MORAL DILEMMAS IN UNIVERSITY POPULATIONS

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ABSTRACT

How sport impacts university student-athletes' development and behaviours has received considerable attention in the past two decades. Researchers have studied student-athlete's development of life skills (Chartier et al., 2021; Rathwell & Young, 2018a), effects of sport participation on their identity (Chen et al., 2010;), leadership development (Wright & Côté, 2003), and moral behaviour (Hodge & Lonsdale, 2011; Kavussanu et al., 2002). Fewer studies have examined why and how university sport impacts student-athlete outcomes. We explored if being an identifiable member within the university community lead student-athletes to behave in ways that align with school and team values. Our study purpose was to test (a) if university student-athletes had more moral intentions than non-student athletes, and (b) whether being reminded of their affiliation to their university enhances student-athletes' moral intentions differently than general student populations. A 3X2 quasi-experimental design was used to test 27 student-athletes', 24 intramural athletes', and 31 regular university students' moral intentions under two conditions. In the experimental condition, participants responded to moral dilemmas while wearing team or university-affiliated apparel. In the control, participants wore non-affiliated apparel. In both conditions, participants completed the Social Identity Questionnaire in Sport, Adapted Social Identity Questionnaire in Sport, and a Social Desirability Scale. No significant difference between group $F(2,79) = 1.75$, $p = .18$, $\eta p^2 = .04$ and condition $F(1,79) = 1.48$, $p = .23$, $\eta p^2 = .02$, or a significant interaction effect was found $F(2,79) = 0.53$, $p = .59$, $\eta p^2 = .01$. Student-athletes are no different in moral intentions than other university student populations. Moreover, wearing university-affiliated apparel does not change the moral intentions of any student group. Our results suggest that emphasizing student-athletes' roles as representatives of the university may be an insufficient behaviour change intervention.

STATEMENT OF CONTRIBUTIONS

All chapters in this thesis are based on research conducted by Keegan Brantner[1], Sharleen Hoar[2] Luc Martin[3] and Scott Rathwell[1], that was conducted at the University of Lethbridge[1], Canadian Sport Institute Pacific[2] and Queens University[3]. I, Keegan Brantner, was the main contributor to all efforts involved with the research and writing of all materials presented in this thesis. I was responsible for reviewing the literature, recruiting participating, conducting data collection, analyzing the data, interpreting the results and writing the content. Dr. Rathwell provided assistance and guidance throughout the entirety of this thesis. As well, Dr. Rathwell assisted and provided guidance with analyzing the data and interpreting the results. Dr. Rathwell, Dr. Martin and Dr. Hoar all provided feedback throughout the writing of the thesis. As well as providing methodological and theoretical suggestions to make the project stronger prior to data collection.

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List of Abbreviations

SIQS	Social Identity Questionnaire for Sport
ASIQS	Adapted Social Identity Questionnaire for Sport
C	Control
E	Experimental
SA	Student-athlete
OSF	Open Science Framework

Chapter 1: Review of the Literature

Who Are University Student-Athletes

University student-athletes are full-time students and full-time athletes who compete in sport programs at the university institution to which they are enrolled. University student-athletes are notably different from high school student-athletes (Rathwell & Young, 2019). The athletic, academic, and social demands that university student-athletes experience is significantly greater than that of high school student-athletes (Gayles & Baker, 2015; Deal & Camiré, 2016). For instance, a poll from Scholarship Stats (2020) indicated that a little over 7% of high school athletes play a varsity sport in college and less than 2% play in the highest competitive division in the United States. Considering the small percentage of high school athletes who can compete at the university level, and the increased demands of being a university student-athlete, university athletics reflects a higher level of commitment and competition than high school sport.

University student-athletes are also different from professional athletes (Rathwell & Young, 2019). Professional athletes have signed contracts with a contingent salary, and their focus is entirely on their sport, whereas, university student-athletes must balance academics and athletics (Antonietti, 2006; Rathwell & Young, 2019). Professional athletes can also be traded between teams or sent to the minor leagues, before, after or until the league's trade deadline of any given season (Jacobs, 1991). Thus, there is pressure for professional athletes to maintain their sport performance, knowing that their performance can directly affect whether they will be traded or offered a different salary in the future (Antonietti, 2006). While university student-athletes also experience pressure to

perform athletically, they do not have the same luxury as professional athletes to direct their focus entirely on their sport. However, they also do not face the same pressures as professional athletes, because they cannot be traded, and they are far less likely to lose their funding once they have been selected.

Despite sharing some similarities with the general student population, university student-athletes have been recognized as a unique population from other university students (Gayles, 2009; Gayles & Baker, 2015; Gomez et al., 2018; Graham, 2017). Along with their athletic pressures, student-athletes also experience academic pressures, creating the dualistic role of a student-athlete. For instance, student-athletes must maintain a full course load to remain eligible for competition, as well as be in good academic standing (Gayles, 2009). Moreover, student-athletes must dedicate approximately 30-40 hours per week on average toward their sport (Saffici & Pellegrino, 2012). Therefore, it has been argued that student-athletes tend to have more responsibilities than their non-athletic peers because of their dual role (Gomez et al., 2018; Saffici & Pellegrino, 2012).

Although the demands can be greater, the dual role can also provide many opportunities and benefits for student-athletes. For instance, in a study by Chen and colleagues (2010) they asked student-athletes and non-athletes, why it was beneficial to be a student-athlete and why the participants valued their role as an athlete. The responses from both groups indicated a recognized special status that came with being a student-athlete. Furthermore, the participants perceived that sport involvement facilitated good behaviours and that the benefits associated with being student-athlete outweighed the harm. Another study by Rathwell and Young (2018a) found that student-athletes learned

lessons about their self and social awareness, time management, goal setting, emotional regulation, working with others, and conflict resolution, built networking with important adults in their community, and established meaningful relationships with other athletes through their participation in university sport. Taken together university sport has the opportunity to foster prosocial behaviour in student-athletes.

What Does the Canadian University Sport System Entail?

In Canada, U SPORTS is the national brand that represents the 56 universities and four conferences that compete in Canadian university sport (U SPORTS, 2021). U SPORTS' mission statement is as follows: "Through governing, delivering, celebrating and advocating for national university sport, U SPORTS aims to support the provision of outstanding environments and opportunities for student-athletes to achieve their full academic and athletic potential" (U SPORTS Strategic Plan, 2019, p. 5). This mission statement aligns with their values of "Students First, Excellence, Equity, Competitive Balance, and Integrity and Transparency" (U SPORTS Strategic Plan, 2019, p. 5).

Roles and Expectations of Student-Athletes as Representatives

Currently most of what is known about the roles and expectations of student-athletes comes from a small number of studies in the Canadian setting (Rathwell & Young, 2018a). In Rathwell and Young's (2018a) study of Canadian university student-athletes, they noted that athletes were identifiable members in a university community, and as identifiable members, they were expected to behave in a manner that aligned with their school and team's values. In fact, the roles and expectations for university athletes are formally outlined by universities and athletics departments in their codes of conduct documents (e.g., Pronghorn Athletics, 2020; Queens, 2020), which consist of rules and

regulations that outline appropriate behaviours for student-athletes. For example, there is an expectations section outlined in the Pronghorn Athletics student-athlete handbook that formally informs the student-athletes of their responsibility as a representative. The section states, “remember at all times that, as a Pronghorn Athlete you are representing the University of Lethbridge and that your behaviour both on and off the field of play must reflect that responsibility” (Pronghorn Athletics, 2020, p. 5). Within this section, specific principles that the student-athletes and staff are expected to follow are outlined, “maintain the highest standards of personal conduct; bring incompetent or unethical behaviour to the attention of the appropriate authority” (Pronghorn Athletics, 2020, p. 5). Together, these codes of conduct outline examples of moral behaviours expected of student-athletes.

When behavioural standards are not upheld, university sport teams can remove players when inappropriate behaviour conflict with the athletic department’s and university’s expectations. For instance, in 2020 the University of Manitoba Men’s hockey team removed a player from the team after he participated in an offensive group chat (Teague, 2020). Regarding this situation University of Manitoba’s Athletic Director stated, “We condemn any such remarks and attitudes as they are offensive, reprehensible, and have absolutely no place in our sport or in our programs” (Teague, 2020, p. 1). As such, it is evident that as representatives of the university and athletic department, inappropriate, immoral, or disrespectful behaviour is not tolerated.

