THE PERCEIVED LEGITIMACY OF HAZING BEHAVIOR SCALE: A CONSTRUCT VALIDATION STUDY WITH NCAA COLLEGIATE COACHES

by

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(Under the Direction of Edward Delgado-Romero)

ABSTRACT

Hazing continues to persist within college sports despite associated risks and negative consequences. Although a growing amount of research exists on the prevalence, nature, and perceived rational for hazing as reported by student-athletes (Allen & Madden, 2008; Allen & Madden, 2012; Hoover, 1999), relatively less research has been conducted on coaches and their attitudes towards hazing. Given the influential nature of coaches' attitudes on team climate and athletes' behavior (Johnson, 2009; Kavussanu, Roberts, & Ntoumanis, 2002; Kowalski & Waldon, 2010; Ommundsen et al., 2003), the purpose of the present study focused on further evaluation of the psychometric properties of the Perceived Legitimacy of Hazing Behavior (PLHB) Scale, a quantitative measure designed to assess coaches' perceptions of legitimacy towards sport-related hazing behavior. With an evolved understanding of coaches' perceptions of hazing, key organizations and personnel may be better informed when developing interventions and programming. This study utilized a quantitative, non-experimental, survey-based research design with stratified cluster sampling and online data collection. Data analysis included 302 NCAA Division I, II, and III college coaches from across the United States. In addition to assessing discriminant validity by exploring the potential impact of social desirability bias as

measured by the Marlowe-Crowne Social Desirability Scale, Form X1, the construct validity of the PLHB Scale was examined with exploratory factor analysis (EFA). Scale reliability was evaluated with Cronbach's alpha. Following data collection and after item parceling, data transformation, and the deletion of item parcel six, an EFA utilizing principal-axis factoring identified a unidimensional factor structure that accounted for 79.86% of the variance. The model appeared to be a good fit and well defined with strong factor loadings and high communalities. In addition to good reliability (.95), the PLHB Scale demonstrated favorable discriminant validity when compared with the MCSDS-X1. While the PLHB Scale continued to demonstrate promising psychometric properties with regards to reliability and construct validity, additional research is needed to confirm the factor structure as well as to establish convergent validity. Additional research implications are discussed, strengths and limitations are reviewed, and recommendations for future research are presented.

INDEX WORDS: Hazing, Sport, Perceived legitimacy, NCAA collegiate coaches, Scale validation

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CHAPTER 1

A hazing incident at Humboldt State University has led to the cancellation of the entire 2012 season for the men's soccer team. Following a recent investigation of an off-campus party in early August, Humboldt President Rollin Richmond announced the university's decision to suspend the season leaving 34 student-athletes' collegiate future up in the air. Furthermore, the women's soccer team is currently being investigated for hazing as well, which could likewise put their season in jeopardy.

The university has not released any specific details about the party, simply stating that there were instances of hazing "designed to humiliate and degrade certain players." There was also heavy alcohol use and underage drinking. No players have had their scholarships taken away or reduced and no one will lose a year of eligibility; however, if any player attempts to transfer, they would have to sit out a year before being eligible (O'Brien, 2012).

Overview of Hazing

The above storyline is just one example of a sport-related hazing incident recounted by the media within the last several years. While hazing is pervasive in athletics (Hoover, 1999; Allan & Madden, 2012), hazing is not confined to the world of sport. Prior research has confirmed the occurrence of hazing across various student groups, including but not limited to military training corps, recreational clubs, fraternities and sororities, marching bands, theater ensembles, honor societies, and academic clubs. Recently, a nationwide survey sampling 11,482 college students reported that 55% of respondents recounted experiencing at least one hazing-

related incident when participating in a campus club, athletic team, or student organization. Researchers further noted that students affiliated with varsity athletics and Greek-letter organizations were most likely to experience hazing (Allan & Madden, 2012).

Often unreported, the scope of hazing rituals varies, ranging from humiliating acts to emotional, physical, and sexual abuse that may or may not involve alcohol (Allan & Madden, 2012). In a review of traumatic injuries stemming from hazing practices, Finkel (2002) noted that the subjects of ritual hazing suffered physical injury often as a result of a variety of hazing practices to include beatings, paddling's, striking, blood pinning, branding, tattooing, cigarette burning, excessive calisthenics, confinement to a restricted area, consumption of nonfood substances, drowning/near drowning, immersion in noxious substances, psychological abuse, and sexual assault.

While there are several definitions of hazing that have been proposed and commonly referenced, what constitutes hazing remains unsettled. Mothers Against Hazing (2008) defined hazing as: "A broad term encompassing any action or activity, which does not contribute to the positive development of a person; which inflicts or intends to cause physical or mental harm or anxieties; which may demean, degrade, or disgrace any person, regardless of location, intent or consent of participants" (2008). Common across most definitions of hazing is the issue of consent. Given the power dynamics and the lack of information available prior to the hazing event, researchers have questioned whether individuals can truly provide consent (Crow, 2008).

While the term may be ill-defined, the consequences of hazing behaviors are evident. Not only is hazing illegal in most jurisdictions in the United States (stophazing.org, nd), but hazing is also considered "maladaptive, destructive, and dehumanizing" since such conduct can result in serious physical, psychological, and emotional harm (Chin & Johnson, 2011; Kirby &

Wintrup, 2002). Hazing behaviors are no longer considered playful or harmless antics as recent research has linked hazing behaviors to the incidence of numerous traumatic injuries and fatalities (Crow, 2008; Finkel, 2002; Johnson & Holman, 2004; Srabstein, 2008). In addition to causing embarrassment, disgust, and pain (Keating et al., 2005), hazing behaviors have also been associated with feelings of anger, confusion, guilt, regret, isolation, and shame (Hollmann, 2002; Hoover & Pollard, 1999).

Hazing in Sport

Increased coverage of hazing incidents in traditional media sources and over social media platforms has intensified the interest of the general public and the academic community, alike (Crow, 2008). Subsequently, research on initiation and hazing practices has also increased. In cooperation with the National Collegiate Athletic Association (NCAA), Hoover and Alfred University (1999) conducted the first and most comprehensive national survey examining the different types and occurrences of hazing behaviors within intercollegiate athletics.

Within such study, hazing was defined as "any activity expected of someone joining a group that humiliates, degrades, abuses, or endangers, regardless of a person's willingness to participate." After defining hazing, the study assessed questionable conduct by classifying hazing behaviors into three distinct categories: questionable initiation activities, alcohol-related initiation activities, and unacceptable or illegal hazing behaviors. Questionable hazing behaviors included being yelled at, sworn at, or forced to wear embarrassing clothing. Alcohol-related hazing activities involved drinking contests and forced consumption of alcohol. Unacceptable or illegal hazing incidents included being kidnapped, beaten, tied up, or abandoned.

Resulting from this research study, frequently reported hazing behaviors among student-athletes included personal servitude, sleep deprivation, restriction of personal hygiene, being

kidnapped, carrying unnecessary objects, beatings, paddling's, forced and excessive consumption of alcohol, and the performance or simulation of sexual acts. Interestingly, the researchers noted that hazing does not include activities such as forcing new team members to carry the team's sporting equipment, hosting team parties that featured community games, or attending public social gatherings with teammates "unless an atmosphere of humiliation, degradation, abuse, or danger arises" (pp.8).

Enlisting a sample size of 2,027 student-athletes from around the United States, the Alfred University study presented unsettling findings as 19% of the sampled student-athletes reported experiencing questionable initiation rites, 39% endorsed undergoing alcohol-related initiation activities, and 21% reported experiencing unacceptable hazing behaviors. While 80% of the sampled student-athletes reported experiencing at least one of the behaviors researchers classified as hazing, only 12% admitted personal involvement in hazing.

In 2012, Allan and Madden also performed a nationwide assessment of the nature and extent of college student hazing in the United States. In their study, Allan and Madden found that seven out of ten student-athletes experienced at least one hazing behavior while attempting to gain or maintain membership on an athletic team. The study offered an even more alarming statistic, reporting that 54% of all hazing behavior conducted among student-athletes involved drinking games. The results from both of these studies suggest a high occurrence and continuation of dangerous hazing behaviors among student-athletes.

Statement of the Problem

In response to the high reported frequency of hazing behaviors within sport and the potential risks associated with such behaviors, increased efforts have been taken to break the cycle of hazing. In addition to the implementation of legislation and anti-hazing policies (Crow

& Resner, 2002; Fields, Collins, & Comstock, 2010), educational awareness programs have also been developed with the support of the NCAA. In spite of the various efforts that have been implemented with the objective of limiting the frequency of hazing, the occurrence of hazing continues to persist (Allen & Madden, 2012).

To not only stop but prevent hazing from occurring, prior research has identified the need for key personnel within the athletics community to take a more proactive stance against the continuation of hazing. The Alfred University study (1999) identified the need for coaches, athletic directors, and college administrators to send clear anti-hazing messaging through policy, education, and strict enforcement. When outlining hazing prevention strategies, Crow (2008) further noted that it is imperative for coaches and administrators to create an anti-hazing policy that is consistently communicated though written documents and anti-hazing presentations. The need for coaches to establish and enforce preventative measures was also highlighted, such as having an adult in the locker room at all times.

In college sports, coaches are a central figure both on and off the field. College coaches serve as teachers and mentors to their athletes. As previously asserted by Bronfenbrenner's model of social influence (1977), coaches are among those important people that wield a significant influence over the athlete (Kavussanu, Roberts & Ntoumanis, 2002; Ommundsen, Roberts, Lemyre, & Treasure, 2003). Additional research has similarly indicated that the coach's attitude and coaching methodology even influences a team's climate and the corresponding social-moral functioning of the individual athletes (Kavussanu, Roberts & Ntoumanis, 2002; Ommundsen, Roberts, Lemyre, & Treasure, 2003). Relatedly, research performed by Johnson (2009) identified the coach as an incredibly influential factor in establishing new team traditions and alternative orientation activities.

Considering coaches substantial influence, researchers have shifted their focus, examining coaches' awareness of and involvement in hazing activities. In the Alfred University Study, less than 10% of college coaches reported being aware of hazing on their respective campuses. Conversely, Allan and Madden (2008) reported that out of those students who self-reported being involved in hazing behaviors, 40% noted that a coach or advisor was aware of the hazing activity. Moreover, 22% of those same students also reported that a coach or advisor was actually involved in the activity. Investigating athletes' perceptions of their coaches' involvement in hazing, Kowalski and Waldron (2010) found that a majority of the athletes in the study believed their coaches to be knowledgeable and tolerant of hazing.

The statistical discrepancy between the Alfred University study (1999), the Allen and Madden study (2008), and the Kowalski and Waldron study (2010) may represent the coaches' perceived need to respond to surveys in a socially desirable manner, to deny, ignore, or feign personal awareness of and/or involvement in hazing behaviors. When examining the phenomenon of hazing in sport, it is difficult to inquire into potentially illegal or socially unacceptable behaviors. Since people are cautious to report their association with illegal and socially unacceptable hazing behaviors, reports of awareness and/or involvement are likely low and misleading (Waldron & Kowalski, 2009). Thus, to improve the academic community's understanding of hazing, the attitudes and perceptions of coaches concerning hazing need to be assessed instead.

To be more specific, it may be more productive to specifically inquire about the coaches' perceived legitimacy of hazing behaviors. Conroy et al. (2001) defined perceived legitimacy as "the degree to which an individual perceives that a specific behavior or a class of behaviors is acceptable" (p. 406). By assessing perceived legitimacy, the coaches are not directly questioned

about their awareness of or involvement in hazing activities. With a better understanding of coaches' perceptions of hazing, organizations, such as the NCAA, may be better informed when developing appropriate interventions and anti-hazing programming.

Purpose of the Study

While a number of researchers have used quantitative research designs to explore the social phenomenon of hazing within sport, the literature has largely been descriptive in nature. Prior research has examined the prevalence of hazing, the typology of hazing behaviors, the reasons for hazing, as well as the effects of hazing (Allen & Madden, 2008; Allen & Madden, 2012; Hoover, 1999). When attitudes towards hazing have been assessed, the research has largely focused on the students' perspective (Campo et al., 2005; Owen, Burke, & Vichesky, 2008). Given the impact of coaches' attitudes on team climate and the athletes' subsequent behavior (Johnson, 2009; Kavussanu, Roberts, & Ntoumanis, 2002; Kowalski & Waldon, 2010; Ommundsen et al., 2003), this research study set out to further develop and validate the Perceived Legitimacy of Hazing Behavior (PLHB) Scale, a quantitative measure assessing coaches' perceptions of legitimacy towards sport-related hazing behavior.

The primary objective of this research study included assessing the construct validity of the PLHB Scale by examining its factor structure. In addition to assessing the reliability of the PLHB Scale, this study also sought to assess the scale's discriminant validity. The discriminant validity of the PLHB Scale, defined as the degree to which responses on one measure fail to correlate with responses on another theoretically different measure (Mitchell & Jolley, 2013), was assessed by measuring the potential impact of social desirability bias as measured by The Marlowe-Crowne Social Desirability Scale, Form X1 (Strahan & Gerbasi, 1972).

Defined as the tendency to project a favorable image of oneself or "faking good" (Crowne & Marlowe, 1960), socially desirable response bias poses a concern when attempting to study controversial topics such as hazing. Because the primary objective of the PLHB Scale is to assess coaches' perceived legitimacy of hazing behavior, it was important to determine whether coaches were responding truthfully, providing their actual perceptions of hazing behaviors rather than responding in a socially desirable manner. If motivated to present oneself in a socially acceptable manner, the subjects' responses on the PLHB Scale may be misleading and not representative of the primary construct of interest.

CHAPTER 2

Literature Review

Hazing Defined

Prior to completing research on a behavior or psychological construct, it is imperative to develop a better understanding of the behavior, event, or psychological construct (Shadish, Cook, & Campbell, 2002). However, developing a better understanding of hazing is difficult due to the limited consensus concerning a definition. Upon further review of the literature, there are several definitions of hazing that have been proposed and are commonly referenced. According to the website for Mothers against Hazing (2008), hazing is:

> A broad term encompassing any action or activity, which does not contribute to the positive development of a person; which inflicts or intends to cause physical or mental harm or anxieties; which may demean, degrade, or disgrace any person, regardless of location, intent or consent of participants. Hazing can also be defined as any action or situation, which intentionally or unintentionally endangers a student for admission into or affliction with any student organization. (Hazing is) any action taken or situation created intentionally, whether on or off school premises, to produce mental or physical discomfort, embarrassment, harassment, or ridicule.

Definitions of hazing seem to vary depending on the perspective from which it was written as well as the objective for which it was written. To assess hazing within the sport context, Hoover and Pollard (1999) developed a more succinct definition.

According to Hoover and Pollard, hazing is:

> Any activity expected of someone joining a group that humiliates, degrades, abuses, or endangers, regardless of a person's willingness to participate. This does not include activities such a novices carrying the balls, team parties with community games, or going out with your teammates, unless an atmosphere of humiliation, degradation, abuse or danger arises. (pp.8)

To offer a different perspective, it is also important to note that 44 states maintain various anti-hazing statutes (stophazing.org, nd). According to the state of Georgia's current anti-hazing law (G.S. 16-5-61):

> "Haze" means to subject a student to an activity which endangers or is likely to endanger the physical health of a student, regardless of a student's willingness to participate in such activity…It is unlawful for any person to haze any student in connection with or as a condition or precondition of gaining acceptance, membership, office, or other status in a school organization.

While the literature proposed several definitions of hazing, a clear understanding of what actually constitutes hazing is clouded by the inconsistencies of the various definitions. Given the ambiguity in hazing definitions, administrators, coaches, and student-athletes often lack a clear understanding of what is considered hazing practices and what is considered acceptable initiation or orientation behaviors (Crow & MacIntosh, 2009).

To further demonstrate the disconnect, Allen and Madden (2008) reported that student-athletes: (1) identify hazing with physical force; (2) believe if a student-athlete consents to participate, it is not hazing; and (3) believe if the activity is perceived as productive, it cannot be hazing. A significant discrepancy exists between what student-athletes perceive hazing to be and

how researchers define hazing (Crow & MacIntosh, 2009). The discrepancy further illustrates the need to further clarify and define sport-specific hazing.

Student-Athletes' Experiences of Hazing

While the occurrence of hazing behaviors has been well documented in collegiate fraternities and sororities, military groups, and other social and professional organizations (Allen & Madden, 2012; Campo, Poulos, & Sipple, 2005; Jones, 2000; Malszecki, 2004), the scholarly research has been limited in examining the phenomenon of hazing in sport (Crow & Phillips, 2004; Field, Collins, & Comstock, 2010). It has only been during the last ten to fifteen years that scholars have documented hazing behaviors among the various levels of competition, including high school, university, amateur, and professional levels (Allen & Madden, 2008; Hoover, 1999; Hoover & Pollard, 1999; Johnson & Holman, 2004).

In cooperation with the National Collegiate Athletic Association (NCAA), Alfred University (1999) conducted the first and most comprehensive national survey on the phenomenon of hazing within sport. Under the direction of Dr. Nadine Hoover, the Alfred University Study divided hazing behaviors into three mutually exclusive categories, including questionable initiation rites (i.e. humiliating or degrading activities), alcohol-related initiation rites (i.e. drinking contests, exclusive of other dangerous or potentially illegal activities), and unacceptable initiation activities (activities that have a high probability of danger or injury).

Of the student-athletes sampled, two-thirds were subjected to humiliating hazing. One in five was subjected to unacceptable and potentially illegal hazing. Half were required to participate in drinking contests or alcohol-related hazing. While 80% of the sampled student-athletes reported being subjected to one or more typical hazing behaviors, only 12% reported being hazed. It is important to note that 60% of the respondents endorsed that they would not

report hazing for fear of being ostracized. Such finding highlights the guise of secrecy that hazing often occurs under.

Confirming many of the same findings from the Alfred University study (1999), Allen and Madden (2012) conducted a national study assessing hazing among undergraduate students. In total, the study was comprised of 11,482 respondents from 53 college campuses across the United States. The most frequently occurring hazing behaviors included participating in drinking games, publicly singing or chanting alone or alongside others, drinking large amounts of alcohol to the point of getting sick/passing out, and experiencing verbal abuse in the form of screaming, yelling, and cursing.

While 55% of respondents reported experiencing at least one hazing behavior (61% of males and 52% of females), Allen and Madden (2012) found that student-athletes and students affiliated with Greek-letter organizations were the most likely to experience hazing. To join or maintain membership on a team or in a Greek-letter organization, seven out of ten students reported experiencing at least one hazing behavior. Of the students who reported experiencing hazing activities, 95% disclosed that they did not report being hazed. Reasons for not reporting hazing included: (1) not wanting to get the team or group in trouble; (2) being afraid of negative consequences, including being physically hurt; and (3) being concerned that they would become an outsider. When examined collectively (Allen & Madden, 2008; Hoover, 1999), the statistics not only speak to the high frequency in which hazing behaviors occur, but they also further highlight the culture of silence that surrounds hazing within sport (Waldron, 2008).

Culture and Objectives of Hazing

Given the frequency of hazing behaviors and the potential for physical, emotional, social, and legal trauma and distress (Crow & Rosner, 2002; Finkel, 2002; Srabstein, 2008), one glaring

question remains: Why does such behavior continue to persist in high school, college, and professional athletics? Attempting to find an answer to such a perplexing question, researchers have examined the attitudes and beliefs of student-athletes. Robinson (1998) and Campo et al. (2005) reported that group cohesion, the desire to belong, and wanting to be a part of something bigger represents important justifications that contribute to the persistence of hazing behaviors. In addition to building a hierarchy within the team (Keating et al., 2005; Van Raalte et. al., 2007), advocates of hazing behaviors have also insisted that hazing constitutes fundamental element in the initiation process (Hollmann, 2002).

To fully explore the question as to how and why hazing continues to persist, it is necessary to consider the construct of conformity and how it is fostered within athletics. Defined as "a change in a person's behavior or opinions as a result of real or imagined pressure from a person or group of people" (Aronson, 2012), conformity is valued within sport and further supported through hazing. Often, veteran teammembers use hazing to force new members to conform and adhere to the social roles and appropriate behaviors of the team, regardless of whether the new members are qualified to participate on the team (Waldron & Kowalski, 2009). More specifically, student-athletes report engaging in hazing behaviors to establish and conform to group relevant skills and attitudes as well as reinforce the team's established status hierarchy (Keating et al., 2005). Hazing not only provides team leaders with the opportunity to establish power over new members, but such activities also persuade new members to comply with and conform to the group's authority structure.

To better understand the relationship between conformity and sport-related hazing, it is important to understand the system or context in which sport-related hazing occurs. In the United States, sport culture promotes values that are best described by the power and performance

model of sport. Pursuant to the performance model of sport, the team's shared focus emphasizes winning at all costs, using strength and power to dominate others, and employing a hierarchical authority structure (Coakley, 2007). Notably, the power and performance model of sport provides a framework that legitimizes hazing attitudes and behaviors. Specifically, the power and performance model implicitly legitimizes hazing behaviors because those same values the performance model of sport emphasizes (i.e., strength and power to dominate others, employing a hierarchical authority structure, etc.) closely align to the justifications for engaging in hazing behavior.

Embedded within the power and performance model of sport (Waldron & Krane, 2005), the sport ethic contributes to the continued persistence of hazing behaviors and resulting conformity. Corresponding to the main tenants promoted by the power and performance model of sport, the sport ethic further emphasizes striving for distinction, sacrificing for the team, taking risks, and refusing to accept limitations (Hughes & Coakley, 1991). While implementation of the sport ethic may initially result in the adoption of adaptive attitudes and beliefs, deviant over conformity to the sport ethic results in the uncritical acceptance of hazing behaviors (Coakley, 2007). Hazing behaviors may be uncritically accepted since athletes believe that hazing: (1) reinforces their position within the team hierarchy; (2) demonstrates their commitment to the whole (Alan & Madden, 2008); (3) fosters organizational loyalty, respect, and discipline (Baier & Williams, 1983); and (4) promotes group cohesion (Campo et al., 2005).

