational communication present in both athletic and professional settings and reveal structures of control that coaches communicate interpersonally.

Qualitative studies have revealed that low levels of perceived coach support are linked to disordered eating habits (Jones Glintmeyer, & McKenzie, 2005). A study by Coker-Cranney and Reel (2015) examined the interpersonal factors of the coach-athlete relationship and found that positive perceptions of coach-athlete relationships were negatively correlated with disordered eating habits. However, these studies, like the vast majority of research surrounding disordered eating habits, featured only female participants. However, it is important to note that because coaches control communicative resources in team settings, they may also have some measure of control

over the eating habits of their athletes whether they are conscious of their power or not. Furthermore, as authority figures, coaches have the power to exert simple control over their athletes to monitor and alter their dietary habits. Thus, my second research question asked:

RQ2: What is the relationship between male athletes' perceptions of simple control and disordered eating habits?

Concertive control. Organizational control does not necessarily originate from upper-level organizational members but rather from coworkers. One of the most poignant forms of organizational control is concertive control which emerges in team-based settings. According to Barker, Melville, and Pacanowsky (1993) in an organization where concertive control functions, "work is not guided by a direct supervisor, an automated line, or organizational rules and procedures. Instead, the workers' behavior is guided by decisions workers make themselves by employing the organization's premises… the organization…shapes employee behavior so they will act in effective and functional manners" (p. 308-309). Barker (1993) noted that organizational environments contingent on concertive control involve "a key shift in the locus of control from management to the workers themselves, who collaborate to develop the means of their own control" (p. 411). Concertive control is efficiently accomplished through the mechanism of identification. According to Pratt (1998) "organizational identification occurs when one comes to integrate beliefs about one's organization into one's identity" (as cited in Fox, Gong, & Attoh, 2015, p. 172,). Cheney (1983) stressed the importance of values identification into the concept of organizational identity, noting that individuals identify with some target(s), i.e., persons, families, groups, collectivities; and to a lesser extent, values, goals,

knowledge, activities, objects" (p. 145). Furthermore, Mael and Ashforth (1992) noted that as an individual identifies with organizations, "he or she perceives him or herself as psychologically intertwined with the fate of the group, as sharing a common destiny, and experiencing its successes and failures" (p. 104-105). Thus, as individuals identify with organizations, they identify with the organization's values and beliefs as well. Organizational identification and concertive control go hand-in-hand. According to Barker (1993), team members created normative control based on their identification within an organization and "are socially constructed by the system they have created" (p. 434). Furthermore, this form of control becomes further normalized as "team members readily accept that they are controlling their own actions. It seems natural, and they willingly submit to their own control system" (p.434) and discipline each other accordingly.

Under this framework, athletic teams are self-managing teams to a certain extent. Members of NCAA teams interact on a daily basis, are delineated by positions, have at least some say in practice scheduling (ex. scheduling practice around classes), possess unique skills that are to function together to achieve a group goal, and receive feedback and supervision from at least one coach. Athletes function as self-managing teams particularly in competition where coach involvement is somewhat restricted. Because coaches cannot step directly onto a court, field, or track, athletes must manage themselves and their teammates to collectively perform the desired task under pressure. Furthermore, sometimes practice sessions, particularly in the off-season, are also highly self-managed.

There are several advantages and disadvantages to this self-management style. Cohen and Ledford (1994) found that self-management was correlated to higher "quality

of work life and productivity benefits from manufacturing settings to a variety of work settings" (p. 12). Barker (1993) noted "proponents argue that self-managing teams make companies more productive and competitive by letting workers manage themselves in small, responsive, highly committed, and highly productive groups" (p. 413). Goodman, Devadas, and Griffith Hughson (1988) noted that self-managing teams can also "create an opportunity for new releases of energy, skill, and problem-solving activity" (p. 316).