The behavioural expectations outlined in the codes of conduct at Canadian universities are often enforced and managed by coaches and teammates (Bloom et al., 2003; Benson et al., 2016; Prapavessis & Carron, 1997; Munroe et al., 1999). For

instance, a study by Kavussanu, Roberts, and Ntoumanis (2002) on the influence of contextual factors on moral functioning suggested interventions to educate student-athletes about the significance of their moral behaviour for maintaining the integrity of the university were beneficial. It is common for university coaches to enforce team rules, norms, and expectations for their student-athletes (Bloom et al., 2003; Benson et al., 2016) to ensure that they understand how their behaviour can affect the reputation of their universities. In addition, coaches tend to use team veterans and leaders as an extension of the coaching staff to address aspects of team social norms to new players. Social norms refer to beliefs that one has regarding a specific behaviour in a group (i.e., team) (Grossbard et al., 2009). In Benson and colleague's (2016) study, this was demonstrated through expectations that were decided and agreed upon by the athletes (e.g., no drinking the night before the game). Together, these results suggest that student-athletes may be more likely to behave responsibly as representatives, with clearly established expectations and responsibilities from coaches, universities and athletic departments that are reinforced by teammates' social expectations.

From the perspective of the student-athletes, it appears that they are aware of the expectations placed on them as representatives of their universities, and that these expectations may help them regulate their behaviours (Deal & Camiré, 2016; Rathwell & Young, 2018a). For example, Rathwell and Young (2018a) interviewed student-athletes from 12 Canadian universities and athletes stated that they understood that they were identifiable members and that they made a concerted effort to ensure their behaviours reflected the values of their teams and universities. Another study by Deal and Camiré (2016) explored university student-athletes' motivations to contribute to their

communities and some athletes noted feeling pressure to contribute based on team expectations to do so. In one interview, a student-athlete described knowing their role as a university student-athlete came with specific pressures and expectations, and that engagement in the community through volunteering was identified as a way to maintain their team's good reputation within the community. Taken together, the aforementioned studies suggest the importance of student-athletes understanding their responsibility as representatives and knowing how their behaviour can affect the reputation of their school, athletic department, and team in both positive and negative ways. However, the aforementioned studies did not specifically address why or how being a visible representative of their university might affect student-athletes' behaviours.

Social Identity

One explanation for why being a visible representative of their university might affect student-athletes' behaviours, is that university athletes behaviour is tied to their social identity, and that athletes' social identity is shaped in part by the values of their teams and universities. Social identity is defined as "that part of an individual's self-concept which derives from his/her knowledge of his/her membership of a social group (or groups) together with the emotional significance attached to that membership" (Tajfel, 1974, p. 69). Social identification is comprised of three dimensions, ingroup ties, ingroup affect, and cognitive centrality (Cameron, 2004). Ingroup ties are the perceptions of similarity, bonding, and belongingness with other group members; ingroup affect is positive feelings associated with group membership; and cognitive centrality is the importance of being a group member (Cameron, 2004). Altogether these three dimensions

may help explain how and why student-athletes internalize and enact group norms and behave in ways that are congruent with their social identity (Hogg et al., 2017).

For instance, a key aspect to the social identity theory is depersonalization, which is when an individual begins to identify with the group (i.e., 'we' and 'us') and no longer as an individual (i.e., 'I' and 'me') (Hogg et al., 2017). It is suggested that an athlete with strong social identification is more likely to engage in team normative behaviours (Ellemers et al., 2013; Grossbard et al., 2009; Kroshus et al., 2015). Previous research has examined the influence of social identification on moral behaviour in sport. Specifically, previous research has examined the influence of social identity on student-athlete's behaviour with drinking (Grossbard et al., 2009) and concussion reporting (Kroshus et al., 2015) and found that the more an athlete identifies with the team the more likely they are to engage in team norms which influences an athlete's behaviour. In sum, research from a range of different paradigms has identified a relationship between social identification and moral behaviour; however, what still is unknown is whether this relationship can be amplified through interventions.

Hawthorne Effect

Another social-psychological phenomenon known as the Hawthorne effect offers a complimentary explanation why being a visible representative of one's university might alter student-athlete's behaviours. The Hawthorne effect was conceptualized after a series of experiments carried out between 1927 and 1933. The experiments examined the productivity of workers at the Hawthorne plant of the Western Electric Company in Chicago, Illinois. The researchers aimed to assess the factors influencing productivity (Wickström & Bendix, 2000). It was concluded that productivity was influenced by the

experiment set-up and the researcher's presence (Wickström & Bendix, 2000). As a result, the "Hawthorne effect" was conceptualized as a change in behaviour that results from being observed (McCambridge et al., 2014). In other words, when participants realize their behaviour is being examined or observed, they alter how they act (Brannigan & Swerman, 2001).

In a critical review of the Hawthorne effect, Chiesa and Hobbs (2008) found three core factors that influence the Hawthorne effect: environmental factors, intervening variables, and behavioural changes. Environmental factors involve the presence of an observer. Intervening variables are the participants' internal factors such as awareness, expectations, and attitudes. Behavioural change is the behavioural result, which has been most often measured as improved performance or increased productivity. The Hawthorne effect had been predominantly tested as a way to understand uncontrollable factors in an experiment that contribute to the outcome (Chiesa & Hobbs, 2008). However, the Hawthorne effect may also matter when assessing student-athletes moral behaviour, as previous research has shown that participants may change their behaviour to be in line with socially desirable expectations when they are aware their behaviour is being watched (McCambridge et al., 2014). In the assessment of student-athletes' moral behaviour, the Hawthorne effect may facilitate an uncontrolled effect due to special attention, artificial conditions (i.e., being identifiable), or change as the participants are aware they are being watched in the community. Of note, the Hawthorne effect has never been studied as an explanatory mechanism for moral behaviour in sport.

Assessing Moral Behaviour with University Student-Athletes

Although no study to our knowledge has tested how the Hawthorne effect might impact student-athlete's behaviours, there is a significant body of literature on youth sport moral development and behaviour from which we can draw inferences. Research on moral behaviour in sport has largely focused on athletes' prosocial and antisocial behaviour. Prosocial behaviour refers to voluntary actions intending to help or benefit another (Eisenberg & Fabes, 1998), and antisocial behaviour refers to voluntary actions intending to harm or disadvantage another (Sage, Kavussanu, Duda, 2006).

Researchers have examined various predictors and influences for prosocial and antisocial behaviour for university student-athletes and youth (Bolter & Kipp, 2018; Bruner, et al., 2018; Hodge & Lonsdale, 2011; Zhu & Han, 2019). Several researchers argue that athletes' moral behaviour may be influenced by the nature of sport itself, proposing the concept of bracketed morality (Bredemeier & Shields, 1986a; Doty, 2006). Bracketed morality is "a legitimated, temporary suspension of the usual moral obligation to equally consider the needs and desires of all persons" (Bredemeier & Shields, 1986a, p. 257-258). Therefore, explaining that when in a sport context, athletes may behave differently than in everyday life (Doty, 2006).

The justification for immoral behaviour in sport is known as game reasoning. Game reasoning is defined as a reflection on the bracketed morality that is believed to occur in sport that athletes use to justify immoral behaviour (Bredemeier & Shields, 1986a). Through sport participation, athletes may also use moral disengagement to justify antisocial behaviours such as attempting to injure an opponent. Moral disengagement is when an individual transgresses moral standards without experiencing any negative

feelings for their actions (Hodge & Gucciardi, 2015). Another potential influence on the moral functioning of student-athletes is moral intention. Moral intention refers to the recognition of a moral issue that elicits the decision maker to decide whether or not to engage in moral behaviour (Haines et al., 2008).

Considering the potential predictors and influences of student-athlete's moral behaviour, competitive season length may contribute to student-athletes' moral judgement and immoral behaviour. For example, a study by Kavussanu and Ntoumanis (2003) examined university student-athletes to determine if participation in sport affects moral functioning. Their results showed that the length of participation in contact sports had a negative effect on the student-athletes' moral functioning, which was explained by their desire to win and outperform others. These findings suggest it is not necessarily sport that promotes immoral behaviour, rather, it is the student-athletes' goal-oriented mindset paired with extensive sport involvement that results in worse behaviours. Thus, the researchers conclude that moral functioning in sport is complex and influenced by multiple variables.