Research has also identified several patterns or trends that provide additional support for the relationship present between hazing, conformity, the power and performance model of sport, and the sport ethic. The Alfred University Study (1999) identified certain sports that demonstrated higher frequencies of hazing over others. Interestingly, those sports that were

increasingly susceptible to hazing also happened to be more aligned with the sport ethic and the power and performance model of sport. According to the Alfred University Study (1999), athletes who played contact sports, such as lacrosse, soccer, football, hockey and water polo, were more likely to experience a greater number of questionable and unacceptable hazing activities. Athletes who participated in non-contact sports, such as track, fencing and golf, were less likely to be hazed.

The literature on sport-specific hazing also suggests a gender effect that further supports the relationship present between hazing, conformity, the power and performance model of sport, and the sport ethic. According to the Alfred University study (1999) and confirmed by Campo et al. (2005), males were more likely to engage in hazing related behaviors. Research has also indicated that men and women initiate new members differently. While men were more likely to be subjected to questionable and unacceptable hazing activities, women were more likely to be involved in alcohol-related hazing (Alfred University Study, 1999).

Consequences of Hazing

Despite the commonly reported justifications for hazing (Baier & Williams, 1983; Campo et al., 2005; Crow & MacIntosh, 2005; Hoover, 1999; Keating et al., 2005; Winslow, 1999), the current literature describes hazing as "maladaptive, destructive, and dehumanizing" by asserting that such behavior can lead to serious physical, psychological and social consequences (Kirby & Wintrup, 2002, p. 82). While the media has linked hazing to numerous traumatic injuries and fatalities over the last several years (Johnson & Holman, 2004), research suggests that hazing behaviors can also result in blunt intra-abdominal organ damage, third-degree burns, heat stroke, suffocation, aspiration, and sexual assault (Finkel, 2002).

While examining the potential physical consequences of hazing, those specific to student-athletes should be highlighted as well. When compared to members of Greek-letter organizations, student-athletes reported experiencing greater duress and physical pain during initiations (Keating et al, 2005). Student-athletes are also at a high risk for alcohol-related injuries or legal action resulting from underage drinking, as 54% of sport-related hazing involved alcohol-consumption and drinking games (Allan & Madden, 2008).

Secretive in nature, hazing behaviors have been associated with feelings of anger, embarrassment, confusion, guilt, regret, and shame (Hollmann, 2002; Hoover & Pollard, 1999**).** In relation to additional psychological consequences, Lodewijkx and Syroit (1997**)** reported a significant correlation between initiation intensity and feelings of depression, frustration, and loneliness. Within the same study, Lodewijkx and Syroit also suggested a negative correlation between initiation intensity and liking for the group.

While there has been ample research to support the argument that team cohesion leads to enhanced team performance (Carran et al., 1998), the research is lacking in reporting a positive association between hazing and team cohesion. Rather, Van Raalte and colleagues (2007) reported a negative association between reported hazing activities and perceived team cohesion. As the number of hazing activities increased, the athletes reported significant decreases in perceived team cohesion.

Notably, Van Raalte and colleagues (2007) also reported a positive association between adaptive or appropriate team activities and enhanced team cohesion. Other researchers have documented similar research findings as well. Johnson (2009) found that alternate orientation activities, such as cooperative games and proposed team building activities, created a deeper sense of team cohesion. Research performed by Martin and Davids (1995) also suggested a

positive association between the constructs of group cohesion, individual psychological well-being, and adaptive team-building techniques.

In addition to the physical, psychological, and social consequences of hazing, there are legal and institutional implications associated with hazing behaviors that also need to be considered. Currently, hazing is illegal in 44 states (stophazing.org). If found guilty of engaging in hazing behaviors, the legal repercussions of hazing may include fines ($10 to $10,000), jail time, or a combination of both. While students can be held criminally and civilly liable for hazing, it is also possible to bring civil suits against coaches and members of administration (Crow & Rosner, 2002). As the enforcement of anti-hazing laws has increased in response to serious hazing-related injuries and deaths (MacLachlan, 2000), there has also been an increase in universities with anti-hazing policies. While such policies differ from college to college, hazing violations may result in fines, expulsions, and the withholding of diplomas (Crow & Resner, 2002).

Points of Intervention

Because of the high prevalence of hazing and the serious risk for injury, efforts have been made by various stakeholders to prevent the occurrence of hazing behaviors within the sport community. As the governing body responsible for college athletics, the National Collegiate Athletic Association (NCAA**)** has endeavored to break college athletics' cycle of hazing. The NCAA's efforts have included developing prevention programs and procedures for administration, coaches, and athletes. The NCAA also hosted the Hazing Prevention Summit during the 2008 NCAA Convention. Notwithstanding those concerted efforts undertaken with the aid of the NCAA, colleges and universities have unilaterally adopted anti-hazing policies and educational awareness programming (Crow & Resner, 2002; Fields, Collins, & Comstock,

2010). Despite the NCAA and various college and universities' efforts to prevent hazing, hazing continues to persist (Allen & Madden, 2012). As policy-makers and researchers continue to explore possible prevention strategies that may assist in breaking the cycle of hazing, efforts have also been made to assess coaches' awareness of and engagement in hazing activities.

Overview of the Perceived Legitimacy of Hazing Behavior Scale Development Study

Creation and content validation of the PLHB Scale. The study consisted of two distinct phases. The first phase focused on the creation and content validation of the PLHB Scale. To establish the content validity of the PLHB Scale, this phase relied on a panel of five experts who reviewed the scale's vignettes and items. The panel of experts was comprised of persons knowledgeable about the phenomena of hazing, the construct of perceived legitimacy, scale development, and coaching. In addition to a Director of Greek Life, experts included the four persons who held seats on the advisory board of this study.

Initially, experts were asked to qualitatively review the vignettes and items. Experts reviewed each hazing vignette to determine if: (a) the behavior was representative of hazing as defined by the Alfred University Study (1999); (b) the behaviors adequately sampled the range of hazing behaviors as reported by the Alfred University Study; and (c) if the vignettes possessed appropriate vocabulary, clarity, and content. Experts also reviewed each item to determine its relevancy to the construct of interest. Based on the experts' qualitative feedback, vignettes and items were modified to address issues relating to content, vocabulary, and clarity.

The content validity was then assessed using content validity ratios (CVRs). CVRs were used to determine which vignettes and items to retain within the PLHB Scale (Lawshe, 1975). The experts were asked to indicate whether each vignette and item was "essential," "useful but not essential" or "not necessary." Based on the experts' responses, a CVR was computed for

each vignette and item. Lawshe (1975) established minimum CVR's for different panel sizes based on a one-tailed test at an alpha of .05. Within this research, a CVR value of .99 was required. Any vignette or item with a CVR value less than .99 was no longer included.

Data collection. After the creation and expert validation of the PLHB Scale, the instrument's reliability and validity (i.e., convergent, concurrent, and discriminant) was assessed within a sample of college coaches. Following IRB approval, data collection occurred during the spring of 2010. A convenience sample of 6,000 NCAA Division I, II, and III college coaches were invited via a recruitment email to participate in a web-based survey titled 'Coaches Perceptions of Athlete Behavior.' Coaches' contact information was retrieved from the web sites of their respective colleges or universities. The list of colleges from which the coaches were pooled from was generated from the list of colleges and universities that participated in the Alfred University Study (1999) as well as those found on the NCAA website.

The instruments were placed on Survey Monkey. Due to the length of the survey, all of the shorter instruments were positioned at the beginning to encourage participation. Due to time constraints, data collection occurred over a one-week period. To promote participation, coaches received a reminder e-mail four days after the initial recruitment e-mail was sent out. Participants did not receive compensation or any form of an incentive for participating in the study.

Measures. The measures used in the development study included a demographic questionnaire, the PLHB Scale, the Marlowe-Crowne Social Desirability Scale, Form X1 (Strahan & Gerbsi, 1972), and the Defining Issues Test-2 (Rest, Narvaez, Thoma, & Bebeau, 1999). While the Marlowe-Crowne Social Desirability Scale, Form X1 (Strahan & Gerbsi, 1972) was used to assess socially desirable responding, the Defining Issues Test-2 (DIT-2) was used to assess the moral reasoning of the respondents.

Statistical analyses. While the reliability of the PLHB Scale was assessed through Cronbach's alpha, a Spearman's correlation coefficient between PLHB and moral reasoning was calculated to determine the concurrent validity of the PLHB Scale. It was assumed that an individual with high moral reasoning would report low PLHB. To measure discriminant validity, a series of Spearman's correlation coefficients were calculated between social desirability and PLHB. Reponses to the items following each vignette were summed to create a composite score for each vignette. Vignettes that negatively correlated with social desirability were considered for deletion or further editing. A series of *t*-tests were conducted to examine concurrent validity (i.e., whether the PLHB Scale could differentiate members of one group from another). The groups that were examined were gender and sport type. Males and those involved in contact-sports were expected to report higher levels of PLHB when compared with females and those involved in non-contact sports.

Participants. A convenience sample of NCAA Division I, II, and III head and assistant college coaches from around the United States were solicited to participate in the preliminary study that focused on the initial development and validation of the Perceived Legitimacy of Hazing Behavior (PLHB) Scale (Bigham, 2010). While 475 college coaches participated in the study, not all respondents completed the survey in its entirety. Of the 475 coaches that began the survey and completed the demographic questionnaire, the Marlowe-Crowne Social Desirability Scale, Form X1, and the PLHB Scale, 261 participants chose not to proceed when presented with the Defining Issues Test-2. Thus, a total of 214 participants completed the entire survey. The response rate for the development study was approximately 8%.

A descriptive analysis was conducted on gender (male $n = 305$; female $n = 170$), age ($M = 38.32$, $SD = 11.67$), ethnicity (Caucasian $n = 421$; African-American/Black $n = 29$; Hispanic or

Latino *n* = 11; Asian/Pacific Islander *n* = 5; Native American *n* = 1; Black *n* = 2; Other Ethnicity *n* = 5; missing data *n* = 1), region (Eastern portion *n* = 249; Midwestern portion *n* = 62; Southern portion *n* = 99; Western portion *n* = 62; missing data *n* = 3), NCAA division (Division I *n* = 174; Division II *n* = 131; Division III *n* = 169; missing data *n* = 1) and sport coached (contact sports *n* = 226; non-contact sports *n* = 249). Participants reported a mean average of 11.06 years of coaching experience (*SD* = 9.19).

Results. Following data collection, items on the PLHB Scale were not normally distributed. In an attempt to reduce non-normality, item parcels were created by summing the scores for each item across the eight vignettes. Still significantly skewed, item parcels were further transformed by computing the reciprocal. Following transformation, low scores represented high perceived legitimacy of hazing behavior whereas high scores indicated low perceived legitimacy of hazing behavior.

Using the transformed item parcels (*n* = 475), Cronbach's alpha for the PLHB Scale was .95. The following item was identified for possible deletion for an improvement in alpha: "If its purpose is to establish a hierarchy within the team." To examine convergent validity, PLHB was compared to moral reasoning as measured by the DIT-2 (*n* = 475). While a positive correlation between PLHB and moral reasoning was expected, no significant correlation was detected between the PLHB total score and moral reasoning.

To establish discriminant validity, Spearman's correlation coefficients were calculated between social desirability and PLHB (*n* = 475). Participants' responses to the items following each vignette were summed into composite scores. The composite scores were then correlated with social desirability. A significant negative correlation was found between the composite

score for the first vignette and social desirability (r = -.08, p < .05). No significant correlations for the remaining vignettes and social desirability were detected.

To measure the concurrent validity of the PLHB Scale, a series of t-tests were conducted. The groups that were examined separately in regards to PLHB were gender and sport type (n = 475). On average, males reported a higher PLHB total score (M = .58, SE = .001) than females (M = .65, SE = .001). The difference was significant (t[421.02] = -4.69, p < .05) with a small effect size (r = .23). Participants who coached contact sports also reported a higher PLHB total score (M = .59, SE = .01) than those involved in non-contact sports (M = .62, SE = .01). The difference was significant (t[473] = -2.33, p < .05) with a small effect size (r = .16).

Discussion. In review, content validity was established through a panel of five experts who reviewed the components of the PLHB Scale. All PLHB vignettes and items resulted from a thorough review of the literature. While the vignettes were constructed to portray the most frequently reported hazing behaviors in sport, each item was developed to represent a commonly reported justification for the occurrence of hazing within sport. The psychometric properties of the PLHB Scale were also evaluated in terms of internal consistency, convergent validity, discriminant validity, and concurrent validity. The PLHB Scale demonstrated an acceptable reliability with a Cronbach's alpha of .95. Though the PLHB Scale did not demonstrate convergent validity, strength was demonstrated in the areas of discriminant and concurrent validity.

CHAPTER 3

Method

Research Purpose and Design

This study utilized a quantitative, non-experimental, survey-based, research design. Following data collection, an exploratory factor analysis (EFA) assessed the underlying factor structure of the PLHB Scale (Williams, Brown, & Onsman, 2010). Focusing on theory development as opposed to theory testing, this study did not include a priori hypotheses concerning the factor structure of the PLHB Scale (Brown, 2006). The dependent variables included the individual PLHB Scale items, also referred to as the indicator variables within factor analytic work. Considered to be the "cause variables," responsible for the variations and correlations among indicator variables, the factor extracted by the EFA was the independent variable (Tabachnick & Fidell, 2014).

In addition to assessing the reliability of the PLHB Scale utilizing Cronbach's alpha, this study also assessed the scale's discriminant validity through a series of non-parametric correlations. Specifically, discriminant validity was examined by measuring the potential impact of social desirability bias as measured by The Marlowe-Crowne Social Desirability Scale, Form X1 (Strahan & Gerbasi, 1972).

Participants

The target population encompassed NCAA athletic coaches from around the United States. To be eligible for participation in the study, respondents had to be 18 years of age or older and hold the title of head or assistant coach for a NCAA Division I, II, or III varsity athletics team. Coaches also had to have a valid email address and access to a computer that could

connect to the Internet. Coaches were excluded from participation if they reported participating in the PLHB development study.

Amongst the proponents of factor analysis, a wide range of opinions and several guiding principles regarding sample size exist (Williams, Brown, & Onsman, 2010). Factor analysis adherents often recommend relying on subject-to-indicator ratios. Ranging from 3:1, 6:1, 10:1, 15:1, and 20:1, subject-to-indicator ratios identify the number of participants required per indicator (Williams, Brown, & Onsman, 2010). One of the most prevalent rules of thumb for determining sample size recommends obtaining a ratio of at least 10 participants per every/each indicator (Costello & Osborne, 2005; Yong & Pearce, 2013). Offering a more conservative recommendation, Field (2014) suggested obtaining 10 to 15 participants per indicator.

In contrast to the previously cited subject-to-indicator ratios, other researchers have recommended adhering to general guidelines focused on total sample size. Whereas Tabachnick and Fidell (2014) recommended having at least 300 participants, Hair et al. (1995) recommended sample sizes be larger than 100 participants. Comrey and Lee (1973) offered a more stratified guide for sample size: 100 as poor, 200 as fair, 300 as good, 500 as very good, and 1,000 or more as excellent.

To adequately perform an EFA, researchers have also noted that the sample size must be large enough for correlations to be reliably estimated (Tabachnick & Fidell, 2014). Thus, the sample size for the present study also depended on the nature or strength of the data collected. When demonstrating uniformly high communalities without cross loadings and by exhibiting several variables loading strongly on each factor, a smaller sample size can be appropriate for factor analysis (Costello & Osborne, 2005). MacCallum, Widaman, Zhang, and Hong (1999) noted that samples can range between 100 to 200 participants when most factors are defined by

many indicators, loadings are greater than .8, and communalities are in the range of .5. Tabachnick and Fidell (2014) suggested including at least 300 cases when communalities are low, there are a small number of factors, and just three to four indicators per factor.

Given that the PLHB Scale included a total of eight indicators analyzed within an EFA, the study only required 160 participants when utilizing the conservative 20:1 subject-to-indicator ratio as the benchmark. However, being the first research study to explore the factor structure of the PLHB Scale, there was a degree of uncertainty concerning the strength of the factor loadings and corresponding communalities. With the lack of agreement found within the literature concerning sample size and factor analysis, and in the event of less than optimal factor loadings and communalities, the sample size for the present study abided by Tabachnick and Fidell's (2014) more conservative methodology and included at least 300 participants in the statistical analysis.

As response rates in the hazing literature have ranged from 10% to 30% (Allen & Madden, 2008; Hoover, 1999; McGlone, 2010), and considering the limited response rate (8%) obtained in the PLHB development study (Bigham, 2010), it was necessary to solicit participation from at least 3,000 potential respondents. However, given the transient nature of college coaches' employment, approximately 3,200 coaches were solicited to participate in the web-based survey to account for failed and bounced emails. For response and completion rates as well as participant demographics, see chapter four.

Procedures

Construction of the Qualtrics survey. Data collection occurred solely over the Internet via a web-based survey. Even though previous research studies questioned the external validity of online data collection and Internet samples (Kongsved et al., 2007), a web-based survey

allowed the researcher to solicit participation from an expansive and geographically diverse population with less expense (Benfield & Szlemko, 2006; Eysenbach & Wyatt, 2002; Ritter et al., 2004). Moreover, when researching potentially sensitive topics, such as the topic of hazing in sport, Internet data collection limits the influence of social desirability bias and supports the submission of more complete responses (Joinson, 1999; Kongsved et al., 2007). For the purposes of the present study, a web-based survey was considered the most appropriate medium for obtaining a more representative and diverse sample of NCAA college coaches from around the United States (Dolowitz, Buckler, & Sweeney, 2008; Eysenbach & Wyatt, 2002).

Survey flow. Placed on Qualtrics, a private web-based research platform, the web-based survey included a total of 13 pages. Not including the two pages dedicated to the informed consent and debriefing, the number of items per page ranged from three to eleven. To increase the start rate while also limiting the attrition associated with longer surveys, the survey was intentionally kept short (Sinkowitz-Cochran, 2013). The survey took approximately 10 to 15 minutes to complete.

After clicking on the hyperlink embedded in the recruitment emails (see Appendices A – C for recruitment emails), respondents were redirected to the survey's informed consent page (see Appendix D for informed consent). After reviewing the informed consent, respondents were then asked to either accept or decline continued participation. After providing informed consent, the respondents were presented with three screening questions based on the inclusion and exclusion criteria (see Appendix E for screening questions). In addition to verifying their age (18 years of age or older), respondents were asked to confirm working as a NCAA Division I, II, or III head or assistant college coach. Lastly, respondents were asked to report previous

participation in the PLHB pilot study. If unable to satisfy the inclusion and/or exclusion criteria, respondents were then redirected to the survey termination page.

Subsequent to the informed consent and the three screening items, participants were asked to complete the PLHB Scale (see Appendix F for the PLHB Scale). The PLHB Scale, comprised of eight vignettes ranging in intensity of the hazing behavior depicted, asked respondents to quantify the legitimacy of such behaviors on an eight-point Likert-scale. As responses to a question may vary depending on the content of prior questions (Tourangeau & Rasinski, 1988), the presentation of the vignettes were not randomized. To avoid the inclusion of additional bias evoked by the early presentation of clear and intense examples of hazing behavior, the PLHB Scale initially presented respondents with somewhat innocuous hazing vignettes. The more extreme hazing vignettes were placed towards the conclusion of the PLHB Scale. Following the PLHB Scale, respondents completed the Marlowe-Crowne Social Desirability Scale, Form X1 (MCSDS-X1) and then the demographics questionnaire (see Appendix G for MCSDS-X1; Appendix H for demographics questionnaire).

After completing the demographics questionnaire, participants were directed to the debriefing page (see Appendix I for debriefing form). The debriefing page outlined the intended purpose of the study and provided a description of the risks and benefits associated with participation. For questions or concerns, the debriefing page also included the researcher's and IRB's contact information. To officially complete the informed consent process, participants were provided with the option to either submit or discard their responses following the debriefing. Discarded responses were not collected by Qualtrics, nor were they available for download by the researcher. After selecting submit or discard, respondents were directed to the survey termination page.

Also placed on Qualtrics, but in the form of a separate survey, coaches had the opportunity to enter into an incentives drawing for one of three $25 Visa gift cards (see Appendix J for incentives drawing). The incentives drawing requested coaches' names and email addresses. It is important to note that as separate surveys, there was no way to link information collected in the incentives drawing to information collected in the PLHB research survey. While the coaches were provided the link to the incentives drawing within all recruitment emails, respondents were also automatically redirected to the incentives drawing upon reaching the end of the PLHB research survey.

Steps to support data quality. When compared to traditional data collection methodologies (i.e., paper-pencil, US postal mail, or telephone), web-based surveys present several unique dilemmas that can impact the quality of the data collected (Heerwegh & Loosveldt, 2002; Kongsved et al., 2007). Ultimately reflected in the response and completion rates, such dilemmas range from participant recruitment to the layout and clarity of the web-based survey (Benfield & Szlemko, 2006; Sinhowitz-Cochran, 2013). Within the present study, several precautions were employed to support the quality of the data and the corresponding start and completion rates.

To encourage buy-in among potential participants, the Qualtrics mailer was utilized to distribute personalized recruitment emails to coaches (see Appendices A – C for recruitment emails; Eysenbach & Wyatt, 2002; Sinhowitz-Cochran, 2013). The recruitment emails included both an individualized survey link and opt-out link. To aid in maximizing the start rate, the individualized survey link allowed Qualtrics to tailor follow-up emails to only those individuals who had yet to respond. To limit partial completions, the individualized survey link also permitted respondents to resume the survey from any computer at another time. Each

individualized survey link was limited to one submission. Thus, respondents were not able to submit the survey twice, nor were they able to forward the link to another individual interested in participating. Lastly, coaches were presented with the option of opting-out of follow-up reminders by selecting the opt-out link located at the bottom of all recruitment emails.

To limit the complexity of the survey while also encouraging survey completion, certain survey elements were also built into the survey. A progress bar visually guided participants through the survey. Additionally, adaptive questioning created skip patterns between questions. By allowing respondents to skip over questions that were not relevant to them, adaptive questioning lessened the number of questions and the amount of time required to complete the survey. To obtain respondents' initial reactions, participants were not allowed to go backwards in the survey (The Odum Institute, 2012).

While forced response was utilized when replying to the informed consent, screening items, and debriefing, participants were not forced to respond to items when proceeding through the main body of the survey. Rather, in order to maintain the voluntary nature of the study, reduce undue attrition, avoid responses influenced by social desirability (The Odum Institute, 2012), and promote completeness in the data, a 'completeness check' was utilized. When attempting to progress on to the next page of the survey, Qualtrics encouraged respondents to fill in any unanswered items. Nonetheless, the survey still allowed respondents to continue onto the next page following the completeness check despite the existence of any unanswered items.