However, there are several downsides to self-management as Langfred (2004) noted that lack of formal management can be detrimental as "high levels of individual autonomy can become a liability in self-managing teams when the level of trust is high and little monitoring takes place" (p. 391). Furthermore, Wright and Barker (2000) posited that "the redistribution of control from hierarchy and democracy to self-managing team designs become a pivotal factor in the development of concertive control systems" (p. 347) which can lead to increases in team control guided by organizational values frameworks. Thus, decentralization of control can very easily enlarge existing control structures in team settings. Within athletic teams it is likely that athletes exert concertive pressure on their teammates to accomplish a mutual goal: winning. Jaworski, Stathakopoulos, and Krishnan (1993) found that teams often rely on peer control to regulate behavior. Although athletic teams are guided by a coaching staff, there are ample opportunities for athletes to exert peer pressure on one another which serves as a form of concertive control. Research has demonstrated the effect of peer groups on weight-controlling behaviors. A study by Mackey and La Greca (2008) revealed that levels of group identification positively correlated with concern with and peer control over weight in adolescent girls. Stice (1998) revealed that endorsement of the thin-ideal body type

among peer groups increases the likelihood of ED tendencies. Although athletic peer influence has been studied in terms of participation in sexual assault (Humphrey & Kahn, 2000), substance use (Knee & Neighbors, 2002), and pain tolerance (Ryan & Kovacic, 1966), its effects have yet to be studied in terms of eating behaviors. Therefore, the following research question addressed institutional control:

RQ 3: What is the relationship between concertive control and disordered eating habits?

All three levels (simple, concertive, and institutional) of control exist within the NCAA. Although EDs are complex, multifaceted syndromes, I believe that control will prove to be a powerful predictor in male athletes with EDs and ED habits. There is a plethora of research available linking other factors (ex. stress, family influence, media exposure) to EDs, but organizational control has not been studied in this context. However, as previous research indicates there are correlations between lack of control and EDs in other settings, the researcher posited that organizational control can potentially have similar effects. If athletes feel out of control due to the controlling structures present at all levels in the NCAA, it is reasonable to assume athletes may attempt to regain lost control through their eating habits. Thus, the final research question analyzed the relationship between the different types of control:

RQ4: What is the relationship between institutional, simple, and concertive control on male athletes' disordered eating habits?

Chapter 3: Methods

As previously mentioned, there is a paucity of research addressing male athlete EDs. Because a key goal of quantitative research is to generate generalized data (Babbie & Baxter, 2004), quantitative research methods were utilized to gather data which can be qualitatively addressed in future research. Baxter and Babbie (2004) asserted that survey methods are useful for discovering participants' "attitudes, beliefs, and perceptions" (p. 103). Because EDs are highly mental syndromes, surveys allowed for the examination of the mindsets behind, rather than the physical repercussions, of EDs. Babbie and Baxter (2004) also noted "respondents are sometimes reluctant to report controversial or deviant attitudes and behaviors in interviews but are willing to in an anonymous, self-administered questionnaire" (p. 198) and when addressing sensitive topics, "internet surveys are definitely more effective for complicated [issues]" (p. 198). As EDs are somewhat of a taboo health topic, quantitative surveys provided participants with an extra measure of privacy in disclosure. Finally, assessing EDs using surveys has yielded success in past research (Garner, Olmsted, & Garfinkel, 1986; Beals & Manore, 2002) particularly in male sub-clinical samples (Riebl, Subudhi, Broker, Schenck, & Berning, 2007). Once IRB approval was obtained the online survey was created using Qualtrics survey software.

Procedures and Participants

Participants in this study were current or former male NCAA Division 1 college athletes recruited using random and snowball sampling methods. An appropriate sample size for regression was estimated using the formula $N \geq 50 + 8(k)$. This calculation was based on the number of predictor variables (k) assuming an alpha level of .05, power of

.8, and a medium effect size. Therefore, a target sample of at least 74 participants was needed (Newton & Rudestam, 1999).