Athlete' moral behaviours can also be influenced by the team atmosphere (Kavussanu et al., 2002; Spruit et al., 2019). For university student-athletes, the coach may be one of the most important authority figures since they are highly involved with and dictate expectations of student-athletes (Bolter & Kipp, 2018; Fraser-Thomas et al., 2005; Gürpınar, 2014; Kavussanu et al., 2002; Kim et al., 2016). For instance, in a study by Kim and colleagues (2016) on university coaches' strategies for developing first year student-athletes, they found that all of the coaches set high standards for all of their student-athletes as a way of regulating behaviour. Research also shows how coaches can

influence the moral atmosphere of a team by modelling and promoting moral behaviour (Bolter & Kipp, 2018; Bruner et al., 2017; McCallister et al., 2000), punishing poor sportsmanship (Bolter & Kipp, 2018; Bruner et al., 2017; Gilbet & Trudel, 2004; McCallister et al., 2000), and setting standards and expectations related to moral behaviour (Gilbet & Trudel, 2004; Prapavessis & Carron, 1997; Rathwell & Young, 2018b).

Other studies have examined how roles and expectations set by the coach can impact moral behaviour. In a study by Vallée and Bloom (2016) on key elements of expert university coaches, they found that the university coaches demanded and set high ethical standards for their student-athletes. In line with setting these expectations for the athletes, the coaches mentioned the importance of leading by example and behaving in ways that reflected the core values of the program such as respect, trust, and communication. The coaches also felt student-athletes' personal development was important, and thus, wanted athletes to focus on positive behaviour and setting high standards for themselves.

Results from another study by Gilbet and Trudel (2004) showed that youth sport coaches used discipline to teach their athletes that disrespectful behaviour reflects poorly on themselves and their team. Similarly, Bolter and Kipp (2018) found that disciplining unsportspersonlike behaviours was an effective way for coaches to show they valued good sportspersonship and cared about their players. Collectively these findings suggest that when coaches actively promote and reinforce good moral behaviour they can positively influence athletes' moral development. However, the aforementioned studies

do not test the explanatory mechanisms (e.g., Hawthorne effect) behind why these athletes were regulating their prosocial and immoral behaviours.

Teammates can also play an important role in the moral atmosphere of a team (Danioni et al., 2021; Gürpınar, 2014). For university student-athletes, teammates are important social agents as they spend copious amounts of time together and are often away from family (Rathwell & Young, 2018a). University student-athletes also reported how they were only able to truly relate with teammates because of their unique experiences as a student-athlete (Rathwell & Young, 2018a). Through interactions with teammates, sport teams develop their own culture and a shared understanding of acceptable moral behaviour (Kavussanu et al., 2002). Previous research has shown that athletes felt they have a sense of responsibility in monitoring and disallowing immoral behaviour of their teammates (Bruner et al., 2017). Research has also shown that athletes' moral behaviour was influenced by their perceptions of what their teammates thought about moral actions (Kavussanu et al., 2002; Vallerand et al., 1992). Taken together, it seems that as athletes build relationships with teammates, their behaviour and actions are influenced by one another and will align with the perceived norm.

Consistent with the aforementioned studies, several researchers suggest that prosocial values for athletes can also be fostered through societal interactions with significant others in a sport context (Jones et al., 2011; Nascimento Junior et al., 2021; Rutten et al., 2008). Correspondingly, Jones and colleagues (2011) put forward that sport is not a homogenous experience for all, and that different rules, structures, coaching styles, motivational climates, and organizational styles provide athletes with differing developmental experiences. In sum, it is evident that the sport context can influence the

moral behaviour and development of athletes. However, with very limited research on the moral behaviours of university student-athlete populations, we still do not have a strong understanding of why university student-athletes behave morally or immorally. In the current study, we aim to test whether being an identifiable member of the university causes athletes to regulate their intent regarding moral behaviours.

Purpose

The main purpose of this study was to test (a) if university student-athletes intended to behave more morally than non-student-athletes overall, (b) whether reminding all students about university affiliation affected their intentions to behave morally (i.e., the Hawthorne effect), and (c) if reminding student-athletes about their affiliation would make them uniquely more likely to intend to behave morally than non-student-athletes. Subsequently, we were also interested in (d) whether social identity was related to moral intentions, and (e) whether the relationship between social identity and moral intentions was different for the three student groups.

We hypothesized that (a) student-athletes' average scores on the moral dilemma's would be higher than non-student-athletes', (b) all participants' average scores on the moral dilemma's would be higher in scenarios when their identity was enhanced, (c) student-athletes' scores on moral dilemmas would be highest when their athletic identity was enhanced. For our subsequent hypotheses, we assumed (d) that there would be a positive relationship between social identity scores and the moral dilemmas, and (e) that the positive relationships between social identity and moral intentions would be stronger for student-athletes compared to the other student groups.

Chapter 2: Methodology

Recruitment

Once university ethical approval was received, the primary researcher worked with the University of Lethbridge athletic department, Pronghorn head coaches, and Pronghorn recreation to recruit student-athletes and intramural athletes. More specifically, the principle investigator sent an email to the Director of Pronghorn Athletics and Pronghorn head coaches, which contained information about the study, a recruitment letter (see Appendix A), and recruitment poster (see Appendix B). In this email, the Director of Pronghorn Athletics and Pronghorn head coaches were asked to connect the research team with Pronghorn student-athletes. The principle investigator also sent an email to the Director of Horns Recreation, which contained a recruitment letter (Appendix A), recruitment poster (Appendix B) and information about the study. In this email the principle investigator asked the Director of Horns Recreation to share the recruitment letter (Appendix A), and poster (Appendix B) with university intramural athletes for participation in the study. Finally, the principle investigator sent an email to the administrative support staff from the Kinesiology, Education, Neuroscience, Sociology and Anthropology, Women and Gender Studies and Psychology departments at the university, which included a recruitment letter (Appendix A), recruitment poster (Appendix B) and information about the study. In this email, the administrative staff were asked to share the recruitment letter (Appendix A), and poster (Appendix B) with university students in their departments.

Procedure

A 3X2 quasi-experimental design was used (Cook et al., 2002). As displayed in the CONSORT Flow diagram (see Fig. 1), all three groups' moral intentions were tested under two conditions, and the order in which participants completed each condition was randomly assigned. This study was preregistered through Open Science Framework (OSF), DOI 10.17605/OSF.IO/BWYU5, and data collection began at least in the middle of the season for each respective sport to ensure participants felt affiliated to their team and/or university.

Data collection for this study took place at the Psychology for Active Living and Sport Lab at the host university. All interested participants were required to visit the lab on two occasions, with each session lasting between 15-25 minutes. In the control condition, the participants were asked to wear non-affiliated apparel. During the experimental condition, the student-athlete group was asked to wear their team-affiliated apparel and the intramural athletes and regular students were asked to wear University of Lethbridge affiliated apparel. By having all groups (especially student-athletes) wear affiliated apparel, we assumed our intervention would heighten the sense that all groups were representing their university and that the student-athlete group were representing their respective teams.

Deception was used in the experimental condition to disguise the purpose of the study. Specifically, participants were asked to wear university or team affiliated apparel and told that we needed to take a photo of them for dissemination purposes (i.e., we would use photos when presenting at conferences). The purpose of the photo was to enhance their athletic identity and increase the perception that they were being watched

(i.e., elicit the Hawthorne effect). Of note, participants were told that the photos would be censored to maintain their anonymity.

During the first visit participants completed a brief questionnaire about their age, gender, education, sport played (if applicable), year of eligibility (if applicable), and leadership role (if applicable). These responses were used during data analysis to adjust for variables that may affect the results of this study. During both the control and experimental visits, participants responded to moral dilemmas and completed a Social Identity Questionnaire (Appendix H), an adapted Social Identity Questionnaire (Appendix I) and a Social Desirability Scale (Appendix J). Participants completed the second visit one week after the first. After the participant's second visit they were provided with a debriefing document (see Appendix D) to fully explain the study and the deception used to accurately assess the Hawthorne Effect.

Participants

A power analysis was conducted prior to data collection. Using G*Power version 3.1.9.7 (Faul et al., 2007) a medium effect size statistic (d = 0.50; Cohen, 1988), with a significance criteria of $\alpha = .05$, and power = .80 was used to estimate the required sample size. The minimum sample size was $N = 63$ (21 student-athletes, 21 intramural athletes, and 21 regular university students) for our mixed factorial analysis. The input parameters for G*Power analysis were numerator $df = 2$, number of groups = 3, and number of covariates = 1.