To reduce error associated with manual data entry, respondents' submissions were recorded and automatically stored by Qualtrics (Eysenbach & Wyatt, 2002). Following data collection, respondents' submissions were available to the researcher for download. To limit inconsistent responses and improve the start and completion rates, the survey was field-tested

prior to data collection for length, clarity of content, clarity of visual design, and technical functionality (deMarries & Lapan, 2004; Dolowitz, Buckler, & Sweeney, 2008; Sinkowitz-Cochran, 2013).

Security measures. In accordance with best practices, Qualtrics was protected by high-end firewall technology. Minimizing the possibility of unauthorized infiltration, the data was stored in Qualtrics' secure and certified data centers. For additional protection, the data was encrypted when at rest in the data centers (Qualtrics, 2015b). Finally, the Qualtrics data was only accessible to the researcher for download.

Further, several security precautions were taken when downloading the data from Qualtrics. To protect the data from being intercepted and possibly decoded, transmitted data was password protected (Qualtrics, 2015b). To ensure that the data could not be traced back to the respondent, the research survey did not collect primary identifiers (i.e., contact information). Considered a secondary identifier, Qualtrics stripped the Internet Protocol (IP) addresses from the data prior to releasing the results to the researcher. It is important to note that some of the respondents choose to provide their contact information (including name and email address) when registering for the incentives drawing. However, as a separate survey in Qualtrics, information collected within the incentives drawing could not be linked back to submissions collected in the PLHB research survey.

Following the conclusion of data collection and after being downloaded by the researcher, the data was stored on a secure drive that was both encrypted and password protected. While key project personnel assisted the researcher in data analysis, the researcher was the only authorized individual with login privileges to the secure drive. When analyzing the data, firewall technology protected the researcher's computer from unauthorized access.

Data collection. After obtaining approval from the Institutional Review Board (IRB) at the University of Georgia (see Appendix K for IRB Approval Letter), Division I, II, and III head and assistant college coaches were invited by email to participate in a closed web-based research study assessing coaches' perceptions of athlete behaviors. While there was no exhaustive list of college coaches available to the public to randomly sample from, coaches' names and email addresses were available on the universities' websites. While ideal, it was not feasible given limited time constraints to manually develop a list of every NCAA college coach to randomly sample (Babbie, 2007; deMarris & Lapan, 2004). Rather, using stratified cluster sampling, a form of probability sampling (Cozby & Bates, 2012; Creswell, 2009), the researcher identified and manually collected the email addresses of college coaches from the websites of randomly selected universities.

To use stratified cluster sampling, it was necessary to identify all naturally occurring clusters or groupings of NCAA college coaches. To meet such need, an exhaustive list of all NCAA-endorsed colleges was retrieved from the official NCAA website (2015). To avoid soliciting participation from those coaches who had already participated in the development study, previously sampled colleges were excluded from the exhaustive list of all NCAA-endorsed colleges (see Appendix L for List of Excluded Colleges). The list of remaining colleges was then stratified into Division I, II, and III subclasses (see Appendix M for Sampling Frame). Since there were nearly 350 schools in Division I, 300 schools in Division II, and 450 schools in Division III, stratification encouraged the representation of each division in more accurate proportions (Creswell, 2009).

To obtain the required participant pool of approximately 3,200 college coaches, colleges from each division were randomly selected using a random number generator. From those

randomly selected colleges, the researcher manually retrieved and compiled the contact information (i.e., names and emails) of all head and assistant varsity athletic coaches. Stratified cluster sampling was performed until approximately 1,000 coaches from Division I, 900 coaches from Division II, and 1,300 coaches from Division III had been identified and their contact information retrieved. For a step-by-step depiction of how potential participants were identified using stratified cluster sampling, see figure 1.

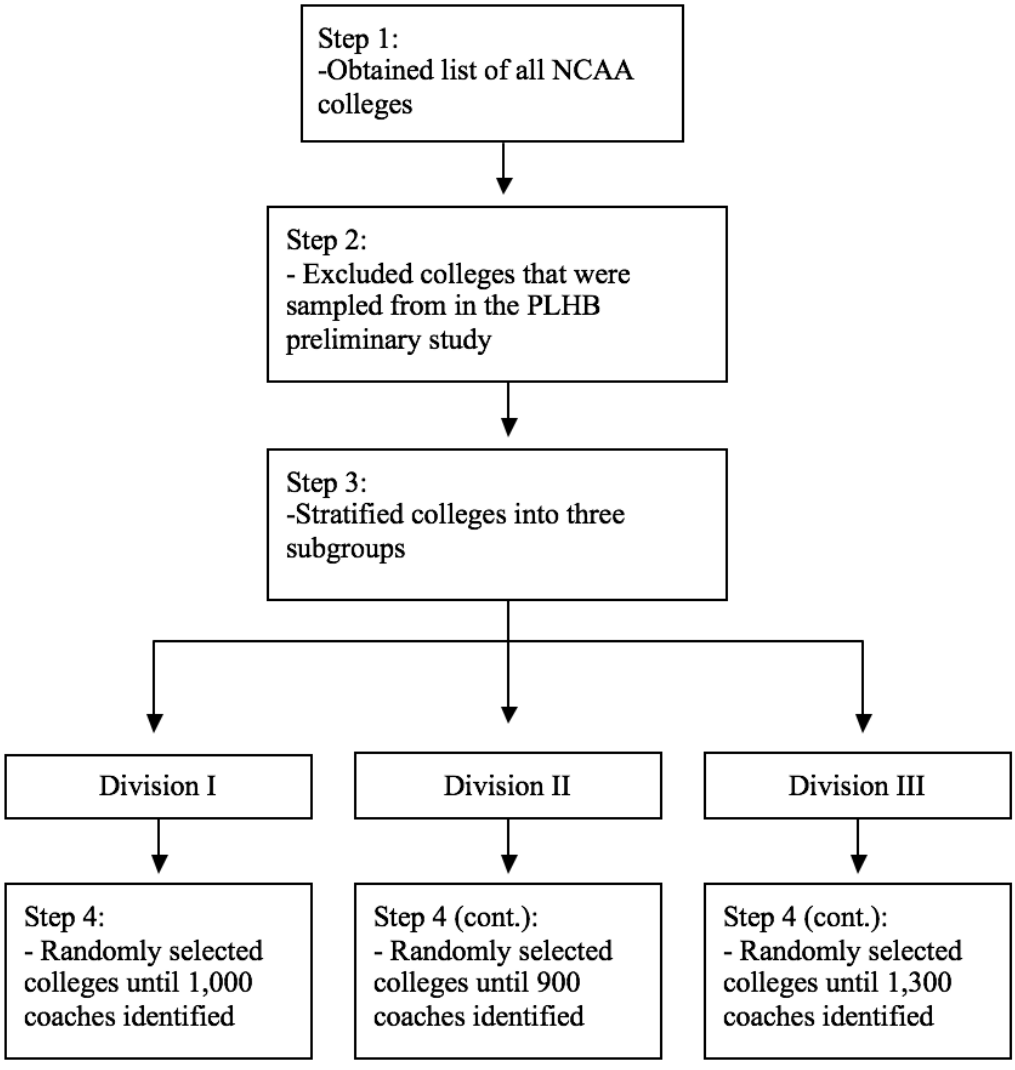

Figure 1: Participant identification procedures. This figure provides a step-by-step depiction of how potential respondents were identified.

During the spring and summer of 2016, approximately 3,200 NCAA coaches from randomly selected colleges were solicited to participate in the survey via email. As coaches' availability fluctuates depending on time of year and competition schedules (i.e., in-season verses out-of-season), data collection occurred in two waves. During 2016, the first wave of data collection occurred during late spring and the second wave took place during mid-summer. The procedures outlined below were adhered to during both waves of data collection.

To obtain a more representative sample, multiple points of contact were employed to improve the response rate (Eysenbach & Wyatt, 2002; Lozar, Manfreda, & Vehovar, 2002; Sinkowitz-Cochran, 2013). As recommended by the IRB, coaches were contacted on three separate occasions by the researcher. The first follow-up email was disseminated two-weeks after the initial recruitment e-mail was sent out (see Appendices A & B for first and second recruitment emails) To account for potential limitations associated with uneven Internet access and overlooked emails (Vehovar, Lozar, & Manfreda, 2008), coaches were sent the second and last follow-up email four-weeks after the initial recruitment email (see Appendix C for the third recruitment email). In total, data collection occurred over a six-week time period.

In every recruitment email, the researcher included a brief introduction to the study, its purpose, and associated benefits. Additionally, the recruitment emails included an embedded link to the survey. Using basic strategies shown to increase web-based response rates, the subject line of the emails included an informal request for assistance and the content of each recruitment email was personalized with the inclusion of the potential respondent's name in the salutation (Eysenbach & Wyatt, 2002; Sinkowitz-Cochran, 2013; Trouteaud, 2004).

Within the body of each recruitment email, the coaches were informed of the incentives drawing (see Appendix J for the incentives drawing). Shown to increase response rates

(Sinkowitz-Cochran, 2013), monetary incentives were preferable over nonmonetary incentives given the reduction in selection bias (Eysenbach & Wyatt, 2002; Sinkowitz-Cochran, 2013). Thus, the coaches had the opportunity to enter into a drawing to receive one of three $25 Visa gift cards. To enter the drawing, coaches either clicked the incentives link included in all recruitment emails or were redirected to the incentives drawing after completing the PLHB research survey.

Following the informed consent and after self-selecting into the study (see Appendix D for the informed consent), respondents were presented with three screening items (see Appendix E for screening questions), the PLHB Scale (see Appendix F), the Marlowe-Crowne Social Desirability Scale, Form X1 (see Appendix G), and then the demographics questionnaire (see Appendix H). To limit the potential influence of bias, college coaches were not informed of the researcher's intention to assess perceived legitimacy of hazing behavior until the conclusion of the survey. Rather, the coaches were invited to participate in a research study assessing coaches' perceptions of athlete behaviors. As hazing can be a controversial topic eliciting a wide range of strong beliefs and emotions, such a precaution was intended to limit the selection bias that could have occurred when deciding whether to participate.

To address the incomplete disclosure included in the recruitment of participants, a debriefing page was included at the conclusion of the survey (see Appendix I for the debriefing). The debriefing page included all pertinent information, including a description of the construct being studied, the rational for the incomplete disclosure, any potential risks and benefits associated with participation, and the researcher's contact information for potential questions and/or concerns. Prompted to either submit or discard their responses, participants had the opportunity to withdrawal from the study following the debriefing.

Following the conclusion of the second wave of data collection, survey data was downloaded from Qualtrics and analyzed using SPSS Version 22. Furthermore, immediately following each wave of data collection, three coaches were randomly selected from the incentives drawing. Shortly thereafter, the recipients of the drawings were informed of their selection and gift cards were sent out by means of priority mail.

Measures

Demographic Questionnaire. Demographic information included age, gender, race and/or ethnicity, and education level. Participatory variables included coaching position (head or assistant coach), NCAA division (I, II, or III), geographic region (Northeast, Midwest, South, or West), years of coaching experience, primary sport coached, gender of team coached (men, women, or both), and previous personal participation in collegiate sports as a student-athlete (see Appendix H for demographic questionnaire).

Contingent on the degree of physical contact permitted within the primary sport coached, sport type was also assessed. Based on the amount of contact permitted within the primary sport coached, respondents were assigned to one of three groups: non-contact, limited-contact, or collision. Whereas collision sports required intense contact between athletes (i.e., football, ice hockey, lacrosse, water polo), limited-contact sports permitted incidental contact between athletes (i.e., soccer, field hockey, basketball). Lastly, non-contact sports prohibited contact between athletes (i.e., swimming and diving, cross-country, bowling, gymnastics, rifle, skiing, baseball/softball, golf, track and field, tennis, rowing, and volleyball; Conroy, Silva, Newcomer, Walker, & Johnson, 2001; Kavussanu & Ntoumanis, 2003).

Marlowe-Crowne Social Desirability Scale, Form XI. The Marlowe-Crowne Social Desirability Scale, Form X1 (MCSDS-X1; Strahan & Gerbasi, 1972) is a 10-item shortened

version of the original 33-item scale (Marlowe-Crowne, 1960). Found to highly correlate (.96) with the full scale (Fisher & Fick, 1993), the MCSDS-X1 contains 10 true-false items that describe both socially desirable and undesirable behaviors (see Appendix G for MCSDS-X1). Developed as a means of measuring socially desirable responding (Fisher & Fick, 1993), respondents were asked to report whether the statements applied to them personally by selecting either true or false.

A total score was calculated by summing up all of the items. Ranging from zero to ten, the scale was scored with higher values representing increased levels of social desirability bias. For those items that described socially desirable behaviors, such as "I'm always willing to admit it when I make a mistake," respondents received a score of zero (0) for responding with "false" and a score of one (1) for responding with "true." For those items that described socially unacceptable behaviors, such as "There have been occasions when I took advantage of someone," respondents received a score of one (1) for "false" and zero (0) for "true." While previous research studies reported internal consistencies ranging from .70 to .79 (Fisher & Fick, 1993; Fraboni & Cooper, 1989), the reliability coefficient for the MCSDS-X1 in the present study was .56.

The Perceived Legitimacy of Hazing Behaviors Scale (PLHB). Intended to measure coaches' perceived legitimacy of sport-related hazing behavior, the PLHB Scale is a self-report measure designed for completion over the Internet (see Appendix F for PLHB Scale). Being the second research study focused on the development of the PLHB Scale, it is necessary to offer a brief review of the scale's preliminary or development study (Bigham, 2010). Within the development study, an item pool was generated to assess the construct in question, an ordinal Likert-scale format was selected, the scale's components underwent expert review, validation

items were included to assess for social desirability in responding, and the PLHB Scale was administered to a development sample. Content validity was established through expert review, and the psychometric properties were evaluated in terms of internal consistency, convergent validity, discriminant validity, and concurrent validity. Suggestive of a unidimensional measure, the PLHB Scale demonstrated an acceptable internal reliability with a Cronbach's alpha of .95. Though the PLHB Scale did not demonstrate convergent validity, strength was demonstrated in the areas of discriminant and concurrent (known-groups) validity (Bigham, 2010).

In total, the PLHB Scale is comprised of eight hazing-related vignettes, with the same eight items following each vignette. Acknowledging that hazing behaviors range from mild and humiliating to potentially life threatening, and given the intended function of the PLHB Scale to assess coaches' perceived legitimacy of hazing behavior, it is necessary to assess coaches' reactions to a range of hazing-related vignettes to adequately assess the construct in question. Thus, the eight vignettes depict a range of the most frequently cited questionable, unacceptable, and alcohol-related hazing behaviors (Alfred University, 1999). Questionable hazing behaviors include humiliating or degrading activities. Unacceptable behaviors include activities that carry a high probability of danger or injury. Alcohol-related hazing behaviors are comprised of drinking contests and alcohol consumption during recruitment visits (Alfred University, 1999). To limit potential bias in responding, gender and sport type are withheld in the vignettes.

Following each of the eight vignettes, the same eight items are then presented (DeVellis, 2003; Little, Rhemtulla, Gibson, & Schoemann, 2013). The first item broadly assesses perceived legitimacy of hazing by generally asking whether it is acceptable for athletes to engage in the hazing behavior described. To further assess perceived legitimacy of hazing, the seven remaining items assess whether such behavior is acceptable when used for specific purposes. The remaining

seven items, developed from a review of the qualitative research on hazing, highlight frequently reported reasons or justifications for hazing. In item four for example, respondents are asked whether it is ok for an athlete to engage in the behavior described if its purpose is to be an important rite of passage. For all eight items, responses are reported on a Likert scale ranging from 1 (*Never OK)* to 8 *(Always OK)*.

Prior to discussing the scoring of the PLHB Scale, it is necessary to expound upon the manner in which the scale was constructed. Considered the building blocks of a questionnaire (Eysenck & Eysenck, 1969), individual items traditionally represent observed variables or indicators of constructs (De Bruin, 2004). As opposed to a totally disaggregated model where items function as indicators, the PLHB Scale was constructed to adhere to a partially disaggregated model (Coffman & MacCallum, 2005). In a partially disaggregated model, two or more items are summed into parcels that are then used as aggregate-level indicators (Coffman & MacCallum, 2005; Little, Cunningham, Shahar, & Widaman, 2002; Little et al., 2013). Because hazing behaviors range along a continuum differing in intensity, and since perceptions of legitimacy may vary with the intensity of the hazing behavior depicted, individual items were unlikely to be as representative as an aggregate score (Little et al., 2013; Matsunaga, 2008; Nunnally, 1978; Rushton, Brainerd, & Pressley, 1983). By summing items across the vignettes into aggregate-level indicators, item parcels better reflected the latent construct while also reducing the influence of specific variance (Little et al., 2002).

The PLHB Scale was also constructed to account for specific variance. Defined as the proportion of non-random variance that is unrelated to the latent construct (Little et al., 1999), specific variance was considered to be a potentially problematic source of variance given the format of the PLHB Scale (Little et al., 2013). While assumed to be specific to each indicator

and uncorrelated across items, shared specific variance conceptually reflects the presence of another construct separate from the primary construct of interest (Little et al., 2002). However, such representation can be misleading due to a "bloated specific" (Cattell, 1961). Instead of being indicative of another construct separate from the primary construct of interest, the shared specific variance may be inflated or bloated as a result of method effects that arise from item overlap, item redundancy, similarly worded items, or reverse worded items (Brown, 2006; Little et al., 2002). Consequently, given the repetition of items on the PLHB Scale, it was necessary to account for a bloated specific and possible 'trivial' factors prior to factor analysis (Brown, 2006; Little et al., 2002). By employing item parcels and a partially disaggregated model, the magnitude of unwanted sources of variance was reduced (Little et al., 2002; Little et al., 2013).

In addition to reducing the magnitude of unwanted sources of variance (Little et al., 2002; Little et al., 2013), item parcels offered several additional advantages. Offering improved reliability (Kishton & Widaman, 1994; Little et al., 2013), item parcels were also used as a remedial approach for distributional non-normality (Brown, 2006). By reducing the degree of non-normality (Bandalos, 2002; Hau & Marsh, 2004; Little et al., 2002; Little et al., 2013; West, Finch, & Curran, 1995), the use of item parcels supported the PLHB Scale in meeting the assumption of distributional normality required for factor analysis (Brown, 2006; Tabachnick & Fidell, 2014; Thompson, 2004). Moreover, because of the normalizing tendency of aggregation (Matsunaga, 2008; Nunnally, 1978; Rushton, Brainerd, & Pressley, 1983), the scale intervals also became more continuous in nature for the purposes of factor analysis (Bentler & Chou, 1987; Hagtvet, 2004; Little et al., 2002; Little et al., 2013).

Given the numerous benefits associated with item parceling, it was warranted to continue to use a partially disaggregated model when scoring and interpreting the PLHB Scale. Informed

by the hierarchical model of parcel construction, item parcels were purposely constructed to reflect the different facets believed to comprise perceived legitimacy of hazing behavior in sport. By summing up those items that purport to measure a particular facet, a homogenous item parcel was created (Coffman & MacCallum, 2005). For example, the eight responses pertaining to rite of passage item included on the PLHB Scale were summed into an aggregate-level indicator. Originally comprised of 64 single items, the PLHB Scale included eight homogenous item parcels following parcel construction. To obtain a total score for the PLHB, item parcels were summed.

Table 1

Arrangement of Items within Parcels

Parcel	Facet	Items Summed in Parcel
Parcel 1	Globally Ok	1, 9, 17, 25, 33, 41, 49, 57
Parcel 2	Team Membership is a Privilege	2, 10, 18, 26, 34, 42, 50, 58
Parcel 3	Prove Commitment	3, 11, 19, 27, 35, 43, 51, 59
Parcel 4	Be a Rite of Passage	4, 12, 20, 28, 36, 44, 52, 60
Parcel 5	Become Accepted Member of the Team	5, 13, 21, 29, 37, 45, 53, 61
Parcel 6	Build Unity	6, 14, 22, 30, 38, 46, 54, 62
Parcel 7	Promote Chemistry	7, 15, 23, 31, 39, 47, 55, 63
Parcel 8	Establish a Hierarchy	8, 16, 24, 32, 40, 48, 56, 64

Statistical Analysis

Survey start and completion rates. To evaluate possible non-response and attrition, the start and completion rates were calculated for the web-based survey. The start rate included the percentage of the gross total of coaches who entered into the Qualtrics survey and responded to the informed consent. The completion rate included the number of coaches who submitted the survey following the debriefing compared to the number of coaches who consented to participate (Eysenbach, 2004). Furthermore, the flow of respondents through the Qualtrics survey was

calculated and reported, including the number of individuals who: (1) did not provide consent; (2) did not meet eligibility requirements; and (3) stopped responding midway through the survey.

Data screening and assumption testing. Prior to factor analysis, the data was cleaned utilizing the procedures as recommended and outlined by Tabachnick & Fidell (2014). Univariate descriptive statistics and frequencies were utilized to inspect the accuracy and plausibility of the data. Missing data were also identified and addressed utilizing deletion. To assess data normality, histograms were created and descriptive statistics were also calculated. The mean, standard deviation, minimum value, maximum value, skewness, standard error of skewness, kurtosis, and standard error of kurtosis were reported for each of the individual items on the PLHB Scale. Skewness and kurtosis z-scores were also calculated and reported. The assumption of normality was assessed by inspecting the skewness and kurtosis of the PLHB items as well as the corresponding z-scores (Field, 2009).

To limit specific variance, better reflect the latent construct, and improve the PLHB Scale's approximation to a normal distribution (Bandalos, 2002; Brown, 2006; Hau & Marsh, 2004; Little et al., 2002; Little et al., 2013), item parcels were created by summing the scores for each item across the eight vignettes (Coffman & MacCallum, 2005; Conroy et al., 2001; West, Finch, & Curran, 1995). Following parcel construction, the PLHB Scale included a total of eight aggregate-level indicators. For additional information concerning the item parceling performed, see the PLHB Scale overview presented earlier in this chapter.