The author emailed multiple NCAA Division 1 programs requesting the coaches to pass the survey link along to their athletes. The author also posted the survey link on Facebook and Twitter with a hashtag leading to the link. Finally, the researcher attended multiple weightlifting practices held on campus to discuss the study and pass along the survey link to athletes.

After following the link, participants viewed the implied consent form and were presented with questions regarding their perceptions of perceived control at the institutional, coach, and teammate level. Participants then answered an eating disorder assessment. Following the aforementioned measurements, participants were asked to provide demographic information regarding age, sport, and university.

Sampling resulted in a total of 97 valid responses. Three female respondents were deleted resulting in a total sample size of 94. Participants represented a range of collegiate sports including baseball (n = 12), basketball (n = 23), football (n = 23), golf (n = 6), track (n = 16), cross country (n = 19), soccer (n = 3), swimming (n = 8), ice hockey (n = 1), and other (n = 2). Geographically, athletes represented the South (20%), Midwest (5%), Southeast (4%), Northeast (4%), West (2%), North (1%), Northwest (1%), and Southwest (1%).

Measures

Eating Attitudes Test (EAT)-26. The Eating Attitudes Test (EAT-26) was originally developed in 1973 to assess in-patient anorexic behavior habits, but was modified to encompass self-reports of eating disorders outside of the clinical setting

(Garner, Olmsted, & Garfinkel, 1986). The scale features three subscales to measure both anorexic and bulimic tendencies (ex. like my stomach to be empty; avoid high-carbohydrate foods; vomit after eating; have binged without feeling able to stop), as well as habitual disturbances around food (ex. display self-control around food; cut food into small pieces). Respondents answered these questions using a Likert-style scale either ranging from "always" to "never" or "never" to "once a day or more."

The EAT-26 "has been used as a screening instrument for detecting previously undiagnosed cases of anorexia nervosa in populations at high risk for the disorder" (p. 871). Notably, the EAT-26 does not factor body weight into the assessment of eating disorders and instead focuses on the behavioral elements of eating disorders, making the scale useful "in identifying groups with abnormal concerns about eating and weight" (p. 871) who may not technically qualify as clinically diagnosed ED patients. The EAT-26 has been tested on clinically-diagnosed ED patients with promising consistency and "has been validated with anorexia nervosa patients but has also been useful in identifying eating disturbances in non-clinical samples" (p. 887). Pertinent to this study is the fact that "most of the individuals who score highly on the EAT-26 do not satisfy the diagnostic criteria for anorexia nervosa, the majority have been identified (in personal interviews) as experiencing abnormal eating patterns which interfere with normal psychological functions, thus the EAT may be most suitable as either an outcome measure in clinical groups or as a scanning instrument in non-clinical settings" (p. 887). The EAT-26 has been used to study eating disorders in athletes and has notably been an accurate predictor of ED-induced bone-density loss (Beals & Manore, 2002). The EAT-26 has been used to assess the prevalence of subclinical EDs in a male cyclist sample

(Riebl, Subudhi, Broker, Schenck, & Berning, 2007), which carries important implications for this study. The mean alpha of the EAT-26 has been reported at .86 (Gleaves, Pearson, Ambwani & Morey, 2014). This study used the short-form EAT which has four factors including Dieting, Oral Control, Food Preoccupation, and Bulimia(Lane, Lane, & Matheson, 2004). In this study, *oral control* was removed due to a low reliability score of .50. Acceptable reliabilities were found for *dieting (*α = .85), *food preoccupation* (α = .68), and *bulimia* (α = .87).