The University of Lethbridge is a small university with approximately 150 student-athletes that compete in the Canada West conference. The U SPORTS teams at the University of Lethbridge are men's & women's basketball, soccer, track and field,

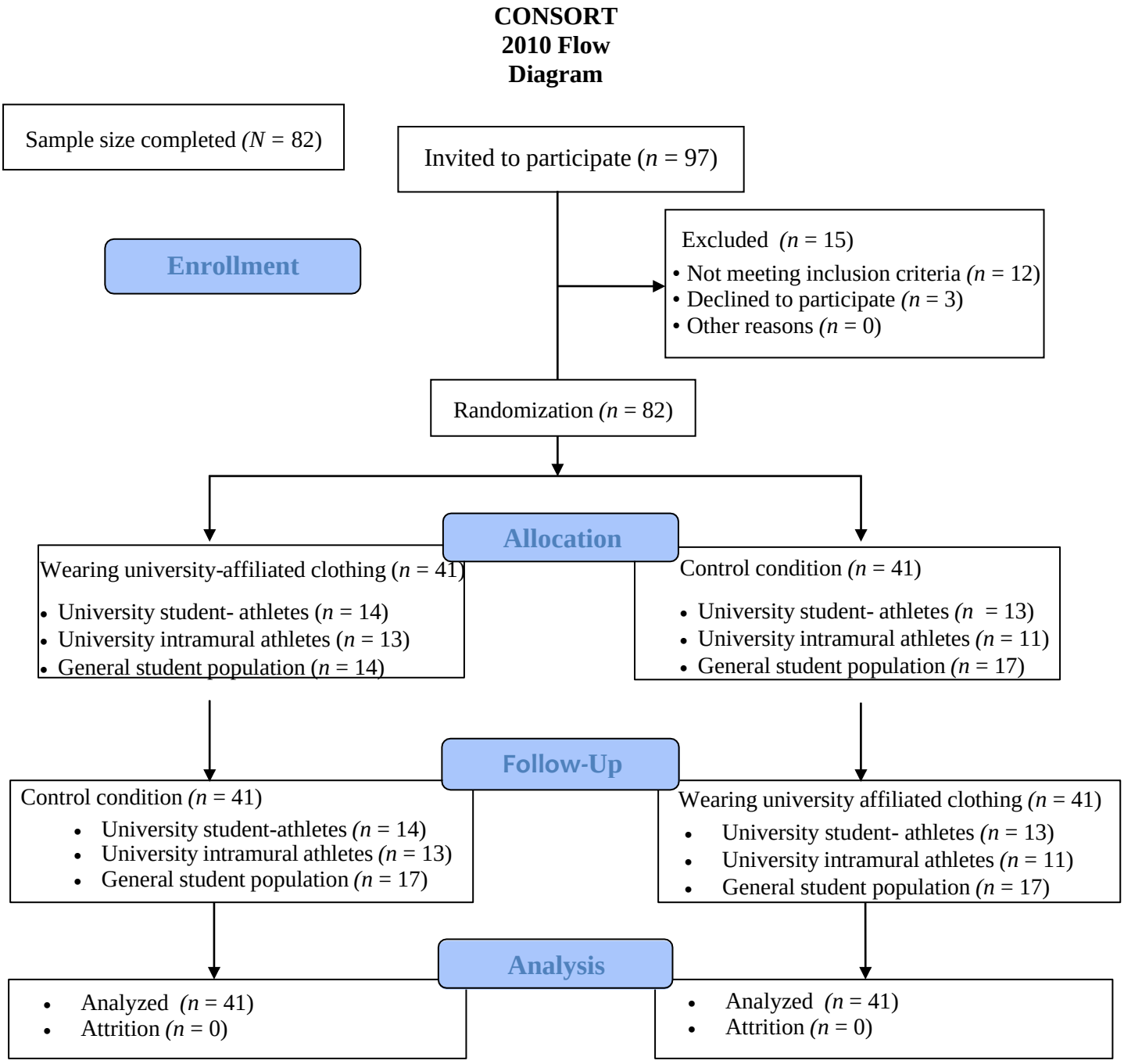
swimming and women's rugby. Student-athletes from all U SPORTS teams were included in the study. Due to the lack of competition in the 2020 year because of COVID-19, only student-athletes in their third, fourth, or fifth year of eligibility were included in this study. This inclusion criteria was chosen to ensure student-athletes had sufficient time to establish an identity as a student-athlete. The inclusion criteria for the university intramural athletes and university students resembled the student-athletes, requiring the students to be at least in third year academic standing.

In total, 94 participants, 34 student-athletes, 26 intramural athletes, and 34 regular university students completed the study. We removed 12 participants from the analysis due to their ineligibility. Seven participants were removed (4 student-athletes, 2 intramural athletes, 1 regular student) because they were in their first or second year of eligibility or in their first or second year of study at the university. Three student-athletes were removed because they wore team affiliated apparel to both data collection sessions. Two regular students were removed for not wearing affiliated apparel during either condition. Of note, there were five participants who were assigned to the control condition for time 1, but wore affiliated clothing at time 1. When this occurred, they followed the experimental protocol at time one and did the control protocol at time 2.

The final sample was comprised of 82 participants who met our inclusion criteria: 27 Pronghorn student-athletes, (8 male, 19 female) from the University of Lethbridge participated. The average age of the student-athletes was 22.56 (SD = 1.37) years. The student-athletes represented different sports: women's basketball (n = 4), men's basketball (n = 1), women's Soccer (n = 3), men's Soccer (n = 2), women's Track and Field (n = 2), men's Track and Field (n = 4), women's Swim (n = 1), men's Swim (n = 1),

Figure 1.

CONSORT flow diagram



and women's Rugby (n = 9). The sample consisted of third year (n = 13), fourth year (n = 11), and fifth year (n = 3) eligible student-athletes. Of the 27 student-athletes, thirteen were formal team leaders.

In total, 24 intramural athletes, (14 male, 10 female) from the University of Lethbridge participated, with an average age of 21.96 (SD = 1.46) years. The sample consisted of third year (n = 4), fourth year (n = 10), fifth year (n = 5), sixth year (n = 3), and master's degree students (n = 2).

The regular university student group had 31 participants, (7 male, 23 female, 1 prefer not to answer) from the University of Lethbridge participate. The average age of students was 23.39 (SD = 2.42) years. The sample consisted of third year (n = 5), fourth year (n = 8), fifth year (n = 6), sixth year (n = 5), and master's degree students (n = 7).

Measures

Moral Dilemmas

The participants were given moral dilemmas to assess their intent to commit moral behaviours. Moral dilemmas have been used in previous research to assess participants' moral reasoning (Bredemeier & Shields, 1986a; Bredemeier & Shields, 1986b; Kavussanu et al., 2002; Kavussanu & Ntoumanis, 2003). For this study, 16 moral dilemmas were created using the host University's student-athlete and student codes of conduct documents (see Appendix G.1). All participants received 16 moral dilemmas that involved scenarios that university students were likely to experience. For example, there were dilemmas involving witnessing cheating, sharing an old midterm, a friend being inappropriate with a waitress/waiter, and aggressive heckling at a sports game. Of note, the 16 moral dilemmas were written in two different formats. The first format was given

to all participants and consisted of scenarios where “a friend” or “a friend from class” was used to represent another social agent in the scenarios (see Appendix G.3). In the second format, given only to the student-athletes and intramural athletes, the same 16 moral dilemmas were also completed, but this time the social agents in the scenarios were “a teammate” (see Appendix G.1 and G.2). For example, one scenario involved overhearing (format 1, a friend; format 2, a teammate) discussing cheating. Another scenario included, (format 1, a friend; format 2, a teammate) saying an inappropriate comment in a group chat. A final example involved a scenario where (format 1, a friend; format 2, a teammate) asked participants to take an online exam for them.

When creating the moral dilemmas, effort was made to write dilemmas that ranged in severity. Following each dilemma, the participants determined how likely they were to engage in the described behaviour in the dilemma. The responses were recorded using a seven-point Likert scale ranging from one (*extremely unlikely*) to seven (*extremely likely*). For scenarios where responding “extremely likely” represented intentions related to doing an immoral behaviour, scores were reverse coded. Thus, for analysis purposes, all moral dilemmas were tested with scores of 7 being the most moral and 1 being the most immoral on the Likert scale.

As an internal reliability check of our moral dilemmas, the principle investigator and a member of the research team independently ranked the severity of each dilemma as either low, medium or high severity. The severity of the moral dilemmas was chosen based on the potential implications within the dilemma for those involved and the participant’s role in the dilemma. An analysis was conducted to assess the interrater reliability (i.e., Cohen’s kappa) of the two coders when categorizing moral dilemmas

based on severity. An acceptable level of agreement was reached after rating the severity of the moral dilemmas independently, $\kappa = .711$. The researchers then met and discussed the items that were disagreed upon. After clarifying the reasons behind the categorization of disagreed items, the two researchers recoded the moral dilemmas again. This time the researchers agreed on the severity of all 16 moral dilemmas. The low moral dilemmas were moral dilemmas 3, 9 and 10. The medium moral dilemmas were moral dilemmas 2, 6, 8, 11, 14, and 15. Finally, the high severity moral dilemmas were moral dilemmas 1, 4, 5, 7, 12, 13 and 16 (See Appendix G.1). The reason for classifying the moral dilemmas by severity was that we wanted to guard against potential floor effects (everyone scoring low on dilemmas where the implications of immoral behaviour were minimal) and ceiling effects (everyone scoring high on dilemmas where the implications of immoral behaviour were more extreme).