For each item parcel, histograms were created and descriptive statistics were also calculated to assess normality (Field, 2009). Specifically, the mean, standard deviation, minimum value, maximum value, skewness, standard error of skewness, kurtosis, and standard error of kurtosis were calculated and reported. With continued non-normality following parcel

construction, transformation was utilized. Via histograms, standardized scores, and Mahalanobis Distance, univariate and multivariate outliers were identified and deleted (Tabachnick & Fidell, 2014).

Description of the sample. Frequencies and descriptive statistics were calculated to describe the sample. Means and standard deviations were calculated for age and years of coaching experience. Frequencies and percentiles were generated for age, gender, race and/or ethnicity, highest education level, geographic region (Northeast, Midwest, South, or West), coaching position (head or assistant), years of coaching experience, NCAA division (I, II, or III), sport type, gender of team coached (men, women, or both), and previous personal participation in collegiate sports as a student-athlete. While initially continuous in nature, age and years of coaching experience were also converted into categorical variables so that frequencies and percentiles could also be computed.

Exploratory factor analysis. Intimately involved with questions of validity (Nunnally, 1978), factor analysis was required to evaluate the construct validity of the PLHB Scale (Brown, 2006; Williams, Brown, & Onsman, 2010). Considered to be one of the most commonly used practices in measurement development (Floyd & Widaman, 1995), there are two main classes of factor analysis that required consideration: Exploratory Factor Analysis (EFA), and Confirmatory Factor Analysis (CFA) (Williams, Brown, & Onsman, 2010). Used to identify the underlying latent factors that cause variation and covariation among a set of indicators (Brown, 2006; Costello & Osborne, 2005; Kahn, 2006), EFA is traditionally performed when building and validating new scales (Miller & Sheu, 2008; Yong & Pearce, 2013). As opposed to the exploratory nature of EFA, CFA is used to test theoretically derived hypotheses where the number and nature of factors are specified (Brown, 2006; Miller & Sheu, 2008).

Still in the early stages of measurement development, an EFA was performed on the PLHB Scale. With the overarching goal of evaluating the dimensionality of the PLHB Scale (Williams, Brown, & Onsman, 2010), an EFA addressed the following research questions. What is the factor structure of the PLHB Scale? Specifically, how many factors exist among the indicators? To what degree do indicators load onto the factors?

Multicollinearity and factorability of the correlation matrix. To determine the suitability of the data for EFA**,** multicollinearity and the factorability of the correlation matrix were assessed prior to factor extraction. In addition to calculating the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity, the correlation matrix was visually inspected for correlation coefficients below +/-.30 (Tabachnick & Fidell, 2014; Yong & Pearce, 2013). To assess multicollinearity, the correlation matrix was also assessed for coefficients +/-.90 (Tabachnick & Fidell, 2014). Furthermore, the determinant of R, squared multiple correlations, variance inflation factors, tolerance statistics, and collinearity diagnostics were calculated (Field, 2009; Tabachnick & Fidell, 2014). In response to multicollinearity within the data, item deletion was utilized as recommended by Field (2009) and Tabachnick & Fidell (2014).

Factor extraction. Defined as the process of fitting a factor model to the data (Fabrigar et al., 1999), factor extraction may be achieved by means of several different methods, including but not limited to unweighted least squares, generalized least squares, maximum likelihood, principal-axis factoring, alpha factoring, and image factoring (Brown, 2006; Costello & Osborne, 2005; Williams, Brown, & Onsman, 2010). For the current analysis, it was necessary to consider the distribution of the data when selecting a factor-extraction method (Tabachnick & Fidell, 2009). Considered one of the most commonly used estimation methods (Brown, 2006),

maximum likelihood (ML) was not utilized as the data did not meet univariate and multivariate normality (Costello & Osborne, 2005; Fabrigar et al., 1999; Tabachnick & Fidell, 2009). Rather, since the assumption of normality was violated, principal-axis factoring (PAF) was utilized in the present study (Fabrigar et al., 1999).

Number of factors to retain. Following factor extraction, it was necessary to decide upon the appropriate number of factors to retain (Brown, 2006). Ultimately, the literature on factor analysis recommended reliance on a combination of criteria (Costello & Osborne, 2005; Fabrigar et al., 1999; Hair et al., 1995; Williams, Brown, & Onsman, 2012). Based on the use of eigenvalues, or the amount of variance explained by a factor (Brown, 2006), Kaiser's criteria and the Scree test were used to inform factor retention.

Using Kaiser's criterion, also known as "the eigenvalues > 1.0 rule," factors with eigenvalues greater than 1.0 were retained. The Scree test produced a graph where eigenvalues form the vertical axis and factors run the horizontal axis (Brown, 2006). By counting the number of data points located above the natural bend or break in the curve, it was possible to further ascertain the number of factors to retain (Yong & Pearce, 2013).

Analysis of factor structure. Following factor extraction, factor rotation was not implemented. Rather, the unidimensional factor structure was evaluated in terms of several criteria. In addition to the factor structure being well-defined by high squared multiple correlations, item parcels also needed to be well-defined by high communalities with a mean value of at least .7 (MacCallum et al., 1999). In order to be included, factor loadings needed to be .32 or higher (Costello & Osborne, 2005). Lastly, the factor required at least three indicators to be considered reliable (Tabachnick & Fidell, 2007). The factor solution that provided the 'cleanest' structure, as outlined by the previously described criteria, was used.

Reliability. Considered one of the most frequently used measures of reliability in applied psychology (Helms, 2006), Cronbach's (1951) coefficient alpha was calculated to assess the internal consistency of the PLHB Scale. Cronbach's alpha was computed using the transformed PLHB item parcels retained in the final EFA. To be considered a reliable instrument, a value of .7 or higher was necessary (DeVellis, 2003; Field, 2009).

Discriminant validity. To examine the discriminant validity of the PLHB Scale, the relationship between the PLHB Scale and social desirability was assessed through a series of non-parametric correlations performed at an alpha level of .05 (Beretvas, Meyers, Leite, 2002; Mitchell & Jolley, 2013). Spearman's correlation coefficients were computed over Pearson correlation coefficients due to the non-normality found within the PLHB data (Field, 2009).

Following item parcel creation and transformation, the PLHB total score was calculated by summing the transformed PLHB item parcels. To broadly examine the relationship between the PLHB Scale and social desirability, a Spearman's correlation coefficient was calculated to determine if a correlation existed between the PLHB total score and the social desirability total score. Descriptive statistics, including means and standard deviations, were calculated and reported for the PLHB total score and the social desirability total score.

To assess the relationship between social desirability and the transformed PLHB item parcels, a series of Spearman's correlation coefficients were computed to determine if correlations existed between social desirability total score and the transformed PLHB item parcels. Descriptive statistics were calculated and reported for the transformed PLHB item parcels.

Lastly, a series of Spearman's correlation coefficients were performed between social desirability and respondents' reaction to each of the hazing vignettes. To measure respondents'

reaction to each of the hazing vignettes, responses to the items following each vignette were summed into eight composite scores. The eight vignette composite scores were then correlated with the social desirability total score using Spearman's correlation coefficients. Descriptive statistics were calculated and reported for the transformed PLHB item parcels.

CHAPTER 4

Results

Survey Start and Completion Rates

While a total of 3,221 college coaches were solicited through email to participate in this study, 181 emails failed or bounced back to the sender. There was no way to tell how many potential participants read the recruitment email or how many were classified as spam by filtering systems. Furthermore, there was no way to confirm if all the email addresses were valid or current. A total of 429 coaches entered into the Qualtrics survey and responded to the informed consent by either agreeing or declining to participate. The start rate, or the percentage of the gross total who began the study, was 13.3%. The completion rate, or the number of respondents who finished and chose to submit their answers following debriefing (Eysenbach, 2004), was 76.7% (n = 329).

When comparing the two waves of data collection, there was a great deal of similarity in the number of coaches who initially consented to participate (216 vs. 211) and the number of coaches who eventually submitted their responses for inclusion in the study (163 vs. 166). Out of all the respondents in both waves of data collection (n = 429), .5% (n = 2) did not consent to participate, 6.5% (n = 28) did not meet eligibility requirements, and 16.3% (n = 70) stopped responding midway through the survey. Without consent and unable to meet eligibility requirements, respondents were not included in the study and the corresponding data analysis. By not providing full consent following the debriefing, those who stopped responding midway

were also not included in data analysis. In total, 329 cases were eligible for data analysis. For more information concerning the flow of respondents through the Qualtrics survey, see Table 2.

In accordance with IRB-imposed constraints on this study, any coach who declined to submit their data post debriefing had their entire record of participation wiped clean. Thus, it was not possible to determine the number of coaches who declined to submit their responses post debriefing. Furthermore, all prior information concerning start and completion rates does not include or reflect those coaches who may have finished the survey but chose to discard their responses.

Table 2

By Data Collection Wave and Total, Flow of Respondents through Survey

	First Collection Wave		**Second Collection Wave**		**Combined Total**	
	Excluded	Included	Excluded	Included	Excluded	Included
Consent	1 (N)	216 (Y)	1 (N)	211 (Y)	2 (N)	427 (Y)
Head/Asst. Coach?	1 (N)	215 (Y)	0 (N)	211 (Y)	1 (N)	426 (Y)
18-years-old?	0 (N)	215 (Y)	1 (N)	210 (Y)	1 (N)	425 (Y)
Prior Participant?	16 (Y)	199 (N)	10 (Y)	200 (N)	26 (Y)	399 (N)
Stopped Responding	36	---	34	---	70	---
Submitted	---	163 (Y)	---	166 (Y)	---	329 (Y)

Note. N = No, Y = Yes.

Data Screening and Assumption Testing

Prior to analysis, 329 submissions were examined using SPSS Version 22 for accuracy of data entry, plausibility of values, and missing values (Tabachnick & Fidell, 2014). Given that the data was collected by self-report online, researcher data entry errors were not a factor. Using SPSS Descriptives, minimum and maximum values, means, and standard deviations of all variables were examined for plausibility. Consequently, .6% (n = 2) of the 329 cases were

deleted for questionable plausibility. In these cases, participants responded without variance and self-reported ages much beyond the standard deviation of the sample's age distribution (e.g., reported being over 80). Utilizing SPSS Frequencies, 3% (n = 10) of cases were then deleted due to missing data. As recommended by Tabachnick & Fidell (2014), such cases were limited in number and appeared to be a random subsample. While a total of 329 responses were initially eligible for data analysis, having provided consent prior to the start of the survey as well as following the debriefing, a total of 317 responses (96.4% of the 329 original submissions eligible for analysis) remained eligible for continued analysis following the 12 previously mentioned case deletions.

Assuming multivariate normality when determining number of factors (Tabachnick & Fidell, 2014), normality of the data was explored using SPSS Descriptives (see Table 3). Following visual inspection of the histograms, all PLHB items appeared positively skewed. Such departures from normality were confirmed by elevations in skewness and kurtosis and further substantiated by skewness and kurtosis z-scores above 1.96 (Field, 2009).

Table 3

Descriptive Statistics for the PLHB Items

		n	Min.	Max.	*M*	*SD*	Skew	SE Skew	Kurtosis	SE Kurtosis	$Z_{Skewness}$	$Z_{Kurtosis}$
V.1	Q.1	317	1	8	1.74	1.34	2.08	0.14	3.77	0.27	15.15	13.81
	Q.2	317	1	8	1.71	1.43	2.25	0.14	4.51	0.27	16.42	16.51
	Q.3	317	1	8	1.61	1.32	2.61	0.14	6.71	0.27	19.01	24.57
	Q.4	317	1	8	1.65	1.32	2.46	0.14	6.22	0.27	17.92	22.80
	Q.5	317	1	8	1.58	1.30	2.54	0.14	5.89	0.27	18.55	21.59
	Q.6	317	1	8	2.23	2.03	1.65	0.14	1.59	0.27	12.04	5.82
	Q.7	317	1	8	2.19	1.99	1.68	0.14	1.67	0.27	12.24	6.13
	Q.8	317	1	6	1.34	0.91	3.24	0.14	10.89	0.27	23.68	39.87
V.2	Q.1	317	1	8	3.42	2.31	0.47	0.14	-1.13	0.27	3.41	-4.12
	Q.2	317	1	8	2.48	2.07	1.16	0.14	0.07	0.27	8.46	0.26
	Q.3	317	1	8	2.57	2.19	1.10	0.14	-0.19	0.27	8.06	-0.70

		n	Min.	Max.	*M*	*SD*	Skew	SE Skew	Kurtosis	SE Kurtosis	$Z_{Skewness}$	$Z_{Kurtosis}$
	Q.4	317	1	8	2.73	2.17	0.94	0.14	-0.40	0.27	6.87	-1.48
	Q.5	317	1	8	2.36	2.02	1.36	0.14	0.69	0.27	9.91	2.52
	Q.6	317	1	8	3.47	2.43	0.46	0.14	-1.21	0.27	3.36	-4.42
	Q.7	317	1	8	3.33	2.38	0.55	0.14	-1.09	0.27	3.99	-4.00
	Q.8	317	1	8	1.74	1.56	2.46	0.14	5.71	0.27	17.97	20.90
V.3	Q.1	317	1	6	1.05	0.37	10.34	0.14	122.37	0.27	75.47	448.22
	Q.2	317	1	4	1.04	0.29	8.03	0.14	70.99	0.27	58.64	260.03
	Q.3	317	1	5	1.05	0.32	9.20	0.14	97.88	0.27	67.17	358.55
	Q.4	317	1	4	1.04	0.29	8.37	0.14	76.18	0.27	61.11	279.04
	Q.5	317	1	5	1.05	0.33	8.92	0.14	89.99	0.27	65.09	329.62
	Q.6	317	1	5	1.07	0.38	7.31	0.14	60.21	0.27	53.35	220.54
	Q.7	317	1	5	1.06	0.37	7.70	0.14	65.62	0.27	56.21	240.37
	Q.8	317	1	4	1.03	0.23	8.78	0.14	95.24	0.27	64.10	348.85
V.4	Q.1	317	1	6	1.06	0.45	9.36	0.14	96.87	0.27	68.33	354.82
	Q.2	317	1	6	1.05	0.42	10.80	0.14	124.39	0.27	78.85	455.63
	Q.3	317	1	6	1.05	0.39	10.42	0.14	119.77	0.27	76.05	438.70
	Q.4	317	1	7	1.08	0.50	9.11	0.14	92.77	0.27	66.50	339.82
	Q.5	317	1	7	1.06	0.47	10.30	0.14	116.42	0.27	75.18	426.44
	Q.6	317	1	7	1.10	0.67	7.69	0.14	62.16	0.27	56.15	227.69
	Q.7	317	1	7	1.09	0.63	7.90	0.14	65.21	0.27	57.65	238.86
	Q.8	317	1	6	1.03	0.31	14.07	0.14	221.30	0.27	102.69	810.62
V.5	Q.1	317	1	6	1.34	0.93	3.29	0.14	11.22	0.27	24.03	41.10
	Q.2	317	1	6	1.13	0.59	5.66	0.14	34.86	0.27	41.34	127.70
	Q.3	317	1	6	1.10	0.50	6.50	0.14	48.60	0.27	47.41	178.02
	Q.4	317	1	6	1.11	0.50	6.16	0.14	45.42	0.27	44.96	166.38
	Q.5	317	1	7	1.12	0.60	6.54	0.14	49.64	0.27	47.74	181.84
	Q.6	317	1	7	1.31	0.93	3.82	0.14	15.88	0.27	27.88	58.16
	Q.7	317	1	7	1.32	0.94	3.67	0.14	14.82	0.27	26.80	54.29
	Q.8	317	1	6	1.08	0.44	7.67	0.14	70.09	0.27	55.98	256.75
V.6	Q.1	317	1	5	1.06	0.35	7.89	0.14	71.35	0.27	57.58	261.35
	Q.2	317	1	3	1.02	0.16	9.33	0.14	95.92	0.27	68.09	351.35
	Q.3	317	1	4	1.03	0.24	9.22	0.14	96.92	0.27	67.28	355.02
	Q.4	317	1	4	1.03	0.27	9.42	0.14	97.05	0.27	68.74	355.49
	Q.5	317	1	2	1.01	0.10	10.18	0.14	102.30	0.27	74.31	374.73
	Q.6	317	1	4	1.05	0.31	7.32	0.14	58.25	0.27	53.39	213.38
	Q.7	317	1	3	1.03	0.23	7.20	0.14	54.23	0.27	52.54	198.63
	Q.8	317	1	2	1.00	0.06	17.80	0.14	317.00	0.27	129.96	1161.17
V.7	Q.1	317	1	4	1.05	0.30	6.54	0.14	47.93	0.27	47.74	175.57

		n	Min.	Max.	*M*	*SD*	Skew	SE Skew	Kurtosis	SE Kurtosis	$Z_{Skewness}$	$Z_{Kurtosis}$
	Q.2	317	1	4	1.04	0.27	7.76	0.14	67.92	0.27	56.66	248.78
	Q.3	317	1	4	1.04	0.27	7.76	0.14	67.92	0.27	56.66	248.78
	Q.4	317	1	4	1.04	0.27	7.42	0.14	62.62	0.27	54.14	229.38
	Q.5	317	1	5	1.05	0.33	8.92	0.14	89.99	0.27	65.09	329.62
	Q.6	317	1	4	1.05	0.33	6.96	0.14	51.79	0.27	50.82	189.71
	Q.7	317	1	4	1.04	0.29	8.03	0.14	70.99	0.27	58.64	260.03
	Q.8	317	1	4	1.03	0.22	10.03	0.14	120.41	0.27	73.20	441.05
V.8	Q.1	317	1	8	1.32	0.99	3.90	0.14	16.72	0.27	28.43	61.23
	Q.2	317	1	8	1.15	0.68	6.15	0.14	45.34	0.27	44.86	166.08
	Q.3	317	1	8	1.20	0.79	5.16	0.14	31.13	0.27	37.65	114.04
	Q.4	317	1	8	1.28	0.94	4.10	0.14	18.78	0.27	29.92	68.77
	Q.5	317	1	8	1.21	0.80	5.12	0.14	30.48	0.27	37.37	111.63
	Q.6	317	1	8	1.35	1.10	3.69	0.14	13.74	0.27	26.93	50.33
	Q.7	317	1	8	1.35	1.15	3.83	0.14	15.04	0.27	27.96	55.07
	Q.8	317	1	8	1.09	0.54	9.08	0.14	100.22	0.27	66.29	367.11

Note. V = Vignette on PLHB Scale, Q = Question on PLHB Scale. V.1 = Questionable Initiation Activity; V.2 = Questionable Initiation Activity; V.3 = Questionable Initiation Activity; V.4 = Alcohol-related Initiation Activity; V.5 = Alcohol-related Initiation Activity; V.6 = Unacceptable Initiation Activity; V.7 = Unacceptable Initiation Activity; V.8 = Unacceptable Initiation Activity
Q.1 = Globally Ok; Q.2 = Team Membership is a Privilege; Q.3 = Prove Commitment; Q.4 = Rite of Passage; Q.5 = Accepted Member; Q.6 = Build Unity; Q.7 = Promote Chemistry; Q.8 = Establish a Hierarchy.

To better reflect the latent construct, reduce the influence of unwanted sources of variance, and improve the PLHB Scale's approximation to a normal distribution (Bandalos, 2002; Brown, 2006; Hau & Marsh, 2004; Little et al., 2002; Little et al., 2013), eight homogenous item parcels were created by summing the scores for each repeated item across the eight vignettes (Coffman & MacCallum, 2005; Conroy et al., 2001; West, Finch, & Curran, 1995). For additional information concerning the item parceling performed, see the overview of the PLHB Scale presented in chapter three.

The distribution of PLHB item parcels was also assessed using graphical and statistical methods to test the assumption of normality required for factor analysis (Field, 2009). After visually inspecting the histograms, PLHB item parcels still appeared positively skewed.

Furthermore, all PLHB item parcels continued to be statistically skewed and kurtosed with *z*-scores well above 1.96 (see Table 4; Field, 2009).

Table 4

Descriptive Statistics for the PLHB Item Parcels

	n	Min.	Max.	*M*	*SD*	Skew	SE Skew	Kurtosis	SE Kurtosis	$Z_{Skewness}$	$Z_{Kurtosis}$
Parcel 1	317	8	31	12.03	4.28	1.39	0.14	2.15	0.27	10.12	7.87
Parcel 2	317	8	29	10.62	3.79	1.61	0.14	2.35	0.27	11.72	8.59
Parcel 3	317	8	29	10.65	3.93	1.76	0.14	3.12	0.27	12.86	11.44
Parcel 4	317	8	30	10.97	3.99	1.70	0.14	3.25	0.27	12.42	11.89
Parcel 5	317	8	27	10.44	3.82	1.87	0.14	3.23	0.27	13.67	11.85
Parcel 6	317	8	31	12.63	5.15	1.35	0.14	1.42	0.27	9.84	5.20
Parcel 7	317	8	31	12.43	5.05	1.36	0.14	1.39	0.27	9.96	5.08
Parcel 8	317	8	25	9.35	2.77	2.77	0.14	8.91	0.27	20.24	32.62

Note. Parcel 1 = Globally Ok; Parcel 2 = Team Membership is a Privilege; Parcel 3 = Prove Commitment; Parcel 4 = Rite of Passage; Parcel 5 = Accepted Member; Parcel 6 = Build Unity; Parcel 7 = Promote Chemistry; Parcel 8 = Establish a Hierarchy.

In response to continued non-normality, all PLHB item parcels were then transformed. After applying a number of different transformations, including inverse (1/X; see Table 5), logarithm (Log(X); see Table 6), and square root (√x; see Table 7), the inverse transformation was selected for continued analysis. Recommended as a remedy for severe positive skewness (Tabachnick & Fidell, 2014), the inverse transformation resulted in skewness and kurtosis values most nearest to zero. Following inverse transformation, low scores on the PLHB Scale indicated high perceived legitimacy of hazing behavior and high scores represented low perceived legitimacy of hazing behavior.