Institutional Control. According to Patterson, West, Shackleton, Dawson, Lawthom, Maitlis, and Wallace, (2005), organizations can create climates in which "coordination and control are achieved by adherence to formal rules and procedures" (p. 386). The Formalization dimension of the Organizational Climate Scale (Patterson, et al., 2005) was used to assess players' perceptions of their workplace environment at the organizational level. The OCS has been used in the past to examine the effect of organizational safety climate with employee safety behavior (Neal, Griffin, and Hart, 2002), employee productivity (Patterson, Warr, & West, 2004), and involvement (Shadur, Kienzle, & Rodwell, 1999), which suggests organizational climate affects organizational member behavior. Participants were given the 4-item scale measuring the dimension termed formalization which focuses specifically on "a concern with formal rules and procedures" (p. 386). Respondents ranked the accuracy of the statements using a four-item Likert scale with the options: "Strongly disagree", "disagree", "neutral" agree," and "strongly agree." The formalization subscale has exhibited acceptable reliability reported at 0.77 (Patterson, et al., 2005). Acceptable reliability was found in this study (α = .82).

Simple Control. Spector and Fox's (2003) Factual Autonomy Scale (FAS) was used to measure simple control, This scale was "designed to pinpoint the employee's sense of choice in shaping the way in which time would be configured and work tasks would be accomplished in the course of his or her daily work routine" (p. 420). The response scale used a four-item Likert-style scale ranging from "never," "rarely," "sometimes," "often," usually" to "always." The FAS has been used to assess perceived workplace restrictions (Jonason, Wee, & Li, 2015) as well as work-home boundary management and at-home technological monitoring (Park & Jex, 2011). In past studies, the FAS has demonstrated adequate reliability with an alpha coefficient of .81 (Park & Jex, 2011). The scale reliability in this study was .91.

Concertive Control. The Peer Pressure Scale (De Jong, Bijlsma-Frankema, & Cardinal, 2014) was used to measure the ways in which team members exert concertive control to create group norms. The scale's items were extrapolated from research addressing team efficacy (Druskat & Kayes, 2000) and the effect of peer pressure on work-norm enforcement in pay-for-performance team environments (Welbourne, Mejia, & Luis, 1995). Items were measured using a Likert-type scale with the options "strongly disagree," "disagree," "neutral," "agree," and "strongly agree" and included items such as: "We openly express our dissatisfaction with team members who behave inappropriately;" "If a team member behaves in a way we consider unprofessional, we confront him or her directly;" "We make sure to let team members know if they do something that is considered unacceptable; "and "If a team member does not meet our performance expectations, we do not hesitate to tell him or her to shape up" (De Jong, Bijlsma-Frankema, & Cardinal, 2014, p. 16). The four-item scale has exhibited high

reliability with a Cronbach's alpha of .86 (De Jong, et al., 2014). The reliability of the modified scale used in this study was .73. Hair, Tatham, Anderson, and Black (2006) note that although a reliability of .72 or higher is more desirable, a cutoff of .65 or higher is considered acceptable; therefore, the concertive control measure was included in the analysis.

Chapter 4: Results

The researcher analyzed the data using Statistical Package for the Social Sciences (SPSS). In order to answer the research questions correlation and multiple regression analyses were conducted to determine the nature of the relationship between each type of power and disordered eating.

RQ1 asked about the relationship between male athletes' perceptions of institutional control and disordered eating habits. Pearson product moment correlations were calculated to assess the strength and direction of relationships between institutional control and dieting (r = -.15, n = 92, p = .16), food preoccupation (r = -.15, n = 94, p =.15), and bulimia (r = -.25, n = 93, p = .02). The only significant relationship found was a negative relationship between bulimia and institutional control (r = -.25, n = 93, p = .02). Table 1 reports the means and correlations for all the variables.

Table 1

Institutional, Coach, and Team Control and Eating Attitudes: Correlations and Descriptive Statistics (N = 94)

Variables	*m*	*sd*	1	2	3	4	5	6
1. Coach Control	2.82	1.19	–					
2. Concertive Control	3.83	.64	-.10	–				
3. Institutional Control	3.89	.74	-.22*	.23	–			
4. Dieting	2.14	.85	.09	.74	.15	–		
5. Food Preoccupation	1.99	.94	.05	.11	-.15	.50**	–	
6. Bulimia	1.09	.34	.06	-.07	-.25*	.40**	.34**	–

*Note: *p < 05; **p < .001*

RQ2 asked about the relationship between male athletes' perceptions of coach control and disordered eating habits. Pearson product moment correlations were calculated to assess the strength and direction of relationships between coach control and dieting (r = .09, n = 91, p = .38), food preoccupation (r = .05, n = 93, p = .61), and bulimia (r = .06 n = 92, p = .58). No significant relationships were found.