Pilot tests of Moral Dilemmas. After ethical approval was received and prior to the commencement of the current study, the primary investigator conducted a pilot test to assess the face validity of the moral dilemmas. Specifically, the primary researcher sent out an email (see Appendix F) including a questionnaire to head and assistant coaches, the athletic director, the manager of athletics and faculty members asking if they would partake in the pilot study.

A total of seven stakeholders (i.e., two head coaches, one high performance head coach, two faculty members, one athletic director and one manager of athletics) from the University of Lethbridge completed the survey. Participants consisted of six male and one female. Participants average age was 41.14 (SD = 8.36). The length of time in their roles ranged from 8 months to 20 years with the average being 6.69 years (SD = 5.83).

All participants were asked to read each dilemma and answer three statements using an online questionnaire delivered through Qualtrics (2022): (a) *This dilemma is written in a way that is easy to understand*, (b) *This dilemma represents a challenge/incident that a student-athlete might face,* and (c) *Responses to this dilemma would allow me to learn about my student-athlete's moral compass.* Stakeholders were asked to indicate their level of agreement/disagreement on a three-point Likert scale ranging from one (*disagree*) to three (*agree*). Stakeholders were also invited to provide comments and/or recommendations for improving each dilemma.

The results from the pilot test are displayed in table 1. On average, stakeholders felt the moral dilemmas were written clearly (M = 1.09, SD = 0.11), were scenarios student-athletes are likely to experience while in university (M = 1.21, SD = 0.14), and would allow them to learn about students' morality (M = 1.40, SD = 0.37).

Manipulation Check. The research team also made efforts to assess the validity of our manipulation. Participants completed a manipulation check after responding to the moral dilemmas. Specifically, open-ended prompts were included to assess how affiliated participants felt to their team or university after responding to the moral dilemmas. After reading the moral dilemmas, the student-athletes were prompted "*how much did you feel like you were 'representing' the UofL and Pronghorn Athletics when completing this study?"* After reading the moral dilemmas, regular students were prompted "*how much did you feel like you were 'representing' the UofL when completing this study?"* Although the intramural athletes (see Appendix G.2) received the same moral dilemmas as the student-athletes, their prompt at the end of the study was the same as the regular

Table 1.

Descriptive Statistics for Moral Dilemma Validation

Moral Dilemma	Is easy to understand	Represents a challenge a student-athlete might face	Responses would allow me to learn about my student-athlete's moral compass
Moral Dilemma 1	*M* = 1.43, *SD*= 0.73	*M* = 1.29, *SD* = 0.45	*M* = 1.57, *SD* = 0.49
Moral Dilemma 2	*M* = 1.00, *SD* = 0.00	*M* = 1.14, *SD* = 0.35	*M* = 1.29, *SD* = 0.45
Moral Dilemma 3	*M* = 1.00, *SD* = 0.00	*M* = 1.14, *SD* = 0.35	*M* = 1.43, *SD* = 0.49
Moral Dilemma 4	*M* = 1.00, *SD* = 0.00	*M* = 1.43, *SD* = 0.49	*M* = 1.14, *SD* = 0.35
Moral Dilemma 5	*M* = 1.14, *SD* = 0.35	*M* = 1.29, *SD* = 0.45	*M* = 1.00, *SD* = 0.00
Moral Dilemma 6	*M* = 1.14, *SD* = 0.35	*M* = 1.14, *SD* = 0.35	*M* = 1.14, *SD* = 0.35
Moral Dilemma 7	*M* = 1.14, *SD* = 0.35	*M* = 1.29, *SD* = 0.45	*M* = 1.43, *SD* = 0.73
Moral Dilemma 8	*M* = 1.14, *SD* = 0.35	*M* = 1.14, *SD* = 0.35	*M* = 1.57, *SD* = 0.49
Moral Dilemma 9	*M* = 1.14, *SD* = 0.35	*M* = 1.29, *SD* = 0.70	*M* = 2.57, *SD* = 0.73
Moral Dilemma 10	*M* = 1.00, *SD* = 0.00	*M* = 1.00, *SD* = 0.00	*M* = 1.57, *SD* = 0.49
Moral Dilemma 11	*M* = 1.00, *SD* = 0.00	*M* = 1.14, *SD* = 0.35	*M* = 1.14, *SD* = 0.35
Moral Dilemma 12	*M* = 1.00, *SD* = 0.00	*M* = 1.14, *SD* = 0.35	*M* = 1.43, *SD* = 0.49
Moral Dilemma 13	*M* = 1.00, *SD* = 0.00	*M* = 1.14, *SD* = 0.35	*M* = 1.29, *SD* = 0.70
Moral Dilemma 14	*M* = 1.14, *SD* = 0.35	*M* = 1.14, *SD* = 0.35	*M* = 1.71, *SD* = 0.70
Moral Dilemma 15	*M* = 1.00, *SD* = 0.00	*M* = 1.00, *SD* = 0.00	*M* = 1.14, *SD* = 0.35
Moral Dilemma 16	*M* = 1.14, *SD* = 0.35	*M* = 1.57, *SD* = 0.73	*M* = 1.00, *SD* = 0.00

Note. M = Mean, *SD* = Standard deviation

students, asking "*how much did you feel like you were 'representing' the UofL when completing this study?*" Some notable responses from the student-athletes to this prompt were, "*quite a bit, made me realize that I represent athletics in a lot more ways/greater degree than I was aware of at first*" and "*a great amount, everything we do as an athlete that represents the school is looked at through a microscope. The decisions I make are influenced by how they can impact the program*."

Regular students responded, "*When completing it, I didn't really consider representing the school, more so my own integrity and character. Looking back now, I can strongly see how each of these dilemmas and my actions could impact the UofL's reputation/image to those around*" and "*Not at all really. Maybe on the question about drinking beer in UofL gear. I mostly felt like I was representing myself*".

The intramural athletes' responses to the prompt provided support for effectiveness of the study design. For example an intramural athlete responded, "*In larger social settings (e.g. restaurants/bars) I'd feel less as though I'd be representing the UofL, and MORE so in smaller social dynamics (e.g. class cohorts, group work projects)".* As well an intramural athlete commented *"I somewhat felt that I was for questions of watching Pronghorns play and if I was wearing Uleth clothing at the bar. For most of it I felt more as though I am representing myself and my friends/family".* Based on the data, it appeared student-athletes' felt affiliated in the experimental condition, while regular students and intramural athletes did not.

Open-Ended Questions. At the beginning of data collection the primary researcher invited all participants to provide any comments on all of the moral dilemmas to provide further insight and/or justification to their selection. It was entirely voluntary

for participants to provide comments on the moral dilemmas, however the majority of participants did. These comments allowed for us to better understand their selection and the rational behind their selection. We also conducted post-hoc analysis on these comments to create themes around student-athletes' moral justifications and rationalizations. Moral rationalization has been defined as a "cognitive process that individuals use to convince themselves that their behaviour does not violate their moral standards" (Tsang, 2002. p. 26). Responses to our open-ended questions gave us further insight into the dilemmas that may violate student-athletes' moral standards and caused them to engage in moral rationalization.

Social Identity

Participants' social identification was assessed using the nine-item Social Identity Questionnaire in Sport (SIQS; Bruner & Benson, 2018), which is an adapted version from Cameron's (2004) Social Identity Questionnaire (see Appendix H). Bruner and Benson (2018) reported the factor structure of the three-factor structure (i.e., individual, interpersonal, and group level) social identification has been tested in sport, and results showed good model fit: X^2 (24) = 87.10, $p < .001$, CFI = 0.98, TLI = 0.97, RMSEA = 0.06, [90% CI = 0.04, 0.07], SRMR = 0.03. For the SIQS, there are three items for each subscale which assess: ingroup ties (e.g., I feel a sense of being "connected" with other members in this team), ingroup affect (e.g., I feel good about being a member of this team), and cognitive centrality (e.g., the fact that I am a member of this team often enters my mind). The SIQS was given to both the student-athlete group and the intramural athlete group.