Table 5

Descriptive Statistics for the PLHB Item Parcels after Inverse Transformation (1/X)

	n	Min.	Max.	*M*	*SD*	Skew	SE Skew	Kurtosis	SE Kurtosis	$Z_{Skewness}$	$Z_{Kurtosis}$
Parcel 1	317	0.03	0.13	0.09	0.03	-0.15	0.14	-1.18	0.27	-1.11	-4.32
Parcel 2	317	0.03	0.13	0.10	0.03	-0.76	0.14	-0.90	0.27	-5.53	-3.28
Parcel 3	317	0.03	0.13	0.10	0.03	-0.81	0.14	-0.79	0.27	-5.93	-2.88
Parcel 4	317	0.03	0.13	0.10	0.03	-0.60	0.14	-1.02	0.27	-4.34	-3.72
Parcel 5	317	0.04	0.13	0.10	0.03	-0.95	0.14	-0.47	0.27	-6.95	-1.71
Parcel 6	317	0.03	0.13	0.09	0.03	-0.17	0.14	-1.25	0.27	-1.27	-4.56
Parcel 7	317	0.03	0.13	0.09	0.03	-0.23	0.14	-1.22	0.27	-1.68	-4.48
Parcel 8	317	0.04	0.13	0.11	0.02	-1.63	0.14	1.57	0.27	-11.93	5.75

Note. Parcel 1 = Globally Ok; Parcel 2 = Team Membership is a Privilege; Parcel 3 = Prove Commitment; Parcel 4 = Rite of Passage; Parcel 5 = Accepted Member; Parcel 6 = Build Unity; Parcel 7 = Promote Chemistry; Parcel 8 = Establish a Hierarchy.

Table 6

Descriptive Statistics for the PLHB Item Parcels after Log Transformation (Log(X))

	n	Min.	Max.	*M*	*SD*	Skew	SE Skew	Kurtosis	SE Kurtosis	$Z_{Skewness}$	$Z_{Kurtosis}$
Parcel 1	317	0.90	1.49	1.06	0.14	0.64	0.14	-0.32	0.27	4.69	-1.18
Parcel 2	317	0.90	1.46	1.00	0.13	1.08	0.14	0.07	0.27	7.89	0.24
Parcel 3	317	0.90	1.46	1.00	0.13	1.16	0.14	0.34	0.27	8.50	1.24
Parcel 4	317	0.90	1.48	1.02	0.13	1.00	0.14	0.15	0.27	7.32	0.54
Parcel 5	317	0.90	1.43	1.00	0.13	1.32	0.14	0.75	0.27	9.62	2.74
Parcel 6	317	0.90	1.49	1.07	0.16	0.67	0.14	-0.47	0.27	4.88	-1.70
Parcel 7	317	0.90	1.49	1.06	0.16	0.71	0.14	-0.43	0.27	5.20	-1.56
Parcel 8	317	0.90	1.40	0.96	0.10	2.06	0.14	3.83	0.27	15.01	14.04

Note. Parcel 1 = Globally Ok; Parcel 2 = Team Membership is a Privilege; Parcel 3 = Prove Commitment; Parcel 4 = Rite of Passage; Parcel 5 = Accepted Member; Parcel 6 = Build Unity; Parcel 7 = Promote Chemistry; Parcel 8 = Establish a Hierarchy.

Table 7

Descriptive Statistics for the PLHB Item Parcels after Square Root Transformation (√x)

	n	Min.	Max.	*M*	*SD*	Skew	SE Skew	Kurtosis	SE Kurtosis	$Z_{Skewness}$	$Z_{Kurtosis}$
Parcel 1	317	2.83	5.57	3.42	0.58	0.98	0.14	0.61	0.27	7.14	2.24
Parcel 2	317	2.83	5.39	3.22	0.53	1.31	0.14	0.95	0.27	9.57	3.46
Parcel 3	317	2.83	5.39	3.22	0.54	1.42	0.14	1.41	0.27	10.39	5.17
Parcel 4	317	2.83	5.48	3.27	0.55	1.31	0.14	1.32	0.27	9.53	4.84
Parcel 5	317	2.83	5.20	3.19	0.53	1.57	0.14	1.78	0.27	11.45	6.51
Parcel 6	317	2.83	5.57	3.49	0.67	0.99	0.14	0.30	0.27	7.20	1.10
Parcel 7	317	2.83	5.57	3.46	0.66	1.02	0.14	0.32	0.27	7.44	1.17
Parcel 8	317	2.83	5.00	3.03	0.39	2.37	0.14	5.86	0.27	17.28	21.45

Note. Parcel 1 = Globally Ok; Parcel 2 = Team Membership is a Privilege; Parcel 3 = Prove Commitment; Parcel 4 = Rite of Passage; Parcel 5 = Accepted Member; Parcel 6 = Build Unity; Parcel 7 = Promote Chemistry; Parcel 8 = Establish Hierarchy.

Following transformation of PLHB item parcels, the data was screened for both univariate and multivariate outliers since the lack thereof is an assumption of factor analysis (Field, 2009). Following visual inspection, histograms of the transformed PLHB item parcels did not indicate univariate outliers. Furthermore, using SPSS Descriptives, standardized scores in excess of 3.29 at $p < .001$ were also not detected among the transformed PLHB item parcels. Thus, univariate outliers were not found among the transformed PLHB item parcels (Tabachnick & Fidell, 2014).

Suggested by Tabachnick & Fidell (2014), multivariate outliers were assessed via SPSS Regression using Mahalanobis Distance at $p < .001$. Evaluated as X^2, with degrees of freedom equal to the number of variables, a Mahalanobis Distance greater than 26.13 was indicative of a multivariate outlier within the present study. Using such criterion, a total of 15 cases, or 4.6% of the original 329 submissions eligible for analysis, were identified as outliers. Since the data had already been aggregated as well as transformed by this point, all 15 cases were deleted leaving 302 cases for further analysis. Most importantly, 302 cases were still considered adequate for

continued analysis as Tabachnick & Fidell (2014) recommended a conservative sample size of 300 for factor analysis. A summary of the descriptive statistics for the transformed PLHB items parcels following all case deletions can be found in Table 8.

Table 8

Descriptive Statistics for the Transformed PLHB Item Parcels after Case Deletions

	n	Min.	Max.	*M*	*SD*	Skew	SE Skew	Kurtosis	SE Kurtosis	$Z_{Skewness}$	$Z_{Kurtosis}$
Parcel 1	302	0.03	0.13	0.09	0.03	-0.18	0.14	-1.19	0.28	-1.29	-4.26
Parcel 2	302	0.03	0.13	0.10	0.03	-0.78	0.14	-0.85	0.28	-5.54	-3.05
Parcel 3	302	0.03	0.13	0.10	0.03	-0.85	0.14	-0.72	0.28	-6.04	-2.56
Parcel 4	302	0.03	0.13	0.10	0.03	-0.62	0.14	-1.00	0.28	-4.43	-3.57
Parcel 5	302	0.04	0.13	0.10	0.03	-0.95	0.14	-0.46	0.28	-6.79	-1.65
Parcel 6	302	0.03	0.13	0.09	0.03	-0.24	0.14	-1.22	0.28	-1.68	-4.37
Parcel 7	302	0.03	0.13	0.09	0.03	-0.25	0.14	-1.21	0.28	-1.81	-4.31
Parcel 8	302	0.04	0.13	0.11	0.02	-1.63	0.14	1.55	0.28	-11.66	5.53

Note. Parcel 1 = Globally Ok; Parcel 2 = Team Membership is a Privilege; Parcel 3 = Prove Commitment; Parcel 4 = Rite of Passage; Parcel 5 = Accepted Member; Parcel 6 = Build Unity; Parcel 7 = Promote Chemistry; Parcel 8 = Establish a Hierarchy.

Description of the Sample

Following data screening and assumption testing, the sample included 302 NCAA Division I, II, and III college coaches from around the United States (see Table 9 for participant demographics). With a mean age of 39.6 (*SD* = 11.91) years, over half (56.9%, *n* = 172) of the sample reported being 40-years-old or younger. In relation to gender, 59.6% (*n* = 180) of respondents were male and 40.1% (*n* = 121) were female. While a majority of the sample identified as White/Caucasian (85.4%, *n* = 258), 7.3% (*n* = 22) of the sample identified as Black/African American, 2.3% (*n* = 7) as Biracial, 1% (*n* = 3) as Hispanic/Latino, .7% (*n* = 2) as American Indian/Native American, .7% (*n* = 2) as Asian, and 2.6% (*n* = 8) as Other. Almost all of the respondents (98.7%, *n* = 298) reported having a four-year college degree or higher. Moreover, 60.3% (*n* = 182) reported having earned a master's or some other professional degree.

Table 9

Respondent Demographics

Variables	*n*	%
Age (yrs.)		
20 to 30	91	30.1
31 to 40	81	26.8
41 to 50	71	23.5
51 to 60	42	13.9
61 to 70	15	5.0
71 and Above	1	0.3
Missing	1	0.3
Gender		
Male	180	59.6
Female	121	40.1
Other	1	0.3
Race/Ethnicity		
American Indian/Native American	2	0.7
Asian	2	0.7
Black/African American	22	7.3
Hispanic/Latino	3	1.0
White/Caucasian	258	85.4
Biracial	7	2.3
Other	8	2.6
Highest Education Level		
High School Degree/GED	2	0.7
Four-year College Degree	56	18.5
Some Graduate Work	41	13.6
Master's or Professional Degree	182	60.3
Advanced Graduate Work/PhD	19	6.3
Other	2	0.7

Regarding participatory variables (see Table 10), little over half of respondents reported working as a head coach (54%, $n = 163$) and a vast majority reported living in either the Midwest (38.7%, $n = 117$) or Northeast (32.5%, $n = 98$). Each NCAA division was represented in the sample, with 41.7% ($n = 126$) coaching in Division III, 31.5% ($n = 95$) in Division II, and 26.8% ($n = 81$) in Division I. Almost half of the sample (47%, $n = 142$) reported solely coaching

women, while there was an almost even split between respondents who coached men (28.8%, *n* = 87) and respondents who coached both men and women (24.2%, *n* = 73). While 19.5% (*n* = 59) of the sample reported coaching collision sports, 30.5% (*n* = 92) reported coaching limited contact sports and 49.7% (*n* = 150) coached non-contact sports. With a mean of 12.07 (*SD* = 9.34) years in coaching experience, 39.1% (*n* = 118) of the sample reported up to six years of coaching experience at the college level. Interestingly, 91.4% (*n* = 276) reported playing collegiate sports.

Table 10

Respondent Sport-related Demographics

Variables	*n*	%		*n*	%
Coaching Position			Sport Type Coached		
Head Coach	163	54	Non-Contact	150	49.7
Assistant Coach	139	46	Limited Contact	92	30.5
NCAA Division			Collison	59	19.5
Division I	81	26.8	Missing	1	0.3
Division II	95	31.5	Gender Coached		
Division III	126	41.7	Men	87	28.8
U.S. Region			Women	142	47.0
Northeast	98	32.5	Both Men & Women	73	24.2
Midwest	117	38.7	College Student-Athlete		
South	64	21.2	Yes	276	91.4
West	23	7.6	No	26	8.6
College Coaching Experience (yrs.)					
1-3	61	20.2			
4-6	57	18.9			
7-10	41	13.6			
11-15	44	14.6			
16-20	49	16.2			
21-25	19	6.3			
26-30	15	5.0			
31-45	16	5.3			

Preliminary Exploratory Factor Analysis

Using SPSS FACTOR, a preliminary EFA was performed on the eight transformed PLHB item parcels utilizing the responses of 302 college coaches. As the data continued to lack normality following inverse transformation, principal axis factoring (PAF) was employed instead of maximum likelihood (Costello & Osborne, 2005; Fabrigar et al., 1999). Commonly used in published literature (Williams, Brown, & Onsman, 2010), PAF analyzed the communality, or the common variance shared among variables. By solely analyzing the communality, PAF reduced the impact of specific variance and measurement error (Kahn, 2006). The preliminary EFA was used to determine whether the data was suitable for factor analysis by assessing multicollinearity and the factorability of the correlation matrix (Tabachnick & Fidell, 2014; Yong & Pearce, 2013).

Following the preliminary analysis, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) suggested that the sample was suitable for factor analysis as both KMO (.91) and the diagonal elements of the Anti-Correlation matrix (.97, .93, .91, .96, .92, .84, .85, .96) were greater than .50 (Yong & Pearce, 2013). Providing support for the factorability of the correlation matrix, Bartlett's Test of Sphericity also indicated that the intercorrelations present within the correlation matrix were significantly different from zero and large enough for factor analysis, X^2 (28) = 3,984.15, $p < .01$ (Field, 2009). To further determine whether there were patterned relationships present among the variables, the correlation matrix was visually inspected for correlation coefficients below +/- .30 (see Table 11; Tabachnick & Fidell, 2014; Yong & Pearce, 2013). Following inspection, all correlations between the transformed PLHB item parcels were found to be significant and in excess of .30, offering additional support that the correlation matrix was indeed factorable.

Table 11

Correlations, Means, and Standard Deviations of Transformed PLHB Item Parcels

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Parcel 1	-							
Parcel 2	.78**	-						
Parcel 3	.79**	**.92****	-					
Parcel 4	.84**	.83**	.86**	-				
Parcel 5	.78**	.87**	**.90****	.88**	-			
Parcel 6	**.94****	.79**	.79**	.84**	.79**	-		
Parcel 7	**.93****	.79**	.78**	.83**	.79**	**.99****	-	
Parcel 8	.58**	.73**	.74**	.69**	.77**	.60**	.60**	-
M	.09	.10	.10	.10	.10	.09	.09	.11
SD	.03	.03	.03	.03	.03	.03	.03	.02

Note. Correlation Coefficients > .90 are in bold. Determinant of R = 1.53E-006. Parcel 1 = Globally Ok; Parcel 2 = Team Membership is a Privilege; Parcel 3 = Prove Commitment; Parcel 4 = Rite of Passage; Parcel 5 = Accepted Member; Parcel 6 = Build Unity; Parcel 7 = Promote Chemistry; Parcel 8 = Establish a Hierarchy; *M* = Mean; *SD* = Standard Deviation.
*p < .05. **p < .01.

In addition to inspecting the correlation matrix for coefficients below +/- .30, the correlation matrix was also examined for coefficients above +/- .90 (Tabachnick & Fidell, 2014; Yong & Pearce, 2013). While there were several correlation coefficients above .90 present in the matrix, a very large correlation was present between item parcel six ("The purpose is to build unity within the team") and seven ("The purpose is to promote chemistry in the team"), $r = .99$, $p < .01$. Suggestive of multicollinearity, or that variables are too highly correlated and possibly redundant (Field, 2009; Tabachnick & Fidell, 2014; Yong & Pearce, 2013), the determinant of R and squared multiple correlations (SMCs) were then assessed within the output. Common heuristics for multicollinearity include a determinant of R that is smaller than .00001 and SMCs that approach one (Tabachnick & Fidell, 2014). With SMCs of .98 and .98 for item parcel six and seven and a determinant of R equal to 1.53E-6, item parcel six and seven appeared to be highly correlated and possibly redundant.

To further inform the decision to drop one of the collinear item parcels from the EFA (Field, 2009; Tabachnick & Fidell, 2014), it was necessary to develop a better understanding of the multicollinearity present among item parcels. The transformed PLHB item parcels were examined using SPSS Regression for variance inflation factors (VIFs), tolerance statistics, and collinearity diagnostics (Field, 2009). Substantiating what was already suggested by the correlation matrix, the extremely small determinant of R, and SMCs near one, the VIFs for item parcel six and seven were well above 10, respectively at 46.36 and 41.33 (Field, 2009). Related to the VIFs, the tolerance statistics also suggested a serious collinearity problem among item parcel six and seven given that both of their tolerance statistics were below .1 (respectively .02 and .02; Field, 2014). Collinearity diagnostics further confirmed the presence of collinearity as the conditioning index (91.21) for the last dimension was greater than 30 while the variance proportions for both item parcel six (.95) and seven (.94) were greater than .50 (Tabachnick & Fidell, 2014). In total, item parcel six and seven correlated too highly with one another, possibly rendering an unstable matric inversion in factor analysis (Tabachnick & Fidell, 2014).

Final Exploratory Factor Analysis

To address multicollinearity within the data, item parcel deletion was implemented and the EFA was re-run on a total of seven transformed PLHB item parcels as recommended by Field (2009) and Tabachnick and Fidell (2014). Between the two item parcels in question, item parcel six was dropped from the second EFA as it reported the higher variance proportion in the collinearity diagnostics (Tabachnick & Fidell, 2014). Again, the dimensionality of the transformed PLHB item parcels was analyzed using PAF.

Similar to the initial EFA, the sample continued to be sufficient for factor analysis as KMO (.90) and the diagonal elements of the Anti-Correlation matrix (.85, .92, .89, .95, .91, .86,

.96) were greater than .50 (Yong & Pearce, 2013). Bartlett's Test of Sphericity also indicated again that the intercorrelations present within the correlation matrix were large enough for factor analysis, X^2 (21) = 2,845.98, $p < .01$ (Field, 2009). Moreover, following visual inspection of the correlation matrix (see Table 12; Tabachnick & Fidell, 2014; Yong & Pearce, 2013), all correlations between the transformed PLHB item parcels were found to be significant and in excess of .30.

Table 12

Excluding Item Parcel Six, Correlations, Means, and Standard Deviations of the Transformed PLHB Item Parcels

	1	*2*	*3*	*4*	*5*	*7*	*8*
Parcel 1	-						
Parcel 2	.78**	-					
Parcel 3	.79**	**.92****	-				
Parcel 4	.84**	.83**	.86**	-			
Parcel 5	.78**	.87**	**.90****	.88**	-		
Parcel 7	**.93****	.79**	.78**	.83**	.79**	-	
Parcel 8	.58**	.73**	.74**	.69**	.77**	.60**	-
M	.09	.10	.10	.10	.10	.09	.11
SD	.03	.03	.03	.03	.03	.03	.02

Note. Correlation Coefficients > .90 are in bold. Determinant of R = 1.53E-006. Parcel 1 = Globally Ok; Parcel 2 = Team Membership is a Privilege; Parcel 3 = Prove Commitment; Parcel 4 = Rite of Passage; Parcel 5 = Accepted Member; Parcel 7 = Promote Chemistry; Parcel 8 = Establish a Hierarchy; *M* = Mean; *SD* = Standard Deviation.
*p < .05. **p < .01.

After inspecting the correlation matrix for coefficients below +/- .30, the correlation matrix was again inspected for coefficients above +/- .90 (Tabachnick & Fidell, 2014; Yong & Pearce, 2013). Since three coefficients above .90 remained in the correlation matrix, the determinant of R and SMCs were then assessed for continued multicollinearity (Tabachnick & Fidell, 2014). With a determinant of R (7.08E-5) larger than .0001 and lacking SMCs that approached one (see Table 13), evidence for continued multicollinearity was not clear.

To further assess for possible multicollinearity, VIFs, tolerance statistics, and collinearity diagnostics were examined (Field, 2009). Both the VIFs and tolerance statistics failed to detect multicollinearity since no VIF was found to be above 10 and no tolerance statistic was found to be below .1 (Field, 2014). Lastly, the collinearity diagnostics did not indicate multicollinearity since all conditioning indexes greater than 30 lacked two corresponding variance proportions greater than .50 (Tabachnick & Fidell, 2014). Despite the presence of three correlation coefficients above .90, the data set including all but the sixth item parcel appeared to be suitable for EFA.

Two common heuristics were used to determine the number of factors present within the data: Cattell's scree plot test and Kaiser's criteria (Brown, 2006; Costello & Osborne, 2005; Fabrigar et al., 1999; Hair et al., 1995; Williams, Brown, & Onsman, 2012; Tabachnick & Fidell, 2014). Using Kaiser's criteria (eigenvalue = 5.59), a one-factor or unidimensional model was extracted that explained a cumulative variance of 79.86%. Cattell's scree plot test further confirmed the unidimensional model (see Figure 2). Given the large sample of 302 college coaches, the agreement between Kaiser's criteria and the scree plot test, the unidimensional model was retained in the final analysis. It is important to note that since only one factor was detected, rotation was not performed.

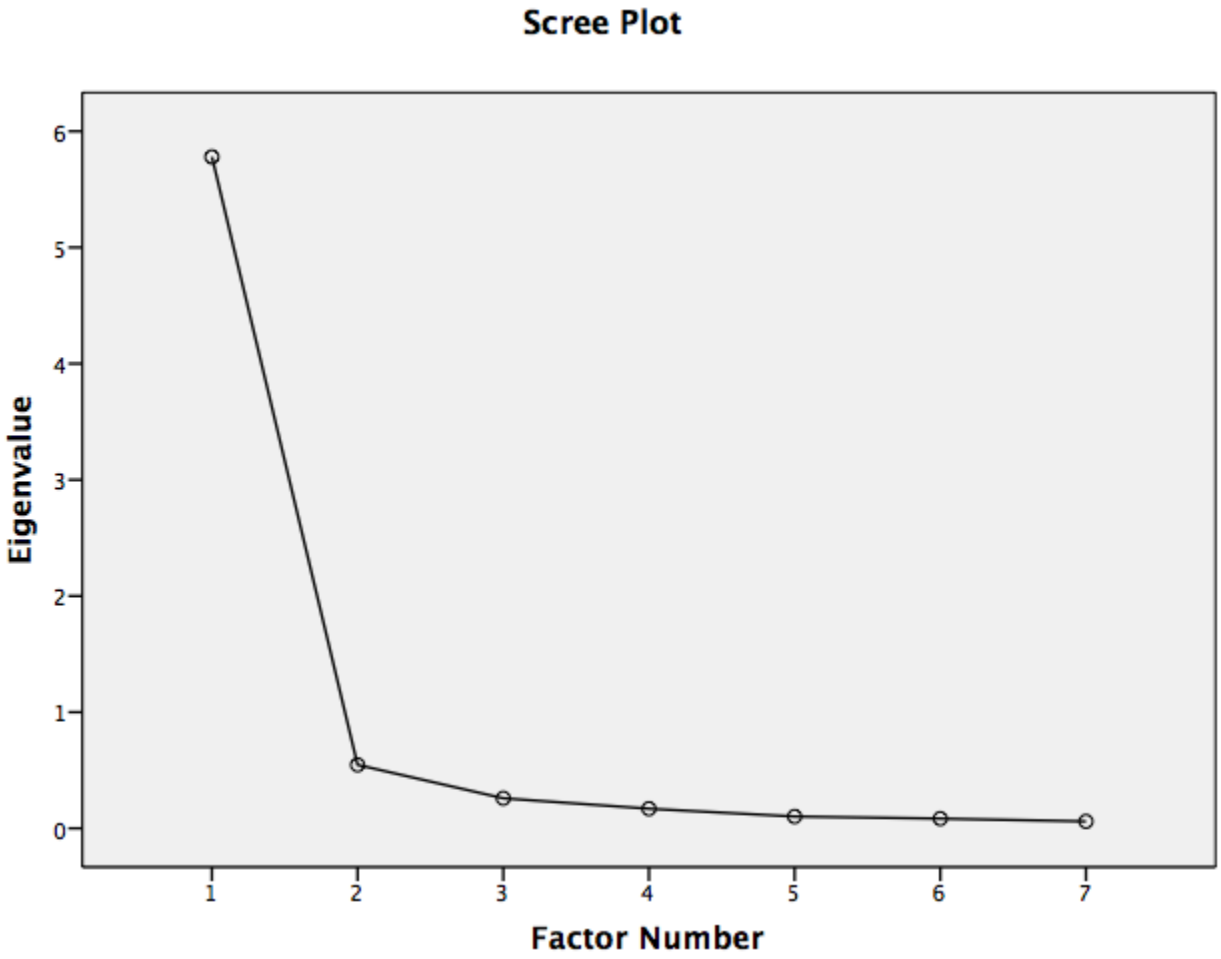

Figure 2: Cattell's Scree plot. This figure further confirms the extraction of a one-factor solution.