RQ3 asked about the relationship between male athletes' perceptions of concertive control and disordered eating habits. Pearson product moment correlations were calculated to assess the strength and direction of relationships between concertive control and dieting (r = .07, n = 91, p = .48), food preoccupation (r = .11, n = 93, p = .28), and bulimia (r = -.07, n = 92, p = .52). No significant relationships were found.

Finally, RQ4 addressed how institutional, coach, and team/concertive control together influenced eating behaviors. Since there were no significant relationships between the types of control and dieting or food preoccupation, regression analyses were not conducted. However, given that a negative, significant relationship was found between institutional control and bulimia, a multiple regression analysis was conducted using institutional, coach, and concertive control as predictor variables and bulimia as the criterion variable. The results of the regression indicated the three predictors did not significantly predict the variance in bulimia scores (R^2=.03, F(3, 90) = 1.78, p=.16). However, it was found that institutional control significantly predicted lower levels of bulimia (β =-.23, p =.04). Table 2 provides the results of the regression analysis.

Table 2

Multiple Regression Analysis for Bulimia

Source	*B*	*SE*	B	*t*	*P*
Institutional Control	-.107	.050	-.232	-2.138	.035
Coach Control	.004	.031	.013	.127	.899
Concertive Control	-.012	.058	-.022	-.206	.838

In summary, coach control and concertive control did not predict ED habits in athletes; however, an inverse relationship was found between institutional control and bulimia, such that when levels of institutional control were high, athletes reported lower levels of bulimia-type behaviors. The following chapter further details the findings of the quantitative analysis.

Chapter 5: Discussion

The results of this study indicated that although athletes perceived different forms of control in their sport, these forms of control did not significantly affect their eating habits. Although this exploratory research did not find many significant relationships the study still carries several important implications regarding institutional control and bulimia, and the study of eating disorders among male athletes. This chapter covers these implications, including athletes' perception of control, gendered differences in ED experiences, unanswered questions regarding male athlete EDs, and the shortcomings of the female-oriented EAT in assessing male ED habits.

First, many of the NCAA athletes in this study reported that they perceived control by the NCAA (*m* = 3.89, *s.d.*= .74) and their peers (*m* = 3.83, *s.d.*= 1.19). While this study found no relationship between peer control and disordered eating patterns, it did confirm a negative relationship between institutional control and bulimia. As previously mentioned, the NCAA touts institutional control as an organizational value (Division 1 Manual, 2016) and upholds this value through legislature such as scholarship limits (Solomon, 2014) and transfer restrictions (Kirschner, 2017). Interestingly, findings in this study suggested a negative correlation between bulimia and institutional control. Because the revocation of four-year scholarships has been considered a mechanism of institutional control (Solomon, 2014) perhaps the carrot-and-stick phenomenon surrounding athletic scholarships actually encourages male athletes to maintain a healthy weight for performance purposes.

Also of note, is that the majority of participants in this study were from football and basketball. These specific sports garner higher levels of attention from universities

and specifically the NCAA. This attention translates into more careful monitoring and administration of rules. These two sports, particularly football, focus more on muscle development and sometimes weight gain (Galli & Reel, 2009), which runs counter to purge cycles associated with bulimia and likely leads to diet modifications and over-exercise (Petrie, Greenleaf, Reel, & Carter, 2008). This combination of tightened control and lack of emphasis on weight loss may lead male athletes to engage in fewer bulimic tendencies.