When given to the regular student group, the SIQS items were adapted by

replacing the words *team member* with *student* and *team* with *university* (see Appendix I). Similar adjustments have been used in previous research to adapt questionnaires for non-athlete groups (Bosselut et al., 2018). Responses were collected using a seven-point Likert scale ranging from one (*strongly disagree*) to seven (*strongly agree*).

Social Desirability

As a measure to protect the internal validity of our study, participants were asked to complete a short form of the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982), which is a 13-item scale comprised of items such as *I'm always willing to admit it when I make a mistake* and *I sometimes try to get even rather than forgive and forget* (see Appendix J). These items were answered with a true-false format, with the scoring consisting of one point for true and zero points for false. Reynolds (1982) showed evidence for the validity (r = .93, r^2 = .86) and internal consistency reliability (r_{KR20} = .76) of the scale.

Data Analyses

Preliminary Analyses

Preliminary analyses were conducted with SPSS® 25 software (IBM, 2022). A missing values analysis was performed and there was no missing data. Descriptive statistics were calculated (see table 2). Data for the independent variables and dependent variable were considered normally distributed in all three groups as values for skewness and kurtosis were within ± 3.29 (Field, 2005). Assumptions for a mixed factorial analysis were tested. We tested for normality of the distribution of residuals and homoscedasticity. All assumptions were satisfied.

Analyses Controlling for Confounding Variables

All quantitative analyses were performed with and without the social desirability measure (Reynolds, 1982) included as a covariate in our models. None of our findings changed when team, eligibility year, formal leadership status, gender, age and year of university were included as covariates. Once again, our results did not change with or without confounding variables in our models. Thus, all subsequently reported data does not control for confounding variables. However, our results mirror the results of analyses where they were controlled for.

Main Analyses

Eight mixed factorial analyses were performed to answer the following research questions: (a) if university student-athletes intended to behave more morally than non-student athletes overall, (b) whether reminding all students about university affiliation affected their intentions to behave morally (i.e., the Hawthorne effect), and (c) if reminding student-athletes about their affiliation would make them uniquely more likely to intend to behave morally than non-student athletes.

This design allowed for testing the main effects of group (i.e., student-athletes, intramural athletes, and regular students) and condition (i.e., university affiliated clothing or non-university affiliated clothing), as well as the interaction between group and condition. For the first mixed factorial analysis we tested a (a) three (group: student-athletes, intramural athletes, regular students) by two (condition: affiliated clothing or non-affiliated clothing) model 1 with average responses to format 1 moral dilemmas (a friend). We hypothesized that (a) student-athletes' average scores on the moral dilemma's would be higher than non-student-athletes, (b) all participants' average scores on the

moral dilemma's would be higher in scenarios when their identity was enhanced, (c) student-athletes' scores on moral dilemmas would be highest when their athletic identity was enhanced.

For the second mixed factorial analysis we tested a three (group: student-athletes, intramural athletes, regular students) by two (condition: affiliated clothing or non-affiliated clothing) model with average responses on the format 2 moral dilemmas (teammate) for athlete groups and format 1 (friend) for regular students serving as the dependent variable. We hypothesized that (a) student-athletes' average scores on the moral dilemma's would be higher than non-athletes, (b) all participants' average scores on the moral dilemma's would be higher in scenarios when their identity was enhanced, (c) student-athletes' scores on moral dilemmas would be highest when their athletic identity was enhanced.

The next six mixed factorial analyses tested the effect of severity of moral dilemmas on moral intentions. As described above, the moral dilemmas were created on a range of severity. More specifically, the moral dilemmas represented scenarios of low severity (moral dilemmas 3, 9 and 10), medium severity (moral dilemmas 2, 6, 8, 11, 14 and 15) and high severity (moral dilemmas 1, 4, 5, 7, 12, 13 and 16). Thus, for the next three mixed factorial analyses our dependent variable now represented each level of severity in each condition. Therefore, just like with the main analyses, we ran 3X2 factorial analyses when comparing groups (student-athletes, intramural athletes and regular students) on the format 1 (friend) moral dilemmas in two conditions (affiliated clothing or non-affiliated clothing), with the three different dependent variables of model 3 = low severity; model 4 = medium severity; model 5 = high severity.

Table 2.

Descriptive Statistics for Study Measures

Measures	N	Min	Max	M	Std. D	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Format 2 Moral Dilemmas Control	82	2.94	5.88	4.59	0.69	-0.49	0.26	-0.13	0.53
Format 1 Moral Dilemmas Control	82	2.88	5.88	4.57	0.74	-0.39	0.26	-0.25	0.53
SIQS Control	82	2.56	7.00	5.39	0.97	-0.59	0.26	0.12	0.53
ASIQS Control	82	1.78	7.00	4.70	1.03	-0.42	0.26	0.08	0.53
Social Desirability Control	82	1.00	11.00	6.73	1.76	-0.29	0.26	0.71	0.53
Format 2 Moral Dilemmas Experimental	82	2.69	6.06	4.64	0.75	-0.34	0.26	-0.49	0.53
Format 1 Moral Dilemmas Experimental	82	2.69	6.85	4.62	0.80	-0.16	0.26	-0.02	0.53
SIQS Experimental	82	2.44	7.00	5.39	0.97	-0.61	0.26	0.13	0.53
ASIQS Experimental	82	1.33	6.67	4.70	1.05	-0.57	0.26	0.44	0.53
Social Desirability Experimental	82	2.00	10.00	6.66	1.61	-0.66	0.26	0.89	0.53

Note. Min = Minimum; Max = Maximum; M = Mean; Std. D = Standard Deviation

Our final three 3X2 factorial analyses were conducted comparing groups (student-athletes, intramural athletes, regular students) on the format 2 (teammate) moral dilemmas for athlete groups and format 1 (friend) for regular students (affiliated clothing or non-affiliated clothing), with the three different dependent variables of model 6 = low severity; model 7 = medium severity; model 8 = high severity.

Analyses based on SIQS. We were also interested in whether social identity was related to moral intentions, and whether the relationship between social identity and moral intentions was different for the three groups. We hypothesized that there would be a positive relationship between social identity scores and the moral dilemmas, and the positive relationships between social identity and moral intentions would be strongest for student-athletes compared to the other groups.

Eight moderation analyses were used to test the possible moderator effect of social identity in SPSS® 25 using PROCESS version 4.1 (Hayes, 2022). To test whether social identity was related to moral intentions, we ran two moderation analyses using the average scores on the overall SIQS, using data from the control (model 1) and experimental (model 2) conditions. In both models, social identity acted as the independent variable, moral dilemma scores (control = model 1 and experimental = model 2) used as our dependent variable, and group (student-athletes, intramural athletes, regular students) as the moderator. We also conducted six moderation analyses to determine the relationship between the three social identity subscales (ingroup ties, ingroup affect, cognitive centrality) and moral intention in both conditions (i.e., control = models 3, 4, 5; experimental = models 6, 7, 8).

Assumptions for moderation analyses with a categorical moderator were tested and met for all models. Specifically, we ensured that the dependent variable was continuous and the moderator was nominal and coded as 1, 2, and 3. Using both statistical and visual analyses, we also assessed the linearity between each of the two independent variables and the dependent variable for both conditions of the moderator variable. When assessing the linearity between the independent variables and the dependent variables, the moral dilemma scores (control and experimental) served as the DVs, scores on the SIQS acted as the IVs, and group (1 = student-athletes; 2 = intramural athletes; 3 = regular students) was used as the moderator.

Post-Hoc Quantitative Analyses

Post-hoc analyses were conducted to delve into potential explanations for why we failed to confirm our hypotheses. One hypothesis was that our experimental manipulation (wearing affiliated clothing) may not have been a sufficient "dose" to enhance feelings of affiliation. One way to test whether our intervention enhanced feelings of affiliation was to run a three (group: student-athletes, intramural athletes, regular students) by two (condition: affiliated clothing or non-affiliated clothing) mixed factorial analyses with average responses to the ingroup ties items serving as the dependent variable. The ingroup ties subscale is particularly useful as a post-hoc manipulation check because it measures the perceptions of similarity, bonding, and belongingness with other group members (Cameron, 2004).