Reporting only five (<50%) non-redundant residuals with absolute values greater than .05, the unidimensional model was considered to be a good fit (Yong & Pearce, 2013). As indicated by the high SMCs, the factor was well-defined and internally consistent. The item parcels also appeared to be well-defined by the factor since the communalities tended to be high with a mean level of .8 (>.7; MacCallum et al., 1999; Tabachnick & Fidell, 2014). Since all factor loadings were well above .32, no item parcels were dropped. Also, the factor had more than three indicators (Costello & Osborne, 2005; Tabachnick & Fidell, 2007). Ordered by size of factor loading, Table 13 provides the factor loadings, SMCs, communalities, eigenvalue, and percent of variance for the EFA of the remaining transformed PLHB item parcels.

Table 13

Factor Loadings, SMCs, Communalities (h^2), Eigenvalue, and Percent of Variance for the Exploratory Factor Analysis of the Remaining Transformed PLHB Item Parcels

Item Parcel	Factor 1	SMCs	h^2
Parcel 3	**.94**	.89	.88
Parcel 5	**.94**	.88	.88
Parcel 4	**.93**	.85	.86
Parcel 2	**.92**	.86	.85
Parcel 7	**.88**	.88	.77
Parcel 1	**.88**	.88	.77
Parcel 8	**.75**	.62	.57
Eigenvalue	5.59		
% of Variance	79.86		

Note. Factor loadings > .32 are in bold. Parcel 1 = Globally Ok; Parcel 2 = Team Membership is a Privilege; Parcel 3 = Prove Dedication; Parcel 4 = Rite of Passage; Parcel 5 = Accepted Member; Parcel 7 = Promote Chemistry; Parcel 8 = Establish a Hierarchy.

Reliability

Cronbach's (1951) coefficient alpha was used to assess the internal consistency or composite reliability of the PLHB Scale. Calculated using the transformed PLHB item parcels retained in the final EFA, Cronbach's alpha for the PLHB Scale equaled .96. Given that alpha was greater than .7 (DeVellis, 2003; Field, 2009), the PLHB Scale demonstrated adequate reliability. The removal of item parcel eight, or "The purpose is to establish a hierarchy within the team," would only result in a slightly higher alpha of .97. No other transformed item parcels could be removed for an additional increase in alpha.

Discriminant Validity

To examine the discriminant validity of the PLHB Scale, social desirability was measured to assess how such a construct related to participants' responses on the PLHB Scale. Measured by the Marlowe-Crowne Social Desirability Scale, Form X1 (MCSDS-X1; Strahan & Gerbasi, 1972), social desirability was compared to the PLHB total score, the transformed PLHB item parcels, and reactions to each of the hazing vignettes. Given the non-normality found within

the data, Spearman's correlation coefficients were calculated (see Table 14 for means and standard deviations for social desirability total score, PLHB total score, transformed PLHB item parcels, and vignette composite scores).

While no significant correlation was detected between social desirability and the PLHB total score ($r = .09$, $p > .05$), social desirability was significantly correlated with transformed PLHB item parcel one ("Is it ok for athletes to engage in the scenario described?"), $r = .12$, $p < .05$. As social desirability increased, scores on transformed item parcel one also increased. Due to the inverse transformation, it is important to remember that high scores represented low perceived legitimacy of hazing behavior. Thus, the correlation between social desirability and transformed item parcel one should be interpreted as follows. High social desirability was associated with low perceived legitimacy of hazing behavior. Scores for transformed item parcels two ($r = .04$, $p > .05$), three ($r = .06$, $p > .05$), four ($r = .08$, $p > .05$), five ($r = .06$, $p > .05$), six ($r = .08$, $p > .05$), seven ($r = .09$, $p > .05$), and eight ($r = .02$, $p > .05$) were not significantly related with the social desirability total score.

A significant negative correlation was detected between the composite score for the fifth vignette ("At a team party, the seniors challenged the rookies on the team to a drinking contest.") and social desirability, $r = -.14$, $p < .05$. In regards to the fifth vignette's composite score, as social desirability increased, perceptions of legitimacy concerning the hazing behavior decreased. Composite scores for vignette one ($r = -.08$, $p > .05$), two ($r = -.06$, $p > .05$), three ($r = -.02$, $p > .05$), four ($r = -.06$, $p > .05$), six ($r = -.07$, $p > .05$), seven ($r = -.09$, $p > .05$), and eight ($r = -.05$, $p > .05$) were not significantly related with the social desirability total score. The prior correlations indicated that respondents were not unduly influenced by social desirability in their

answers to the majority of the survey. However, given the low reliability of the MCSDS-X1, it is necessary to interpret such results with caution.

Table 14

Means and Standard Deviations for Discriminant Validity Correlations

Variables	*M*	*SD*		*M*	*SD*
Social desirability Total Score	5.78	1.98	Vignette 1 Composite Score	13.74	10.09
			Vignette 2 Composite Score	21.93	15.37
PLHB Total Score	.80	.19	Vignette 3 Composite Score	8.37	2.43
			Vignette 4 Composite Score	8.56	3.64
Transformed Item Parcel 1	.09	.03	Vignette 5 Composite Score	9.55	4.93
Transformed Item Parcel 2	.10	.03	Vignette 6 Composite Score	8.25	1.48
Transformed Item Parcel 3	.10	.03	Vignette 7 Composite Score	8.37	2.22
Transformed Item Parcel 4	.10	.03	Vignette 8 Composite Score	9.92	6.39
Transformed Item Parcel 5	.10	.03			
Transformed Item Parcel 6	.09	.03			
Transformed Item Parcel 7	.09	.03			
Transformed Item Parcel 8	.11	.02			

CHAPTER 5

Discussion

During the initial development study of the PLHB Scale, individual items were created and underwent expert review. Preliminary analyses offered initial evidence for the reliability, discriminant validity, and concurrent (known-groups) validity of the PLHB Scale (Bigham, 2010). However, it was necessary to further explore the scale's psychometric properties in a new sample of NCAA Division I, II, and III college coaches. Thus, the primary objectives of this study were to: (1) assess the construct validity of the PLHB Scale by examining its factor structure; (2) re-evaluate the scale's internal reliability; and (3) further assess the discriminant validity of the scale by measuring the potential impact of social desirability bias on the respondents' answers as measured by the MCSDS-X1 (Strahan & Gerbasi, 1972).

To examine the construct validity of the PLHB Scale, an EFA was performed to determine the scale's initial factor structure (Brown, 2006; Williams, Brown, & Onsman, 2010). Also demonstrated in the development study (Bigham, 2010), the individual items on the PLHB Scale continued to exhibit significant non-normality. As a result, item parceling and data transformation were required prior to factor analysis (Bandalos, 2002; Brown, 2006; Hau & Marsh, 2004; Little et al., 2002; Little et al., 2013; Tabachnick & Fidell, 2014). To remediate extreme positive skewness, all item parcels were transformed using inverse transformation (Tabachnick & Fidell, 2014). As a result, low scores on the PLHB Scale indicated high perceived legitimacy of hazing behavior whereas high scores indicated low perceived legitimacy of hazing behavior.

A finding unique to the present research study, transformed item parcel six ("The purpose is to build unity within the team.") and seven ("The purpose is to promote chemistry in the team.") were found to be highly correlated and possibly redundant. This result suggests that respondents perceived team unity and team chemistry as highly analogous. To achieve parsimony within the PLHB Scale, transformed item parcel six was dropped from the factor analysis since it reported a higher variance proportion in the collinearity diagnostics than that of item parcel seven (Tabachnick & Fidell, 2014). Future research utilizing the PLHB Scale should no longer include those items that comprise transformed item parcel six.

Following item parceling, data transformation, and item deletion, an EFA utilizing principal-axis factoring was re-administered on the remaining seven transformed PLHB item parcels. Analyzing 302 responses from NCAA Division I, II, and III college coaches, a one-factor solution was extracted from the data that accounted for 79.86% of the variance. This returned results that detailed strong factor loadings well above .32 (Costello & Osborne, 2005), high communalities with a mean of .8 (MacCallum et al., 1999), and more than three variables per factor (Tabachnick & Fidell, 2007). The model appeared to be a good fit and well defined. Reporting a one-factor solution, also commonly referred to as a unidimensional solution, the PLHB Scale appeared to measure a single construct (Field, 2009).

Transformed item parcel eight demonstrated the lowest factor loading (.75) and communality (.57) when compared to the other transformed item parcels. While item parcel eight met the requisite criteria for continued inclusion in the factor analysis (Tabachnick & Fidell, 2014), respondents may have been confused by the wording used in this item. Focused on assessing the legitimacy of the justification that hazing assists in establishing a hierarchy on a team (Keating et al., 2005), the use of the term "hierarchy" may have resulted in a lower factor

loading and communality than that of the other transformed item parcels (Brown, 2006). To clarify, and possibly strengthen transformed item parcel eight, the term "pecking-order" should replace "hierarchy" in future research. While both terms express the same rationale legitimizing sport-related hazing, "pecking-order" is more context appropriate for NCAA Division I, II, and III college coaches.

The PLHB Scale continued to demonstrate adequate reliability in the present study by demonstrating a slightly higher reliability score than that reported in the development study (alpha = .95; Bigham, 2010). Reporting a Cronbach's alpha of .96, the PLHB Scale appeared to consistently reflect the construct that the scale purports to measure (Field, 2009). Also similar to the development study (Bigham, 2010), transformed item parcel eight was once again identified as a possible candidate for item deletion resulting in an improvement in alpha. While deletion of transformed item parcel eight would result in an increase in reliability, the effect would only offer a slight improvement. Furthermore, it may prove more prudent to change and clarify the wording of item parcel eight before resorting to item deletion (Mitchell & Jolley, 2013o). Again, by replacing the term "hierarchy" with "pecking-order," the psychometrics may improve.

To further examine the discriminant validity of the PLHB Scale, non-parametric correlations between the PLHB Scale and the MCSDS-X1 were calculated. Evaluating for potential response bias, or "a systematic tendency to respond to a range of questionnaire items on some basis other than the specific item content" (Paulhus, 1991, p. 17), the objective behind the correlations was to determine whether coaches demonstrated a tendency to respond in a socially desirable manner when completing the PLHB Scale (Mitchell & Jolley, 2013). Such correlations not only suggested that the PLHB total score represented a construct separate from that measured

by the MCSDS-X1, but also suggested that social desirability asserted only limited influence on the transformed item parcels and the responses to the hazing vignettes.

Of the seven transformed item parcels, social desirability only correlated with item parcel one ($r = .12$, $p < .05$), which broadly assessed perceived legitimacy of hazing behavior by asking in a general sense if it is ok for athletes to engage in the hazing behavior depicted. The presence of a small correlation between social desirability and transformed item parcel one indicated that the coaches may have responded in a more socially acceptable manner rather than providing their true perception of the depicted behavior. However, given the large sample size, the small correlation, and the low reliability of the MCSDS-X1, the items comprising transformed item parcel one should remain unaltered in the PLHB Scale until additional evidence suggesting their deletion is obtained.

Similar to the transformed item parcels, only one vignette correlated with social desirability. Interestingly, vignette five negatively correlated with social desirability ($r = -.14$, $p < .05$). One of two alcohol-related hazing vignettes on the PLHB Scale, vignette five reads as follows: "At a team party, the seniors challenged the rookies on the team to a drinking contest." As indicated by the negative correlation, as socially desirable responding increased, the perceptions of legitimacy concerning the hazing behavior depicted decreased.

Remarkably, this study failed to detect a significant correlation between social desirability and the other alcohol-related hazing vignette included on the PLHB Scale. The second alcohol-related hazing vignette, which presents a more overt, forced consumption of alcohol, reads as follows: "At the conclusion of pre-season training, the seniors purchased a large amount of alcohol for the rookies to consume at the team party. According to the seniors, it was the rookies' job to finish the alcohol prior to the end of the night."

When comparing the two alcohol-related hazing vignettes, respondents may have found the context of a drinking game between seniors and rookies to be more collegial and less concerning. The incidence of alcohol-related hazing behaviors appears to support the findings of this study, offering analogous findings. According to Allan and Madden (2012), while 47% of sampled student-athletes reported participating in hazing-related drinking games, only 23% reported drinking large amounts of alcohol to the point of getting sick. Whether more overt or covert in their delivery, alcohol-related hazing behaviors are still high-risk behaviors, illegal for most college students, and may result in binge drinking, alcohol poisoning, and even death.

The Marlowe-Crowne Social Desirability Scale is considered to be the most commonly used measure to assess social desirability (Beretvas, Meyers, & Leite, 2002). Due to its low reliability in the present study, however, all related findings should be interpreted with caution (.56<.7; Field, 2009). To limit attrition related to survey length (DeVellis, 2003), the full 33-item MCSDS was not used in the current study. Although the MCSDS-X1 has been found to be highly correlated with the full 33-item measure (Fisher & Fick, 1993), research performed by Beretvas, Meyers, and Leite (2002) suggested a positive correlation between reliability and the length of the MCSDS. To continue to examine the discriminant validity of the PLHB Scale, additional research utilizing the full 33-item version of the MCSDS is required.

Lastly, when compared to the development study, it is important to note that respondents did not perceive the hazing behaviors depicted in the PLHB Scale as legitimate. In the present study, the mean of the PLHB total score was .80 (*SD* = .19; range = .3 - 1), whereas the development study reported a mean of .61 (*SD* = .15; range = .17 - .78). While this study cannot provide a definitive explanation for the change in hazing-related perceptions, the change is

certainly promising as coaches substantially influence team culture and climate through their position of authority (Bronfenbrenner, 1977).

When comparing current scores to past results of the PLHB Scale, it is also necessary to examine whether the discrepancy between total mean scores resulted from sampling error. Though the current study included a balance of head and assistant college coaches, the sample lacked diversity in both gender and sport type coached. Approximately half of the respondents reported coaching women's team, whereas only 28.8% reported coaching men's teams. Only 19.5% of the respondents reported coaching collision sports (i.e., football, ice hockey, lacrosse, water polo) as opposed to non-contact (49.7%) and limited-contact sports (30.5%). With higher frequencies of hazing behaviors reported on men's teams and in collision sports, previous literature suggested that males and those involved in high-contact sports would report higher levels of PLHB (Hoover, 1999; Allan & Madden, 2008). Given the lack of diversity in the sample, it is possible that this study was limited in the range of responses collected.

Strengths of the Study

A significant strength of this study is the sample size. By obtaining a sample size of 302 college coaches after data screening and case deletion, the sample was large enough to sustain a factor analysis (Tabachnick & Fidell, 2014). The present study also demonstrated improvements in start and completion rates when compared to the development study. Whereas the development study reported a response rate of approximately 8%, the present study documented a start rate of 13.3% and a completion rate of 74%. The lower response rate reported in the development study may be attributed to the study's limited methodology. Specifically, the preliminary study did not implement methodological strategies associated with higher response

rates, including the use of incentives and the application of short instruments (Sinkowitz-Cochran, 2013).

The improvement in both the start and completion rates in the current study is most likely due to improved recruitment and data collection procedures. Using online data collection that incorporated personalized recruitment emails, individualized survey links, and follow-up reminder emails, the current study encouraged greater participation from an expansive and geographically diverse population of college coaches. In addition to intentionally keeping the survey length short and offering an incentives drawing, the use of completeness checks, adaptive questioning, and a progress bar may have also supported the obtainment of more complete data. By field testing the web-based survey for clarity and technical functionality, data collection occurred over a combined 12-week period without defect.

Limitations of the Study

In addition to the low reliability of the MCSDS-X1, another limitation included the methodological dependence on Internet data collection (Kaye & Johnson, 1999; Kongsved et al., 2007; Miller et al., 2002; Schaefer & Dillman, 1998). Since participation was only solicited from college coaches with published and active email accounts, the results may not be representative of all NCAA college coaches. To limit such sampling bias, prior research recommended adopting a multimodal approach to administration of the survey and data collection. By relying on both a web-based survey and a traditional paper-pencil form sent through the mail, possible sampling bias could have been alleviated and response rates improved (Fielding, Lee, & Blank, 2008). However, since the psychometric properties of the web-based version of the PLHB Scale potentially vary from those properties of the paper-pencil version, data collection occurred solely over the Internet.

Other limitations of this study included the high rates of non-response and attrition. Despite being higher than what the development study obtained, this study still demonstrated a low start rate of 13.3%. Out of the 3,221 college coaches solicited to participate, only 429 entered into the survey and responded to the informed consent. Out of those 429 college coaches, 70 (16.3%) stopped responding mid-way through and did not complete the web-based survey. Despite the utilization of a probability-based sampling procedure, this study ultimately depended on the coaches' good will to not only participate but complete the research survey (Fricker, 2008).

The sample was also limited in that it was mostly comprised of highly educated, Caucasian males from the Northeast and Midwest regions of the United States. The sample not only lacked diversity in regards to race and/or ethnicity, gender, and region, but it also lacked diversity regarding certain respondent participatory variables. As stated previously, coaches of women's teams and coaches of non-contact and limited-contact sports constituted an overwhelming majority of the respondents. Simply stated, the sample lacked diversity in gender and sport type coached. Within quantitative research, a primary objective includes drawing conclusions beyond the data collected and generalizing such results to a broader population. With high rates of non-response and attrition as well as the limited diversity in the sample, the external validity of this research is cautiously limited to the sample collected.

Related to non-response and attrition, the generalizability is also limited in that the number of withdrawals could not be calculated due to an IRB-imposed constraint on the study. The IRB required that all participants be given the opportunity to either submit or discard their responses following the debriefing (by selecting one of two buttons located at the bottom of the screen). Unfortunately, there was no way to determine the number of coaches who chose to

discard their data. Given the controversy that surrounds the topic of hazing in sport, coaches who declined submission of their responses could have maintained significantly different views from those coaches who agreed to submit their responses. In total, the IRB-mandated data collection procedure may have negatively impacted respondent drop-out among certain subsets of college coaches. In future research using the PLHB Scale, alternative data collection methods should be utilized to account for possible non-response, attrition, and withdrawal.

Research Implications and Future Directions

Given the high occurrence of hazing within college sports (Allan & Madden, 2012; Hoover, 1999), research efforts must persist so that these incidences can be prevented in the future. Despite the influential role that college coaches maintain within the sport context, limited research existed addressing college coaches' awareness of and approach to dealing with hazing. Of the prior research focused on college coaches, the methodology was too direct in inquiring about awareness of and/or involvement in hazing . Whether the results of such research reflected impression management, the desire to avoid self-incrimination, or the genuine lack of knowledge and awareness concerning the social phenomenon of hazing, discrepancies existed between coaches' self-report and those of student-athletes regarding the occurrence of and engagement in sport-related hazing (Allan & Madden, 2008; Hoover, 1999; Kowalski & Waldron, 2010).

To address the limitations found in prior research, this study sought to further validate a scale that may be used to advance our understanding of where college coaches stand concerning sport-related hazing. With a better understanding of college coaches' perceptions of hazing, key organizations and personnel, including the NCAA, colleges/universities, and counseling psychologists, will be more informed when developing appropriate interventions and anti-hazing

programming. More specifically, it will be possible to develop programming and interventions that address hazing from a top-down approach.

Counseling psychologists, who are most likely to be employed in university settings (Goodyear et al., 2008), are uniquely qualified to address hazing in collegiate sports. Trained to address both normal developmental issues as well as problems that are more severe in nature (Munley et al., 2004), counseling psychologists are qualified via training and licensure to: 1) engage in hazing prevention efforts; and 2) intervene and treat all emotional, social, educational, health-related, and organizational concerns that are either directly or indirectly related to hazing. Informed by the current research study, it is through consultation with college coaches that counseling psychologists can specifically provide interventions focused on the prevention of hazing and the creation of a positive and supportive team culture. In addition to providing education on hazing and the associated consequences, counseling psychologists may guide college coaches in replacing traditional hazing initiation rituals with more inclusive and positive orientation experiences (Johnson, 2009).

In the short term, the primary implication of this study is the continued development of the first psychometrically sound instrument to measure perceived legitimacy of hazing behavior in sport. Having demonstrated initial reliability, discriminant validity, and concurrent validity in the development study, the PLHB Scale continued to demonstrate sound psychometric properties with regard to reliability and construct validity in the present study. However, additional research is still warranted on the PLHB Scale since the scale's psychometric properties are not yet robust enough for research purposes. Rather, further refinement and testing is required.

While the PLHB Scale was found to be highly reliable and unidimensional in nature, there is still uncertainty as to whether the results would generalize to a more diverse and

representative sample of NCAA Division I, II, and III college coaches. While the EFA suggested the existence of a unidimensional structure, whether the PLHB Scale specifically measures perceptions of legitimacy that surround hazing behavior in sport remains in question. Without additional empirical evidence, primarily convergent and discriminant validity, the PLHB Scale may actually assess a different construct from what it purports to measure.

To further develop and validate the PLHB Scale, future research should seek to confirm the scale's unidimensional factor structure by obtaining a more diverse and representative sample of college coaches. Such research should rely on a confirmatory factor analysis to test whether the unidimensional factor model continues to be dependable given a more representative sample and the recommended item alterations and deletions. For the purposes of parsimony, clarity, and the potential for improved reliability, all items comprising item parcel six should be dropped from the PLHB Scale while those items within item parcel eight should be reworded to include "pecking-order" instead of "hierarchy."