Another major implication of this study comes in the form of unanswered questions about male athletes and eating disorders. Previous research has demonstrated that athletes in general have a more positive body image and overall mental health (McCabe & Ricciardelli, 2001). The participants in this study reported very low levels of disordered eating patterns. It is reasonable to conclude that the male athletes in this study demonstrated lower levels of ED habits because they are more likely to fit the prototypically attractive body image standards set forth by society good analysis. Thus, this study should be replicated in a non-athletic setting to assess male ED habits in a broader population. That said, it is important to note that many individuals who suffer from EDs also fit the prototypical beauty standards of American society.

The results of this study may reflect the population differences between men and women who experience EDs, as 18% of female athletes suffer EDs as opposed to 0.5% of male athletes (Joy, Kussman, & Nattiv, 2016). Furthermore, according to the results of this study, men may simply internalize these standards differently. McGabe and Ricciardelli (2001) found that both men and women face similar image pressures from family, friends, and the media. However, according to Galli and Reel (2009), "male body

dissatisfaction associated with feeling too small can lead to negative feelings similar to those felt by females who feel that they are too big" (p. 96). Perhaps gendered body image standards affect men and women differently based on clinical and subclinical eating behaviors.

It is also worth noting that the EAT has largely been used to assess EDs in at-risk populations, which are overwhelmingly female (Garner, Olmsted, & Garfinkel, 1986). Furthermore, men also experience eating disorders differently than women, which might have been reflected in the male responses to the female-oriented EAT. For instance, a study by Greenleaf, Reel, and Carter (2008) indicated that male athletes are more likely to control their weight through exercise and dieting rather than through vomiting or use of laxatives. The EAT addresses the latter forms of disordered eating patterns.

Furthermore, Chatterton and Petrie (2013) noted that male athletes in weight-class sports such as wrestling and weightlifting are more susceptible to eating disorders than athletes who participate in sports where weight is not a qualifying factor. Both studies also mentioned that male athlete eating disorders tend to be subclinical, which would make them harder to detect using the EAT.

There are also environmental factors involved in male EDs. Hypermasculine athletic environments encourage men to gain weight and fit the phenotypical male body image ideal (Gerschick & Miller, 1994), whereas women are bombarded with images of the thin ideal. Petrie, Greenleaf, Reel, and Carter (2008) reveal that masculine pressures encourage men to be tough, and not show pain or suffering, especially if they are dealing with a "woman's problem" like an ED (Petrie, Greenleaf, Reel, & Carter, 2008). Thus, the overall social climate likely encourages men to either maintain a healthy weight to fit

the hypermasculine prototypical male body image or simply not report EDs in order to preserve their masculinity.

Furthermore, previous research has demonstrated that men are more encouraged to gain weight while women are encouraged to lose weight (Galli & Reel, 2009). Gaining weight is more associated with overeating, while the EAT is predominately focused on undereating, over-exercising, and purging to maintain or lose (but not gain) weight. Therefore, it is reasonable to assume that the EAT, like most ED research, is skewed toward feminine weight loss tendencies and is relatively ineffective in research featuring male populations.

Chapter 6: Conclusion

Eating disorders are dangerous syndromes which pose many threats to vulnerable populations, particularly women and adolescents. EDs emerge in many forms, both clinical and subclinical and may or may not result in severe weight loss. Consequences of prolonged ED habits include (but are not limited to) hair loss, osteoporosis, depression, reduced heart rate, muscle atrophy, and even death.

Athletes are particularly vulnerable to EDs due to high stress levels, performance demands, and unique body image pressure. Thus, the rates of EDs among athletes is inflated compared to the general public. A high training load puts additional strain on athletes with EDs. It is for these reasons that athletes need to be carefully monitored to avoid the many negative health repercussions that come with EDs.

Organizational control is considered a defining characteristic of organizational life. Although all organizations operate under control mechanisms to ensure order and professionalism, control in organizational settings has been linked to increased stress, turnover intentions, and workplace resistance.