Post-Hoc Qualitative Analysis

All participants received a study prompt at the end of the moral dilemmas to assess whether the intervention worked. Participants were asked how much they felt like

they were ‘representing’ the UofL (and Pronghorn athletics for student-athletes) when completing this study. Throughout data collection the prompt responses were read by the primary researcher in an active way (Braun & Clarke, 2006) and were added to a data spread sheet. Notably, in the data spread sheet the responses were split up by group (student-athletes, intramural athletes, regular students) and by condition (i.e., affiliated clothing or non-affiliated clothing). For the student-athlete group, their sport team and eligibility year were also included in the spread sheet. Following data collection, the primary researcher conducted a latent thematic analysis on this data (Braun & Clarke, 2006). The primary researcher re-read the responses again looking for data that indicated whether the intervention worked or did not work. For this analyses, the researcher used a deductive approach on the prompt responses (Braun & Clarke, 2006). Specifically, the researcher went through and analyzed the responses through the lens of the research questions. Each individual prompt response was re-read looking for responses and themes to help answer our research questions. Specifically, the researcher looked for responses mentioning participants’ concept of identifying as a representative, moral intentions, social identity and the influence of affiliated apparel. The qualitative responses and analyses are reported in the results as an alternative interpretation to our research questions.

Exploratory Qualitative Analysis

All participants were invited at the beginning of data collection to provide any comments or justifications on the moral dilemmas to provide further insight and rational to their selection. Following data collection all of the comments on the moral dilemmas were read by the primary researcher and were added to a spread sheet for each specific

moral dilemma. The spread sheet was broken down by group (student-athletes, intramural athletes, regular students), each moral dilemma including the participant number, which condition they were in (i.e., affiliated clothing or non-affiliated clothing), their response selected on the Likert scale and their comments made.

Following the completion of data collection, the primary researcher conducted a semantic thematic analysis (Braun & Clarke, 2006). This method allowed for the identifying, analyzing, and reporting of themes within the data (Braun & Clarke, 2006). Specifically, the primary researcher looked for themes in relation to student-athletes' moral justifications and rationalizations in the moral dilemmas. In determining the themes, prevalence was considered in terms of the individual occurrence of the theme across the moral dilemmas. The researcher used an inductive approach as the themes are strongly linked to the data (Braun & Clarke, 2006) and were not driven by our theoretical interest. From the comments on each moral dilemma, we made codes through identified concepts and grouped the codes into themes. We report four reoccurring justification themes: depends on situational factors; helping a teammate; depends on the course and/or professor; not worth it/none of my business.

Chapter 3: Results

Below, the results for each analysis are presented. Table 3 represents the results from our correlation matrix and descriptive statistics for all continuous measures assessed in this study across all participants. The descriptive statistics for all measures are reported in Table 4 for student-athletes, Table 5 for intramural athletes, and Table 6 for regular students.

Mixed Factorial Results on Average Scores on Moral Dilemmas

The first mixed factorial analysis, 3 (student-athletes, intramural athletes, regular students) X 2 (affiliated clothing, non-affiliated clothing) model 1 was conducted with average scores on moral dilemmas (format 1; friend) acting as the dependent variable. For research question (a) the analysis indicated no significant main effect for group, $F(2,79) = 1.98$, $p = .15$, $\eta p^2 = .05$. For research question (b) there was no significant main effect for condition, $F(1,79) = 1.05$, $p = .31$, $\eta p^2 = .01$. For research question (c) there was no significant interaction, $F(2,79) = 0.43$, $p = .65$, $\eta p^2 = .01$.

The second mixed factorial analysis, 3 (student-athletes, intramural athletes, regular students) X 2 (affiliated clothing, non-affiliated clothing) model 2 was conducted with average scores on moral dilemmas (format 2; teammate) acting as the dependent variable for the athlete groups and format 1 for regular students. For research question (a) the analysis indicated no significant main effect for group, $F(2,79) = 1.75$, $p = .18$, $\eta p^2 = .04$. For research question (b) there was no significant main effect for condition, $F(1,79) = 1.48$, $p = .23$, $\eta p^2 = .02$. For research question (c) there was no significant interaction, $F(2,79) = .53$, $p = .59$, $\eta p^2 = .01$.

Table 3.

Pearson Correlations and descriptive statistics for all continuous variables assessed in this study.

	Format 2 Moral Dilemma C^2	Format 1 Moral Dilemma C^1	SIQS C^2	ASIQS C^1	Social Desirability C^1	Format 2 Moral Dilemma E^2	Format 1 Moral Dilemma E^1	SIQS E^2	ASIQS E^1	Social Desirability E^1
Format 2 Moral Dilemma C^2	1	.95**	-0.21	0.04	-0.02	.87**	.82**	-0.13	0.07	0.15
Format 1 Moral Dilemma C^1	.95**	1	-0.20	0.03	-0.04	.85**	.82**	-0.14	0.04	0.08
SIQS C^2	-0.21	-0.20	1	.46**	-0.17	-0.16	-0.16	.90**	.36**	-0.11
ASIQS C^1	0.04	0.03	.46**	1	-0.04	0.06	0.14	.48**	.87**	0.03
Social Desirability C^1	-0.02	-0.04	-0.17	-0.04	1	-0.10	-0.01	-0.17	-0.05	.65**
Format 2 Moral Dilemma E^2	.87**	.85**	-0.16	0.06	-0.10	1	.91**	-0.11	0.11	0.07
Format 1 Moral Dilemma E^1	.82**	.82**	-0.16	0.14	-0.01	.91**	1	-0.10	0.18	0.07
SIQS E^2	-0.13	-0.14	.90**	.48**	-0.17	-0.11	-0.10	1	.49**	-0.13

ASIQS E[1]		0.07	0.04	.36**	.87**	-0.05	0.11	0.18	.49**	1	0.02
Social Desirability E[1]		0.15	0.08	-0.11	0.03	.65**	0.07	0.07	-0.13	0.02	1
N		51	82	51	82	82	51	82	51	82	82
Minimum		2.94	2.88	2.56	1.78	1.00	3.13	2.69	3.44	1.33	2.00
Maximum		5.75	5.88	7.00	7.00	11.00	5.81	6.85	7.00	6.67	10.00
M		4.55	4.57	5.74	4.70	6.73	4.62	4.62	5.71	4.69	6.66
SD		0.67	0.74	0.88	1.03	1.76	0.73	0.81	0.82	1.05	1.61
Skew	Statistic	-0.48	-0.39	-1.28	-0.43	-0.29	-0.20	-0.16	-.64	-0.57	-0.66
	Std. Error	.33	.27	.33	.27	.27	.33	.27	.33	.27	.27
Kurtosis	Statistic	-0.30	-0.35	2.94	.08	0.71	-.95	-.02	.44	.44	0.89
	Std. Error	.66	.53	.66	.53	.53	.66	.53	.66	.53	.53

Note. [1] = Completed by all groups; [2] = Completed only by student-athletes and intramural; E = Experimental; C = Control; SIQS = Social Identity Questionnaire in Sport; ASIQS = Adapted Social Identity Questionnaire in Sport; *M* = Mean ; *SD* = Standard Deviation.

** $p < 0.01$ level

Table 4.

Descriptive Statistics for Student-athletes

Measures	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Format 2 Moral Dilemmas C	27	3.56	5.56	4.69	0.51	-0.12	0.45	-0.58	0.87
Format 1 Moral Dilemmas C	27	3.56	5.75	4.72	0.60	-0.16	0.45	-0.70	0.87
SIQS C	27	4.56	7.00	6.00	0.72	-0.13	0.45	-1.01	0.87
ASIQS C	27	1.78	7.00	4.52	1.13	-0.37	0.45	0.47	0.87
Social Desirability C	27	1.00	10.00	6.22	1.87	-0.62	0.45	1.57	0.87
Format 2 Moral Dilemmas E	27	3.38	5.81	4.80	0.61	-0.40	0.45	-0.59	0.87
Format 1 Moral Dilemmas E	27	3.44	5.75	4.72	0.66	-0.22	0.45	-1.02	0.87
SIQS E	27	4.33	7.00	5.88	0.84	-0.34	0.45	-1.24	0.87
ASIQS E	27	1.33	6.22	4.49	1.15	-1.00	0.45	1.23	0.87
Social Desirability E	27	2.00	9.00	6.33	1.84	-0.49	0.45	0.17	0.87

Note. C = Control; E = Experimental; SIQS = Social Identity Questionnaire in Sport; ASIQS = Adapted Social Identity Questionnaire in Sport.

Table 5.