To provide additional empirical evidence that the PLHB Scale measures what it actually asserts to measure, future research should focus on examining the convergent and discriminant validity of the PLHB Scale. Deviant overconformity to the sport ethic, where dominance and aggression is often highlighted and embraced (Coakley, 2007; Waldron and Krane, 2005), should be considered when examining convergent validity, as higher levels of PLHB should in theory be correlated with increases in dominance and/or sport-related aggression. Also previously noted, future research should continue to examine the impact of social desirability bias on the PLHB Scale using the 33-item measure of the MCSDS. Lastly, in addition to exploring the potential impact of vignette randomization on socially desirable responding, attrition, and withdrawal, future research efforts should also be performed to determine how the paper-pencil version of the

PLHB Scale compares to the online version. Does the paper-pencil version also demonstrate adequate and comparable reliability as well as discriminant, concurrent, and construct validity?

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APPENDIX A

Initial Recruitment Email

Dear Coach :

I am a graduate student under the direction of Dr. Edward Delgado-Romero in the Department of Counseling and Human Development Services at The University of Georgia. As one of the final requirements that I have remaining for my degree, I invite you to participate in a research study titled "Coaches' Perceptions of Athlete Behaviors." The purpose of this study is to investigate college coaches' perceptions of athlete behaviors exhibited within the sport context.

The link to the survey is:

<ENTER SURVEY LINK>

Your participation will involve answering a series of questions online and should only take about 15 minutes to complete. In addition to responding to a number of statements concerning personal attitudes and traits, you will also be asked to read several sport-related scenarios and then provide your opinions regarding such scenarios. While there are no known risks or discomforts associated with this research, findings from this project may further inform the development of programming within college athletics.

Following the survey, you will have the opportunity to enter into a drawing to receive one of three $25 Visa gift cards for your time and effort. If you do not wish to participate in this research study but would like to enter into the drawing, go to <ENTER SURVEY LINK>.

If you have any questions about this research project, please feel free to send an email to me at bighaml@uga.edu or to Dr. Edward Delgado-Romero at edelgado@uga.edu. Thank you for your consideration and your participation is greatly appreciated!

Sincerely,

Lauren Bigham
Doctoral Candidate, Counseling Psychology
The University of Georgia

Follow the link to opt out of future emails:
<ENTER OPT OUT LINK>

APPENDIX B

Second Recruitment Email

Dear Coach :

My name is Lauren Bigham. I am a graduate student under the direction of Dr. Edward Delgado-Romero in the Department of Counseling and Human Development Services at The University of Georgia. I contacted you two weeks ago concerning participation in a research study titled "Coaches' Perceptions of Athlete Behaviors." The purpose of this study is to investigate college coaches' perceptions of athlete behaviors exhibited within the sport context. If possible, I would greatly appreciate your participation.

The link to the survey is:

<ENTER SURVEY LINK>

Your participation will involve answering a series of questions online and should only take about 15 minutes to complete. In addition to responding to a number of statements concerning personal attitudes and traits, you will also be asked to read several sport-related scenarios and then provide your opinions regarding such scenarios. While there are no known risks or discomforts associated with this research, findings from this project may further inform the development of programming within college athletics.

Following the survey, you will have the opportunity to enter into a drawing to receive one of three $25 Visa gift cards for your time and effort. If you do not wish to participate in this research study but would like to enter into the drawing, go to <ENTER SURVEY LINK>.

If you have any questions about this research project, please feel free to send an email to me at bighaml@uga.edu or to Dr. Edward Delgado-Romero at edelgado@uga.edu. Thank you for your consideration and your participation is greatly appreciated!

Sincerely,

Lauren Bigham
Doctoral Candidate, Counseling Psychology
The University of Georgia

Follow the link to opt out of future emails:
<ENTER OPT OUT LINK>

APPENDIX C

Third Recruitment Email

Dear Coach :

My name is Lauren Bigham. I am a graduate student under the direction of Dr. Edward Delgado-Romero in the Department of Counseling and Human Development Services at The University of Georgia. As one of the final requirements that I have remaining for my degree, I would appreciate your participation in my research study titled "Coaches' Perceptions of Athlete Behaviors." The purpose of this study is to investigate college coaches' perceptions of athlete behaviors exhibited within the sport context.

The link to the survey is:

<ENTER SURVEY LINK>

Your participation will involve answering a series of questions online and should only take about 15 minutes to complete. In addition to responding to a number of statements concerning personal attitudes and traits, you will also be asked to read several sport-related scenarios and then provide your opinions regarding such scenarios. While there are no known risks or discomforts associated with this research, findings from this project may further inform the development of programming within college athletics.

Following the survey, you will have the opportunity to enter into a drawing to receive one of three $25 Visa gift cards for your time and effort. If you do not wish to participate in this research study but would like to enter into the drawing, go to <ENTER SURVEY LINK>.

If you have any questions about this research project, please feel free to send an email to me at bighaml@uga.edu or to Dr. Edward Delgado-Romero at edelgado@uga.edu. Thank you for your consideration and your participation is greatly appreciated!

Sincerely,

Lauren Bigham
Doctoral Candidate, Counseling Psychology
The University of Georgia

Follow the link to opt out of future emails:
<ENTER OPT OUT LINK>

APPENDIX D

Informed Consent

Date:

Dear Coach :

I am a graduate student under the direction of Dr. Edward Delgado-Romero in the Department of Counseling and Human Development Services at The University of Georgia. I invite you to participate in a research study titled "Coaches' Perceptions of Athlete Behavior." The purpose of this study is to investigate college coaches' perceptions of the behaviors that athletes exhibit within the sport context.

To consent to participate in this research study, you must be 18 years of age or older. You must also be a NCAA Division I, II, or III head/assistant collegiate coach. Individuals who have previously participated in a research study assessing college coaches' perceptions of athlete behavior will be excluded from participating in this study.

Your participation will involve answering a series of questions online and should only take about 15 minutes to complete. In addition to responding to a number of statements concerning personal attitudes and traits, you will also be asked to read several sport-related scenarios and then provide your opinions regarding such scenarios. Your involvement in this study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. If you decide to stop or withdraw from the study, any information collected from you will be discarded and not kept as part of the study. At the conclusion of the study, you will also have the opportunity to formally submit your responses for inclusion in the study or discard such information. Completion and submission of the survey implies that you agree to participate and your data may be used in this research.

While the information that you provide in the study will be handled confidentially, there is a limit to the confidentiality that can be guaranteed due to the technology itself. Prior to being downloaded, IP addresses and any other identifiable information will be stripped from the data. Once downloaded, recovered surveys will be stored on a secure password protected drive and the researchers will be the only individuals with access to such drive.

The findings from this project may provide information that will further inform the development and implementation of educational programming within collegiate athletics. There are no known risks or discomforts associated with this research. Following the survey, you will have the opportunity to enter into a drawing to receive one of three $25 Visa gift cards. If you do not wish

to participate in this research study but would like to enter into the drawing, go to <ENTER SURVEY LINK>.

In order to make this study a valid one, some information about the study will be withheld until completion of the study. If you have any questions about this research project, please feel free to send an email to me at bighaml@uga.edu or to Dr. Edward Delgado-Romero at edelgado@uga.edu. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 609 Boyd GSRC, Athens, Georgia 30602; telephone (706) 542-3199; email address irb@uga.edu.

Thank you for your consideration!

Sincerely,

Lauren Bigham, Ed.S.
Doctoral Candidate, Counseling Psychology
Department of Counseling and Human Development Services
The University of Georgia

I have read and understood the above consent letter, and desire of my own free will to participate in this study.

- Accept
- Decline

APPENDIX E

Screening Items

1. Are you a NCAA Division I, II, or III head/assistant college coach?
    - Yes
    - No

2. Are you 18 years of age or older?
    - Yes
    - No

3. Have you participated in a research study assessing college coaches' perceptions of athlete behavior?
    - No
    - I cannot recall
    - Yes

APPENDIX F

Perceived Legitimacy of Hazing Behavior Scale

Instructions: Please read through the following scenarios. After each of the scenarios, and on a scale from 1(Never OK) to 8 (Always OK), answer the subsequent questions to reflect your opinions as accurately as possible. As there are no right or wrong answers, please answer honestly and to the best of your ability. Note: Once you click on the CONTINUE button located at the bottom of the screen, you will be unable to return to the previous page.

Scenario 1

The day before the first game of the season, the seniors on the team had the rookies walk around campus dressed in clown costumes.

1. Is it OK for athletes to engage in the scenario described?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Is it OK for athletes to engage in the scenario described if …

2. The purpose is to enforce the notion that team membership is a privilege?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

3. The purpose is for new members to prove their commitment to the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

4. The purpose is to be an important rite of passage?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

5. The purpose is to become an accepted member of the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

6. The purpose is to build unity within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

7. The purpose is to promote chemistry in the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

8. The purpose is to establish a hierarchy within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Scenario 2

During a team dinner held in the main dining hall on campus, the rookies were instructed by the seniors to stand up and sing the school's fight song prior to eating.

9. Is it OK for athletes to engage in the scenario described?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Is it OK for athletes to engage in the scenario described if …

10. The purpose is to enforce the notion that team membership is a privilege?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

11. The purpose is for new members to prove their commitment to the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

12. The purpose is to be an important rite of passage?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

13. The purpose is to become an accepted member of the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

14. The purpose is to build unity within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

15. The purpose is to promote chemistry in the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

16. The purpose is to establish a hierarchy within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Scenario 3

During pre-season training, the seniors took the rookies to a tattoo parlor located downtown. While at the tattoo parlor, the rookies were instructed to get matching tattoos.

17. Is it OK for athletes to engage in the scenario described?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Is it OK for athletes to engage in the scenario described if …

18. The purpose is to enforce the notion that team membership is a privilege?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

19. The purpose is for new members to prove their commitment to the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

20. The purpose is to be an important rite of passage?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

21. The purpose is to become an accepted member of the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

22. The purpose is to build unity within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

23. The purpose is to promote chemistry in the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

24. The purpose is to establish a hierarchy within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Scenario 4

At the conclusion of pre-season training, the seniors purchased a large amount of alcohol for the rookies to consume at the team party. According to the seniors, it was the rookies' job to finish the alcohol prior to the end of the night.

25. Is it OK for athletes to engage in the scenario described?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Is it OK for athletes to engage in the scenario described if …

26. The purpose is to enforce the notion that team membership is a privilege?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

27. The purpose is for new members to prove their commitment to the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

28. The purpose is to be an important rite of passage?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

29. The purpose is to become an accepted member of the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

30. The purpose is to build unity within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

31. The purpose is to promote chemistry in the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

32. The purpose is to establish a hierarchy within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Scenario 5

At a team party, the seniors challenged the rookies on the team to a drinking contest.

33. Is it OK for athletes to engage in the scenario described?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Is it OK for athletes to engage in the scenario described if …

34. The purpose is to enforce the notion that team membership is a privilege?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

35. The purpose is for new members to prove their commitment to the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

36. The purpose is to be an important rite of passage?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

37. The purpose is to become an accepted member of the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

38. The purpose is to build unity within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

39. The purpose is to promote chemistry in the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

40. The purpose is to establish a hierarchy within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Scenario 6

The night before the big game, the seniors had the rookies go to the opposition's athletic complex and steal something of value.

41. Is it OK for athletes to engage in the scenario described?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Is it OK for athletes to engage in the scenario described if …

42. The purpose is to enforce the notion that team membership is a privilege?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

43. The purpose is for new members to prove their commitment to the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

44. The purpose is to be an important rite of passage?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

45. The purpose is to become an accepted member of the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

46. The purpose is to build unity within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

47. The purpose is to promote chemistry in the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

48. The purpose is to establish a hierarchy within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Scenario 7

When traveling to a pre-season away game, the rookies were directed towards the back of the bus by the seniors. The rookies were then pushed into the bus bathroom and confined there until the team arrived at the competition site.

49. Is it OK for athletes to engage in the scenario described?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Is it OK for athletes to engage in the scenario described if …

50. The purpose is to enforce the notion that team membership is a privilege?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

51. The purpose is for new members to prove their commitment to the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

52. The purpose is to be an important rite of passage?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

53. The purpose is to become an accepted member of the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

54. The purpose is to build unity within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

55. The purpose is to promote chemistry in the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

56. The purpose is to establish a hierarchy within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Scenario 8

After a team dinner, the seniors gathered up and blindfolded all of the rookies. The rookies were then dropped off 3 miles away from campus and instructed to find their way back within the hour.

57. Is it OK for athletes to engage in the scenario described?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Is it OK for athletes to engage in the scenario described if …

58. The purpose is to enforce the notion that team membership is a privilege?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

59. The purpose is for new members to prove their commitment to the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

60. The purpose is to be an important rite of passage?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

61. The purpose is to become an accepted member of the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

62. The purpose is to build unity within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

63. The purpose is to promote chemistry in the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

64. The purpose is to establish a hierarchy within the team?

Never OK		Seldom OK		Often OK		Always OK	
1	2	3	4	5	6	7	8

Scoring Instructions:

As the responses on the PLHB scale are traditionally extremely skewed – the following steps should be taken to make the distribution more normal.

1. Create item parcels for each of the 8 repeated items by summing the scores for each item across the eight scenarios.
2. Calculate the reciprocal of each item parcel.
3. Sum the reciprocals of the item parcels.

When relying on this method, the *low scores* represent perceptions that the hazing behavior was *more legitimate* and *high scores* represent perceptions that the hazing behavior was *less legitimate*.

This scoring method is based on the methods that Conroy et al. (2001) proposed for the Sport Behavior Inventory.

APPENDIX G

Marlowe-Crowne Social Desirability Scale – X1

Directions: Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is True or False as it pertains to you personally. It's best to go with your first judgment and not spend too long mulling over any one question. Please select True or False for each item on the scale.

1. I like to gossip at times.
   - True
   - False

2. There have been occasions when I took advantage of someone.
   - True
   - False

3. I'm always willing to admit it when I make a mistake.
   - True
   - False

4. I always try to practice what I preach.
   - True
   - False

5. I sometimes try to get even rather than forgive and forget.
   - True
   - False

6. At times I have really insisted on having things my own way.
   - True
   - False

7. There have been occasions when I felt like smashing things.
   - True
   - False

8. I never resent being asked to return a favor.
   - True
   - False

9. I have never been irked when people express ideas very different from my own.
   - True
   - False

10. I have never deliberately said something that hurt someone's feelings.
   - True
   - False

Scoring Instructions:

Initially, all respondents earn a score of zero (0) for 'False' and one (1) for 'True.' However, items 1, 2, 5, 6, and 7 are reverse-scored. After items are reverse-scored, the scores are then summed to produce a total social desirability score.

APPENDIX H

Demographics Questionnaire

Instructions: Please fill in the following information.

- Age
  - _____
- Gender:
  - Male
  - Female
  - _____ (fill in)
- Would you describe yourself as:
  - American Indian/Native American
  - Asian
  - Black/African American
  - Hispanic/Latino
  - White/Caucasian
  - Pacific Islander
  - Biracial
  - _____ (fill in)
- Highest Education Level:
  - Completed high school or the equivalent (GED)
  - Some college, but have not finished
  - Two-year college degree (A.A./A.S.)
  - Four-year college degree (B.A./B.S.)
  - Some graduate work
  - Completed Master's or professional degree
  - Advanced graduate work or PhD
  - _____ (fill in)
- Do you work as a head or assistant coach?
  - Head coach
  - Assistant coach
- What NCAA division do you coach in?
  - Division I
  - Division II

  - Division III

- What region of the United States do you coach in?
  - Northeast
  - Midwest
  - South
  - West

- In years, how long have you been coaching at the college level?
  - _____

- Indicate the primary sport that you coach:
  - Cross-country
  - Field hockey
  - Football
  - Soccer
  - Volleyball
  - Water polo
  - Basketball
  - Bowling
  - Fencing
  - Gymnastics
  - Ice hockey
  - Rifle
  - Skiing
  - Swimming and diving
  - Track and field
  - Baseball
  - Softball
  - Golf
  - Lacrosse
  - Rowing
  - Tennis
  - Wrestling
  - Beach Volleyball
  - _____ (fill in the blank)

- Do you coach men, women, or both?
  - Men
  - Women
  - Both

- Prior to coaching at the college level, did you participate in college sports as a student-athlete?
  - Yes
  - No

APPENDIX I

Debriefing Form

Study Title: Coaches' Perceptions of Athlete Behavior

Thank you for your participation in this research study. For this study, it was important that we withhold some information from you about certain aspects of the study. Now that your participation is complete, we will describe the withheld information to you, why it was important to have the information withheld, and provide you with the opportunity to make a decision on whether you would like to have your data included in this study.

What You Should Know About This Study
Exploring coaches' perceptions of athlete behaviors, this research study specifically focuses on how college coaches perceive sport-related hazing behaviors. Since the topic of 'hazing' often elicits a wide range of strong opinions, it was necessary to withhold some information in order to obtain participants' unbiased reactions. The objective of this research study is NOT to investigate the occurrence of hazing or to determine an individual's awareness of or participation in hazing activities. Rather, the intention of this research study is to explore how coaches perceive hazing behaviors when performed in a sport context. Please do not disclose the purpose of this research to anyone who might participate in this research study in the future, as disclosure of the study's purpose could unintentionally affect the results of the study.

Right to Withdraw Data
You may choose to withdraw the data that you provided prior to debriefing, without penalty or loss of benefits to which you are otherwise entitled. Whether you agree or do not agree to have your data used for this study, you will still be directed to the incentives drawing (for one of three $25 gift cards) by clicking on the CONTINUE button located at the bottom of the page.

Please indicate below if you do, or do not, give permission to have your data included in the study:
_____I give permission for the data collected from or about me to be included in the study.
_____I DO NOT give permission for the data collected from or about me to be included in the study.

If You Have Questions
The main researcher conducting this study is Lauren Bigham, a graduate student at the University of Georgia's Department of Counseling and Human Development Services. If you have any questions about this research project, please feel free to send an email to Lauren Bigham at bighaml@uga.edu or to Dr. Edward Delgado-Romero at edelgado@uga.edu. If you have any questions or concerns regarding your rights as a research participant in this study, you may contact the Institutional Review Board (IRB) Chairperson at 706.542.3199 or irb@uga.edu.

APPENDIX J

Incentives Drawing

Upon completion of this survey, you will be entered into a drawing to be conducted on <MONTH DAY, 2016> for one of three $25 Visa gift cards. The drawing will be performed by Lauren Bigham, a doctoral candidate in the Department of Counseling and Human Development Services at The University of Georgia. Immediately following the drawing, winners will be notified by email and their mailing addresses will be requested. The winners will also be provided with information on when to expect the prizes to arrive.

To participate in the drawing, you must be eighteen (18) years of age or older. As the drawing is open to all individuals, entry is not contingent on participation in the research study titled "Coaches' Perceptions of Athlete Behaviors." Moreover, a person remains eligible for the drawing even if he/she withdraws from the research study or does not complete every question. Lastly, as this drawing is a separate Qualtrics survey, there is no way to link information collected via this drawing to the information obtained within the research survey titled "Coaches' Perceptions of Athlete Behaviors."

1. Would you like to participate in the drawing for one of three $25 Visa gift cards?
    - Yes
    - No

2. Are you 18 years of age or older?
    - Yes
    - No

Instructions: Please enter the following information for the drawing.

3. Last Name: _____

4. First Name: _____

5. Email Address: _____

APPENDIX K

IRB Approval of Protocol

Phone 706-542-3199

The University of Georgia

Office of the Vice President for Research
Institutional Review Board

APPROVAL OF PROTOCOL

February 16, 2016

Dear Edward Delgado-Romero:

On 2/16/2016, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	The Factor Structure of the Perceived Legitimacy of Hazing Behavior Scale
Investigator:	Edward Delgado-Romero
IRB ID:	STUDY00000885
Funding:	None
Grant ID:	None

The IRB approved the protocol from 2/16/2016 to 2/15/2017 inclusive. Before 2/15/2017 or within 30 days of study closure, whichever is earlier, you are to submit a continuing review with required explanations. You can submit a continuing review by navigating to the active study and clicking Create Modification / CR.

If continuing review approval is not granted before the expiration date of 2/15/2017, approval of this study expires on that date.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103).