The NCAA is essentially a business which garners billions of dollars in revenue through marketing and media rights. NCAA athletes earn scholarships through athletic and academic performance. Like any organization, the NCAA exerts measures of control over its athletes in the form of nonrenewable scholarships, regulation of amateur status and transfer limits. Most notably, the NCAA lists a "commitment to institutional control" as one of its pillars which guides its legislation.

Like organizational life, control is a defining factor of EDs. Individuals with EDs often engage in their extreme habits because the absolute control over one's diet is an

alluring feature. Individuals with binge eating disorder (BED) often feel ashamed at the lack of control they exhibit when they binge and compensate by purging. Furthermore, lack of control over one's life and body in adolescence is a common contributing factor to EDs in middle/high school aged individuals. For these individuals, the ED acts as a stable function in their otherwise tumultuous lives. It is for these reasons that the researcher decided to explore the link between perceptions of organizational control and ED habits.

This study revealed virtually no significant links between male athlete ED habits and perceptions of organizational control. Although athletes in this study perceived organizational control at the institutional and peer level, the only significant effect was a negative relationship between institutional control and bulimia. A final noteworthy finding was the sheer absence of ED habits in the sample population, whereas EDs abound in women's athletics.

These results are relatively unsurprising, given the low incidences of EDs among men. However, these findings still raise several important questions, most notably: How do men and women experience EDs differently? And, more specifically, what factors prompt women to engage in ED habits that men seem immune to? Special attention must be paid to societal factors such as media representation, gender roles, and female-specific stressors and constraints to fully understand and remedy this phenomenon.

Limitations and Future Directions

First and foremost, the primary limitation of this study was the sample size. A larger, more representative sample should be studied in the future to ensure an accurate statistical representation. The data regarding disordered eating patterns were non-normal,

and positively skewed such that very few participants reported engaging in unhealthy patterns. A much larger sample is necessary to more accurately predict the impact of control on disordered eating. Sampling male athletes diagnosed with eating disorders would be an important step for further understanding potential relationship between EDs and organizational factors such as control.

A second limitation of the study was the sample population. Given that research suggests men and women experience eating disorders differently, the results of this study may have been more definitive if female athletes were also included for comparison. Specifically, although forms of organizational control had little effect on male athlete eating disorders, the same may not be true for female athletes. Future research should consider expanding the population of focus in order to make group comparisons.

As suggested earlier, it is important to note that the EAT scale selected for measuring disordered eating patterns may have affected the results. Because men and women experience EDs differently, a different scale focusing on subclinical ED habits and weight-gaining tendencies may prove useful in future research. A final limitation of this study is the type of athletes studied. There were no aesthetic or weight class sports, such as gymnastics or wrestling, represented in the sample, which might have affected results.

Future research should expand upon the potential effects of control in athletic settings and the fact that athletes in this study perceive control from the institutional level is significant. Outside of athletic environments, studies of institutional control reported increases in resistance, rule exploitation (Zeichner & Tabachnick, 1985), decreases in motivation levels (McAllister, Aanstoot, Hammarström, Samuelsson, Johannesson,

Sandström, & Berglind, 2014), and workplace bullying (DeJordy, & Barrett, 2014). Therefore, future research should examine these effects in athletes to see if the NCAA's institutional reach is producing negative effects outside of eating habits.

Results of this study also indicate the effects of both institutional and peer communication in athletic settings. Because sports are so ingrained in American culture overall, further studies on the rhetorical agency of sports entities might prove useful from a persuasive standpoint. From this standpoint, communication scholars could also assess elements of control involved in organizational identification and commitment in athletes. Structuration theory might also help identify specifically which elements of peer and institutional control constitute control mechanisms and how athletes support and create such structures. Because perceptions of peer control were high in this study, peer pressure and its positive and negative outcomes should also be assessed in athletic settings in future studies. Health communication scholars would likely benefit greatly from a male-oriented ED assessment that might help more accurately identify male ED tendencies and subclinical EDs. Finally, future qualitative studies could focus on the role of interpersonal athlete-coach communication that was not adequately covered in this study, specifically in terms of coach power and control. Conclusively, further studies on both male EDs and consequences of organizational control are warranted.