Sincerely,

Dr. Gerald E. Crites, MD, MEd
University of Georgia
Institutional Review Board Chairperson

APPENDIX L

List of Excluded Colleges

Division I Excluded Schools
Arizona State University
Ball State University
Bowling Green State
Brown University
Bucknell University
Butler University
California State University Sacramento
Campbell University
Centenary College of Louisiana
Central Connecticut State University
Colgate University
College of Charleston
College of the Holly Cross
Colombia University
Delaware State University
Drake University
East Carolina University
East Tennessee State University
Eastern Washington University
Florida Atlantic University
Fordham University
George Mason University
Gonzaga University
Idaho State University
Jacksonville University
Kent State University
La Salle University
Loyola Marymount University
New Mexico University
Niagara University
North Carolina State University
Northwestern University
Ohio University
Piedmont College
Radford University
Saint Bonaventure University
Saint Francis College, Pennsylvania
Samford University
Santa Clara University
Southern Methodist University
Southern Utah University
Syracuse University
Troy State University
University of California – Irvine
University of Colorado at Boulder
University of Delaware
University of Denver
University of Georgia
University of Hartford
University of Idaho
University of Kentucky
University of Maryland
University of Montana
University of Nevada, Reno
University of New Hampshire
University of New Mexico
University of North Carolina Ashville
University of North Carolina at Charlotte
University of Northern Iowa
University of Notre Dame
University of Portland
University of Rhode Island
University of Richmond
University of San Francisco
University of South Carolina
University of Southern Mississippi
University of Southwestern Louisiana
University of Tennessee at Chattanooga
University of Tennessee at Martin
University of Texas – Pan American
University of Texas – El Paso
University of Virginia
University of Wyoming
University of Wisconsin-Milwaukee
Valparaiso University

Vanderbilt University
Wagner College
Wake Forest University
Western Kentucky University
Western Michigan University
Wofford College
Worcester Polytechnic Institute
Youngston State University

NCAA Division II Excluded Schools

Assumption College
Augusta State University
Augustana College, South Dakota
Bellarmine College
Bemidji State University
Bentley College
Brigham Young University
Caldwell College
California University
Central Missouri State University
Central Washington University
Chaminade University
Christian Brothers University
Clarion University
Coker College
Colorado Christian University
Converse College
Davis & Elkins College
Delta State University
Dominican College
Elizabeth City State University
Emporia State University
Fairmount State College
Gannon University
Georgia State and College University
Glenville State College
Humboldt State University
Indiana University of Pennsylvania
Kennesaw State University
Lees-McRae College
Lenior-Rhyne College
Limestone College
Lock Haven University
Longwood College
Lynn University
Mercyhurst College
Merrimack College
Michigan Technical University
Millersville University
Molloy College
Montana State University – Billings
Newberry College
North Carolina Central
North Dakota State University
Northern Kentucky University
Nova Southeastern University
Oklahoma Panhandle State University
Ouachita Baptist University
Pace University
Pfeiffer University
Philadelphia College of Textiles and Science
Pittsburgh State University
Presbyterian College
Queens College
Quincy University
Rollins College
Sacred Heart University
Saint Joseph College – Connecticut
Saint Leo College
Saint Martin's College
Saint Michael's College
San Francisco State University
Schreiner College
Shippensburg University
Slippery Rock University
South Dakota State University
Southern Arkansas University
Southwest Baptist University
St. Mary's University, Texas
State University of West Georgia
Teikyo Post University
Texas Lutheran University
Texas Woman's University
The college of Saint Rose
University of Alabama Huntsville
University of Central Arkansas
University of Central Oklahoma
University of Colorado at Colorado Springs
University of Missouri St. Louis
University of Northern Colorado

University of South Carolina Aiken
University of South Colorado
University of South Dakota
Valdosta State University
Virginia State University
Wayne State University
West Chester University

NCAA Division III Excluded Schools

Albertus Magnus College
Albion College
Alfred University
Anna Maria College
Augustana College, Illinois
Austin College
Bard College
Bates College
Bay Path College
Bethany College
Blackburn College
Bowdoin College
Brandeis University
Bridgewater College
Brooklyn College
Buena Vista University
Buffalo State College
Cabrini College
California State Hayward
Calvin College
Carroll College
Carthage College
Case Western Reserve University
Cazenovia College
Central College
Centre College
Chatham College
Chowan College
Clarkson University
Colby-Sawyer College
College Misericordia
College of New Jersey
College of Staten Island
Concordia University
Defiance College
Delaware Valley College
Denison University
DePauw University
Eastern College
Eastern Connecticut State University
Eastern Mennonite University
Elmhurst College
Emerson College
Emory University
Fitchburg State College
Franklin and Marshall College
Gallaudet University
Gettysburg College
Goucher College
Greensboro College
Greenville College
Grinnell College
Nebraska Wesleyan University
New Jersey City University
North Carolina Wesleyan College
Northland College
Norwich University
Oberlin College
Oglethorpe University
Otterbein College
Pennsylvania State University at Erie-Behrend College
Pine Manor College
Plymouth State College
Principia College
Ramapo College of New Jersey
Randolph-Macon College
Randolph-Macon Woman's College
Rensselaer Polytechnic Institute Rhode Island College
Roanoke College
Rockford College
Roger Williams University
Rowan University
Salisbury State University
Salve Regina University
Skidmore College
Southern Vermont College
Southwestern University
Springfield College

St. John Fisher College
St. Joseph's College, Maine
St. Lawrence University
State University of New York College at Brockport
State University of New York College at Cortland
State University of New York College at Geneseo
State University of New York Institute of Technology at Utica-Rome
Sul Ross State University
Susquehanna University
Sweet Briar College
The College of New Jersey
The Sage Colleges
The University of the South
Tufts University
Union College
University of California-Santa Cruz
University of Mass Boston
University of Mass Dartmouth
University of Pittsburg at Bradford
University of Pittsburg Greensburg Campus
University of Redlands
University of Scranton
University of Southern Maine
University of Wisconsin-Eau Claire

APPENDIX M

Sampling Frame

Division I Schools
Alabama A&M University
Alabama State University
Alcorn State University
American University
Appalachian State University
Arkansas State University
Auburn University
Austin Peay State University
Baylor University
Belmont University
Bethune-Cookman University
Binghamton University
Boise State University
Boston College
Boston University
Bradley University
Bryant University
California Polytechnic State University
California State University, Bakersfield
California State University, Fresno
California State University, Fullerton
California State University, Northridge
Canisius College
Central Michigan University
Charleston Southern University
Chicago State University
Clemson University
Cleveland State University
Coastal Carolina University
College of William and Mary
Colorado State University
Coppin State University
Cornell University
Creighton University
Dartmouth College
Davidson College
DePaul University
Drexel University
Duke University
Duquesne University
Eastern Illinois University
Eastern Kentucky University
Eastern Michigan University
Elon University
Fairfield University
Fairleigh Dickinson University, Metropolitan Campus
Florida A&M University
Florida Gulf Coast University
Florida International University
Florida State University
Furman University
Gardner-Webb University
George Washington University
Georgetown University
Georgia Institute of Technology
Georgia Southern University
Georgia State University
Grambling State University
Hampton University
Harvard University
High Point University
Hofstra University
Houston Baptist University
Howard University
Illinois State University
Indiana State University
Indiana University, Bloomington
Indiana University-Purdue University at Indianapolis
Indiana University-Purdue University, Fort Wayne
Iona College
Iowa State University
Jackson State University

Jacksonville University
James Madison University
Kansas State University
Lafayette College
Lamar University
Lehigh University
Liberty University
Lipscomb University
Long Beach State University
Long Island University-Brooklyn Campus
Louisiana State University
Louisiana Tech University
Loyola University Chicago
Loyola University Maryland
Manhattan College
Marist College
Marquette University
Marshall University
McNeese State University
Mercer University
Miami University (Ohio)
Michigan State University
Middle Tennessee State University
Mississippi State University
Mississippi Valley State University
Missouri State University
Monmouth University
Montana State University-Bozeman
Morehead State University
Morgan State University
Mount St. Marys University
Murray State University
New Jersey Institute of Technology
Nicholls State University
Norfolk State University
North Carolina A&T State University
Northeastern University
Northern Arizona University
Northern Illinois University
Northwestern University
Oakland University
Oklahoma State University
Old Dominion University
Oral Roberts University
Oregon State University
Pennsylvania State University
Pepperdine University
Portland State University
Prairie View A&M University
Princeton University
Providence College
Purdue University
Quinnipiac University
Rice University
Rider University
Robert Morris University
Rutgers
Saint Joseph's University
Saint Louis University
Saint Peters University
Sam Houston State University
San Diego State University
San Jose State University
Savannah State University
Seattle University
Seton Hall University
Siena College
South Carolina State University
Southeast Missouri State University
Southeastern Louisiana University
Southern Illinois University at Carbondale
Southern Illinois University Edwardsville
Southern University, Baton Rouge
St. Bonaventure University
St. Francis College Brooklyn
St. Johns University (New York)
St. Marys College of California
Stanford University
Stephen F. Austin State University
Stetson University
Stony Brook University
Temple University
Tennessee State University
Tennessee Technological University
Texas A&M University, College Station
Texas A&M University-Corpus Christi
Texas Christian University
Texas Southern University
Texas State University
Texas Tech University
The Citadel
The Ohio State University

The University of North Carolina at Greensboro
The University of Tulsa
Towson University
Tulane University
U.S. Air Force Academy
U.S. Military Academy
U.S. Naval Academy
University at Albany
University at Buffalo
University of Akron
University of Alabama
University of Alabama at Birmingham
University of Arizona
University of Arkansas at Little Rock
University of Arkansas, Fayetteville
University of Arkansas, Pine Bluff
University of California, Berkeley
University of California, Davis
University of California, Los Angeles
University of California, Riverside
University of California, Santa Barbara
University of Central Florida
University of Cincinnati
University of Connecticut
University of Dayton
University of Detroit Mercy
University of Evansville
University of Florida
University of Hawaii, Manoa
University of Houston
University of Illinois at Chicago
University of Illinois Urbana-Champaign
University of Iowa
University of Kansas
University of Louisville
University of Maine, Orono
University of Massachusetts, Amherst
University of Memphis
University of Miami (Florida)
University of Michigan
University of Minnesota, Twin Cities
University of Mississippi
University of Missouri, Columbia
University of Missouri-Kansas City
University of Nebraska Omaha
University of Nebraska, Lincoln
University of Nevada, Las Vegas
University of New Orleans
University of North Carolina Wilmington
University of North Carolina, Chapel Hill
University of North Dakota
University of North Florida
University of North Texas
University of Oklahoma
University of Oregon
University of Pennsylvania
University of Pittsburgh
University of San Diego
University of South Alabama
University of South Florida
University of Southern California
University of Tennessee, Knoxville
University of Texas at Arlington
University of Texas at Austin
University of Texas at San Antonio
University of the Pacific
University of Toledo
University of Utah
University of Vermont
University of Washington
University of Wisconsin, Madison
University of Wisconsin-Green Bay
Utah State University
Utah Valley University
Villanova University
Virginia Commonwealth University
Virginia Military Institute
Virginia Polytechnic Institute and State University
Washington State University
Weber State University
West Virginia University
Western Carolina University
Western Illinois University
Wichita State University
Winthrop University
Wright State University
Xavier University
Yale University

Division II Schools

Abilene Christian University
Academy of Art University
Adams State University
Adelphi University
Albany State University (Georgia)
Alderson Broaddus University
American International College
Anderson University (South Carolina)
Angelo State University
Arkansas Tech University
Armstrong State University
Ashland University
Auburn University at Montgomery
Azusa Pacific University
Barry University
Barton College
Belmont Abbey College
Benedict College
Black Hills State University
Bloomfield College
Bloomsburg University of Pennsylvania
Bluefield State College
Bowie State University
Brevard College
Brigham Young University, Hawaii
California Baptist University
California State Polytechnic University, Pomona
California State University, Monterey Bay
California State University, Chico
California State University, Dominguez Hills
California State University, Los Angeles
California State University, San Bernardino
California State University, Stanislaus
Cameron University
Carson-Newman University
Catawba College
Cedarville University
Central State University
Chadron State College
Chestnut Hill College
Cheyney University of Pennsylvania
Claflin University
Clark Atlanta University
Clayton State University
Colorado Mesa University
Colorado School of Mines
Columbus State University
Concord University
Concordia College (New York)
Concordia University, St. Paul
Daemen College
Dallas Baptist University
Dixie State University
Dominican University of California
Dowling College
Drury University
East Central University
East Stroudsburg University of Pennsylvania
Eastern New Mexico University
Eckerd College
Edinboro University of Pennsylvania
Embry-Riddle Aeronautical University (Florida)
Erskine College
Fayetteville State University
Felician College
Ferris State University
Flagler College
Florida Institute of Technology
Florida Southern College
Fort Hays State University
Fort Lewis College
Fort Valley State University
Francis Marion University
Franklin Pierce University
Fresno Pacific University
Georgia Southwestern State University
Georgian Court University
Goldey-Beacom College
Grand Canyon University
Grand Valley State University
Harding University
Hawaii Pacific University
Henderson State University
Hillsdale College
Holy Family University
Holy Names University
Johnson C. Smith University
Kentucky State University

Kentucky Wesleyan College
King University
Kutztown University of Pennsylvania
Lake Erie College
Lake Superior State University
Lander University
Lane College
Le Moyne College
Lee University
LeMoyne-Owen College
Lewis University
Lincoln Memorial University
Lincoln University (Missouri)
Lindenwood University
Livingstone College
Long Island University/LIU Post
Lubbock Christian University
Malone University
Mansfield University of Pennsylvania
Mars Hill University
Maryville University of Saint Louis
McKendree University
Mercy College
Metropolitan State University of Denver
Midwestern State University
Miles College
Minnesota State University Moorhead
Minnesota State University, Mankato
Minot State University
Mississippi College
Missouri Southern State University
Missouri University of Science and Technology
Missouri Western State University
Morehouse College
New Mexico Highlands University
New York Institute of Technology
Newman University
North Greenville University
Northeastern State University
Northern Michigan University
Northern State University
Northwest Missouri State University
Northwest Nazarene University
Northwestern Oklahoma State University
Northwood University (Michigan)
Notre Dame College (Ohio)
Notre Dame de Namur University
Nyack College
Oakland City University
Ohio Dominican University
Ohio Valley University
Oklahoma Christian University
Paine College
Palm Beach Atlantic University
Point Loma Nazarene University
Queens University of Charlotte
Regis University (Colorado)
Roberts Wesleyan College
Rockhurst University
Rogers State University
Saginaw Valley State University
Saint Anselm College
Saint Augustines University
Saint Joseph's College (Indiana)
Salem International University
Seattle Pacific University
Seton Hill University
Shaw University
Shepherd University
Shorter University
Simon Fraser University
Sonoma State University
South Dakota School of Mines & Technology
Southeastern Oklahoma State University
Southern Connecticut State University
Southern Nazarene University
Southern New Hampshire University
Southwest Minnesota State University
Southwestern Oklahoma State University
Spring Hill College
St. Cloud State University
St. Edwards University
St. Thomas Aquinas College
Stillman College
Stonehill College
Tarleton State University
Texas A&M International University
Texas A&M University-Commerce
Texas A&M University-Kingsville
The Lincoln University (Pennsylvania)

The University of Virginias College at Wise
Tiffin University
Trevecca Nazarene University
Truman State University
Tusculum College
Tuskegee University
Union University
University of Alaska Anchorage
University of Alaska Fairbanks
University of Arkansas, Fort Smith
University of Arkansas, Monticello
University of Bridgeport
University of California, San Diego
University of Charleston (West Virginia)
University of Findlay
University of Hawaii at Hilo
University of Illinois at Springfield
University of Indianapolis
University of Mary
University of Massachusetts Lowell
University of Minnesota Duluth
University of Minnesota, Crookston
University of Montevallo
University of Mount Olive
University of Nebraska at Kearney
University of New Haven
University of North Alabama
University of North Carolina at Pembroke
University of North Georgia
University of Pittsburgh, Johnstown
University of Puerto Rico, Bayamon
University of Puerto Rico, Mayaguez
University of Puerto Rico, Rio Piedras
University of Sioux Falls
University of Southern Indiana
University of Tampa
University of Texas of the Permian Basin
University of the District of Columbia
University of the Incarnate Word
University of the Sciences in Philadelphia
University of West Alabama
University of West Florida
University of Wisconsin, Parkside
Upper Iowa University
Urbana University
Ursuline College
Virginia Union University
Walsh University
Washburn University of Topeka
West Chester University of Pennsylvania
West Liberty University
West Texas A&M University
West Virginia State University
West Virginia Wesleyan College
Western New Mexico University
Western Oregon University
Western State Colorado University
Western Washington University
Wheeling Jesuit University
William Jewell College
Wilmington University (Delaware)
Wingate University
Winona State University
Winston-Salem State University
Young Harris College

Division III Schools

Adrian College
Agnes Scott College
Albright College
Alfred State College
Allegheny College
Alma College
Alvernia University
Alverno College
Amherst College
Anderson University (Indiana)
Arcadia University
Augsburg College
Aurora University
Averett University
Babson College
Baldwin Wallace University
Baruch College
Becker College
Beloit College
Benedictine University (Illinois)
Berea College
Berry College
Bethany Lutheran College
Bethel University (Minnesota)
Birmingham-Southern College
Bluffton University
Bridgewater State University
Bryn Athyn College
Bryn Mawr College
Cairn University
California Institute of Technology
California Lutheran University
Capital University
Carleton College
Carnegie Mellon University
Castleton University
Catholic University
Cedar Crest College
Centenary College (New Jersey)
Chapman University
Christopher Newport University
Claremont McKenna-Harvey Mudd-Scripps Colleges
Clark University (Massachusetts)
Coe College
Colby College
College of Mount St. Vincent
College of New Rochelle
College of Saint Benedict
College of Saint Elizabeth
College of Wooster
Colorado College
Connecticut College
Cornell College
Covenant College
Crown College (Minnesota)
Curry College
Daniel Webster College
DeSales University
Dickinson College
Dominican University (Illinois)
Drew University
DYouville College
Earlham College
East Texas Baptist University
Eastern Nazarene College
Edgewood College
Elizabethtown College
Elmira College
Elms College
Emmanuel College (Massachusetts)
Emory and Henry College
Endicott College
Eureka College
Fairleigh Dickinson University, Florham
Farmingdale State College
Ferrum College
Finlandia University
Fontbonne University
Framingham State University
Franciscan University of Steubenville
Franklin College
Frostburg State University
Geneva College
George Fox University
Gordon College
Green Mountain College
Grove City College
Guilford College
Gustavus Adolphus College
Gwynedd Mercy University

Hamilton College
Hamline University
Hampden-Sydney College
Hanover College
Hardin-Simmons University
Hartwick College
Haverford College
Heidelberg University
Hendrix College
Hilbert College
Hiram College
Hobart and William Smith Colleges
Hollins University
Hood College
Hope College
Houghton College
Howard Payne University
Hunter College
Huntingdon College
Husson University
Illinois College
Illinois Institute of Technology
Illinois Wesleyan University
Immaculata University
Iowa Wesleyan College
Ithaca College
John Carroll University
John Jay College of Criminal Justice
Johns Hopkins University
Johnson & Wales University (RI)
Johnson State College
Juniata College
Kalamazoo College
Kean University
Keene State College
Kenyon College
Keuka College
Keystone College
Kings College (Pennsylvania)
Knox College
La Roche College
LaGrange College
Lake Forest College
Lakeland College
Lancaster Bible College
Lasell College
Lawrence University
Lebanon Valley College
Lehman College
Lesley University
LeTourneau University
Lewis & Clark College
Linfield College
Loras College
Louisiana College
Luther College
Lycoming College
Lynchburg College
Lyndon State College
Macalester College
MacMurray College
Maine Maritime Academy
Manchester University
Manhattanville College
Maranatha Baptist University
Marian University (Wisconsin)
Marietta College
Martin Luther College
Mary Baldwin College
Marymount University (Virginia)
Maryville College (Tennessee)
Marywood University
Massachusetts College of Liberal Arts
Massachusetts Institute of Technology
Massachusetts Maritime Academy
McDaniel College
McMurry University
Medaille College
Medgar Evers College
Meredith College
Messiah College
Methodist University
Middlebury College
Millikin University
Mills College
Millsaps College
Milwaukee School of Engineering
Mitchell College
Monmouth College (Illinois)
Montclair State University
Moravian College
Morrisville State College

Mount Aloysius College
Mount Holyoke College
Mount Ida College
Mount Mary University
Mount Saint Mary College (New York)
Mount St. Joseph University
Muhlenberg College
Muskingum University
Nazareth College
Neumann University
New England College
New York University
Newbury College
Nichols College
North Central College
North Central University
North Park University
Notre Dame of Maryland University
Occidental College
Ohio Northern University
Ohio Wesleyan University
Olivet College
Pacific Lutheran University
Pacific University (Oregon)
Penn State Berks College
Penn State Harrisburg
Penn State University, Abington
Penn State University, Altoona
Pennsylvania College of Technology
Plattsburgh State University of New York
Pomona-Pitzer Colleges
Purchase College, State University of New York
Regis College (Massachusetts)
Rhode Island College
Rhodes College
Ripon College
Rivier University
Rochester Institute of Technology
Rose-Hulman Institute of Technology
Rosemont College
Rust College
Rutgers, The State Univ. of New Jersey, Camden
Rutgers, The State Univ. of New Jersey, Newark
Saint Marys College (Indiana)
Saint Marys University of Minnesota
Saint Vincent College
Salem College
Salem State University
Sarah Lawrence College
Shenandoah University
Simmons College
Simpson College
Smith College
Southern Virginia University
Spalding University
St. Catherine University
St. Johns University (Minnesota)
St. Josephs College (Long Island)
St. Marys College of Maryland
St. Norbert College
St. Olaf College
State University College at Old Westbury
State University of New York at Canton
State University of New York at Cobleskill
State University of New York at New Paltz
State University of New York at Oneonta
State University of New York at Oswego
State University of New York at Potsdam
State University of New York Maritime College
Stevens Institute of Technology
Stevenson University
Stockton University
Suffolk University
Summit University of Pennsylvania
Swarthmore College
The City College of New York
The College of St. Scholastica
The State University of New York at Fredonia
The University of Texas at Tyler
Thiel College
Thomas College
Thomas More College
Transylvania University
Trine University
Trinity College (Connecticut)
Trinity University (Texas)
Trinity Washington University

U.S. Coast Guard Academy
U.S. Merchant Marine Academy
University of Chicago
University of Dallas
University of Dubuque
University of La Verne
University of Maine at Presque Isle
University of Maine, Farmington
University of Mary Hardin-Baylor
University of Mary Washington
University of Minnesota, Morris
University of Mount Union
University of New England
University of Northwestern-St. Paul
University of Puget Sound
University of Rochester
University of St. Thomas (Minnesota)
University of Texas at Dallas
University of the Ozarks (Arkansas)
University of Valley Forge
University of Wisconsin, La Crosse
University of Wisconsin, Oshkosh
University of Wisconsin, Platteville
University of Wisconsin-River Falls
University of Wisconsin-Stevens Point
University of Wisconsin-Stout
University of Wisconsin-Superior
University of Wisconsin-Whitewater
Ursinus College
Utica College
Vassar College
Virginia Wesleyan College
Wabash College
Wartburg College
Washington and Jefferson College
Washington and Lee University
Washington College (Maryland)
Washington University in St. Louis
Waynesburg University
Webster University
Wellesley College
Wells College
Wentworth Institute of Technology
Wesley College
Wesleyan College (Georgia)
Wesleyan University (Connecticut)
Western Connecticut State University
Western New England University
Westfield State University
Westminster College (Missouri)
Westminster College (Pennsylvania)
Wheaton College (Illinois)
Wheaton College (Massachusetts)
Wheelock College
Whitman College
Whittier College
Whitworth University
Widener University
Wilkes University
Willamette University
William Paterson University of New Jersey
William Peace University
Williams College
Wilmington College (Ohio)
Wilson College
Wisconsin Lutheran College
Wittenberg University
Worcester State University
Yeshiva University
York College (New York)
York College (Pennsylvania)