APPENDIX A: Survey Instruments

Demographic Information:

Age

Sport

Region (South, Southeast, Southwest, East, Northeast, Northwest, Midwest, or West)

Athletic Status (Current or Former)

EAT-26

Check a response for each of the following statements. I… (Always → Usually → Often → Sometimes → Rarely → Never):

1. Am terrified about being overweight.
2. Avoid eating when I am hungry.
3. Find myself preoccupied with food.
4. Have gone on eating binges where I feel that I may not be able to stop.
5. Cut my food into small pieces.
6. Aware of the calorie content of foods that I eat.
7. Particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.).
8. Feel that others would prefer if I ate more.
9. Vomit after I have eaten.
10. Feel extremely guilty after eating.
11. Am preoccupied with a desire to be thinner.
12. Think about burning up calories when I exercise.
13. Other people think that I am too thin.
14. Am preoccupied with the thought of having fat on my body.
15. Take longer than others to eat my meals.
16. Avoid foods with sugar in them.
17. Eat diet foods.
18. Feel that food controls my life.
19. Display self-control around food.

20. Feel that others pressure me to eat.
21. Give too much time and thought to food.
22. Feel uncomfortable after eating sweets.
23. Engage in dieting behavior.
24. Like my stomach to be empty.
25. Have the impulse to vomit after meals.
26. Enjoy trying new rich foods.

In the past 6 months have you (never → once a month or less → 2-3 times a month → once a week → 2-6 times a week → once a day or more):

1. Gone on eating binges where you feel that you may not be able to stop
2. Ever made yourself sick (vomited) to control your weight or shape?
3. Ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?
4. Exercised more than 60 minutes a day to lose or to control your weight?
5. Lost 20 pounds or more in the past 6 months

Institutional Control

Organizational Climate Scale (Formalization dimension)

1. It is considered extremely important to follow NCAA rules.
2. People can ignore NCAA rules if it helps get the job done.
3. Everything has to be done according to NCAA compliance standards.
4. It's not necessary to follow procedures to the letter in the NCAA.
5. Nobody gets too upset if people break NCAA rules.

Coach Control

Factual Autonomy Scale

During practice time, how often do you have to ask permission:

1. to take a rest break?
2. to take a lunch/meal break?
3. to leave practice early?
4. to change practice hours?
5. to leave practice?
6. to come late to practice?
7. to take time off from training?

How often do the following events occur on your team?

1. How often does someone tell you what you are to do?
2. How often does someone tell you when you are to do your work?
3. How often does someone tell you how you are to do your work?

Concertive (Team) Control

Peer Pressure Scale

1. We openly express our disatisfaction with team members who behave inappropriately.
2. If a team member behaves in a way we consider unprofessional, we confront him or her directly.
3. We make sure to let team members know if they do something considered unacceptable.
4. If a team member does not meet our performance expectations, we do not hesitate to tell him or her to shape up.

APPENDIX B: Tables

Table 1

Institutional, Coach, and Team Control and Eating Attitudes: Correlations and Descriptive Statistics (N = 94)

Variables	*m*	*sd*	1	2	3	4	5	6
1. Coach Control	2.82	1.19	–					
2. Concertive Control	3.83	.64	-.10	–				
3. Institutional Control	3.89	.74	-.22*	.23	–			
4. Dieting	2.14	.85	.09	.74	.15	–		
5. Food Preoccupation	1.99	.94	.05	.11	-.15	.50**	–	
6. Bulimia	1.09	.34	.06	-.07	-.25*	.40**	.34**	–

*Note: *p < 05; **p < .001*

Table 2

Multiple Regression Analysis for Bulimia

Source	*B*	*SE*	β	*t*	*p*
Institutional Control	-.107	.050	-.232	-2.138	.035
Coach Control	.004	.031	.013	.127	.899
Concertive Control	-.012	.058	-.022	-.206	.838

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