Descriptive Statistics for Intramural Athletes

Measures	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Format 2 Moral Dilemmas C	24	2.94	5.75	4.39	0.80	-0.23	0.47	-0.94	0.92
Format 1 Moral Dilemmas C	24	2.88	5.81	4.29	0.85	0.03	0.47	-0.84	0.92
SIQS C	24	2.56	6.44	5.46	0.97	-1.68	0.47	2.88	0.92
ASIQS C	24	2.44	6.78	4.74	1.13	-0.49	0.47	-0.41	0.92
Social Desirability C	24	3.00	10.00	6.79	1.82	-0.23	0.47	-0.53	0.92
Format 2 Moral Dilemmas E	24	3.13	5.81	4.42	0.81	0.21	0.47	-1.06	0.92
Format 1 Moral Dilemmas E	24	2.75	6.85	4.41	0.96	0.51	0.47	0.51	0.92
SIQS E	24	3.44	6.44	5.52	0.76	-1.48	0.47	2.73	0.92
ASIQS E	24	3.00	6.67	4.72	1.03	-0.01	0.47	-0.80	0.92
Social Desirability E	24	2.00	9.00	6.63	1.84	-0.81	0.47	0.67	0.92

Note. C = Control; E = Experimental; SIQS = Social Identity Questionnaire in Sport;

ASIQS = Adapted Social Identity Questionnaire in Sport.

Table 6.

Descriptive Statistics Regular Students

Measures	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Format 1 Moral Dilemmas C	31	2.94	5.88	4.66	0.72	-0.54	0.42	0.28	0.82
ASIQS C	31	3.11	6.33	4.83	0.84	-0.13	0.42	-0.61	0.82
Social Desirability C	31	4.00	11.00	7.13	1.57	0.39	0.42	0.16	0.82
Format 1 Moral Dilemmas E	31	2.69	6.06	4.69	0.79	-0.62	0.42	0.32	0.82
ASIQS E	31	2.44	6.56	4.85	0.98	-0.37	0.42	-0.21	0.82
Social Desirability E	31	5.00	10.00	6.97	1.14	0.50	0.42	0.28	0.82

Note. C = Control; E = Experimental; SIQS = Social Identity Questionnaire in Sport; ASIQS = Adapted Social Identity Questionnaire in Sport.

Mixed Factorial Results on Format 1 Moral Dilemmas Depending on Severity

Further analysis was conducted to assess if groups differed on moral dilemmas depending on moral dilemma severity. A mixed factorial analysis was conducted for each level of severity using format 1 moral dilemmas (friend) to evaluate the main group (3) X condition (2). The mixed factorial analysis for the low moral dilemmas indicated no significant main effect for group, $F(2,79) = 2.65$, $p = .08$, $\eta p^2 = .06$ and condition, $F(1,79) = 0.87$, $p = .35$, $\eta p^2 = .01$. There was also no significant interaction, $F(2,79) = 1.39$, $p = .25$, $\eta p^2 = .03$. The mixed factorial analysis for the medium severity format 1 moral dilemmas revealed no significant main effect for group, $F(2,79) = 1.46$, $p = .24$, $\eta p^2 = .04$ and condition, $F(1,79) = 3.86$, $p = .05$, $\eta p^2 = .05$. There was also no significant

interaction, $F(2,79) = 0.05$, $p = .95$, $\eta p^2 = .00$. The mixed factorial analysis for the high severity format 1 moral dilemmas indicated no significant main effect for group, $F(2,79) = 1.41$, $p = .09$, $\eta p^2 = .02$. There was no significant main effect for condition, $F(1,79) = 1.77$, $p = .19$, $\eta p^2 = .02$. There was no significant interaction, $F(2,79) = 1.41$, $p = .25$, $\eta p^2 = .03$.

Mixed Factorial Results on Format 2 Moral Dilemmas Depending on Severity

Identical analyses by severity were also conducted to assess if groups differed on moral dilemmas depending on moral dilemma severity using format 2 (teammate) as the dependent variable. The mixed factorial analysis for the low severity format 2 moral dilemmas indicated no significant main effect for group, $F(2,79) = 2.06$, $p = .14$, $\eta p^2 = .05$ and condition, $F(1,79) = 3.36$, $p = .07$, $\eta p^2 = .04$. There was no interaction as well, $F(2,79) = 0.08$, $p = .93$, $\eta p^2 = .001$. The mixed factorial analysis for the medium severity format 2 moral dilemmas indicated no significant main effect for group, $F(2,79) = 0.59$, $p = .55$, $\eta p^2 = .02$ and condition, $F(1,79) = 0.43$, $p = .51$, $\eta p^2 = .01$. There was no interaction, $F(2,79) = 0.65$, $p = .53$, $\eta p^2 = .02$. The mixed factorial analysis for the high severity format 2 moral dilemmas indicated no significant main effect for group, $F(2,79) = 1.50$, $p = .23$, $\eta p^2 = .04$. There was a significant main effect for condition, $F(1,79) = 4.07$, $p < .05$ $\eta p^2 = .05$. Scores on the moral dilemmas were higher in the experimental condition ($M = 5.18$, $SD = 0.94$) than the control condition ($M = 5.08$, $SD = 0.93$). There was no interaction effect, $F(2,79) = 0.73$, $p = .49$, $\eta p^2 = .02$.

Results for the Moderation Analyses

Eight moderation analyses were conducted to determine the relationship between student-athletes' social identity and moral intentions. Two moderation analyses (model 1

= control data; model 2 = experimental data) were conducted using the overall SIQS data as the independent variable. For both analyses the moral dilemma scores served as the DV, SIQS as the IV, and group (1 = student-athletes; 2 = intramural athletes; 3 = regular students) as the moderator. The overall model testing the moderation effect of group in the control condition on the relationship between social identity and moral intentions was statistically non-significant, $F(5, 76) = 1.61$, $p = .17$, $R^2 = .09$. The conditional direct effect of social identity on moral intentions was non-significant, β = -.19, 95% CI [-.56; .18], $t = -1.04$, $p = .30$. The conditional direct effect comparing student-athletes and intramural athletes on moral intentions was not significant, β = -.22, 95% CI [-2.97; 2.54], $t = -0.16$, $p = .88$. The conditional direct relationship comparing student-athletes and regular students on moral intentions was not significant, β = -.35, 95% CI [-3.01; 2.30], $t = -0.27$, $p = .79$. The regression coefficient for the interaction term of student-athlete versus intramural athletes by SIQS control was not significant, β = -.04, 95% CI [-.51; .44], $t = -0.15$, $p = .88$. The regression coefficient for the interaction term of student-athlete versus regular students by SIQS control was not significant, β = -.02, 95% CI [-.45; .49], $t = 0.09$, $p = .93$.

Moderation Analyses Experimental Condition. The moderation analysis in the experimental condition also indicated that for each group social identity scores do not predict moral intention. The overall model testing the moderation effect of group in the experimental condition on the relationship between social identity and moral intentions was statistically not significant, $F(5, 76) = 1.23$, $p = .30$, $R^2 = .07$. The conditional direct effect of social identity on moral intentions was not significant, β = -.27, 95% CI [-.62; .07], $t = -1.57$, $p = .12$. The conditional direct relationship comparing student-athletes and

intramural athletes on moral intentions was not significant, β = -1.63, 95% CI [-4.70; 1.44], *t* = -1.06, *p* = .29. The conditional direct relationship comparing student-athletes versus regular students on moral intentions was not significant, β = -1.55, 95% CI [-4.02; .92], *t* = -1.25, *p* = .22. The regression coefficient for the interaction term of student-athletes versus intramural athletes by SIQS experimental was not significant, β = .21, 95% CI [-.33; .74], *t* = .77, *p* = .44. The regression coefficient for the interaction term of student-athletes versus regular students by SIQS experimental was not significant, β = .24, 95% CI [-.21; .68], *t* = 1.06, *p* = .29.

Social Identity Subscale Analysis Control Condition. We also ran a moderation analyses testing the three subscale levels of the SIQS independently (i.e., ingroup ties, ingroup affect, and cognitive centrality). The overall model testing the moderation effect of group in the control condition on the relationship between ingroup ties and moral intentions was statistically significant, $F(5, 76) = 3.09$, $p = .013$, $R^2 = .17$. However, the conditional direct effect of ingroup ties on moral intentions was not significant, β = -.16, 95% CI [-.37; .05], *t* = -1.49, *p* = .14. The conditional direct relationship comparing student-athletes and intramural athletes on moral intentions was not significant, β = .40, 95% CI [-1.50; 2.29], *t* = 0.42, *p* = .67. The conditional direct relationship comparing student-athletes versus regular students on moral intentions was not significant, β = .06, 95% CI [-1.51; 1.63], *t* = 0.07, *p* = .94. The regression coefficient for the interaction term of student-athletes versus intramural athletes by ingroup ties control was not significant, β = -.13, 95% CI [-.45; .20], *t* = -0.78, *p* = .44. The regression coefficient for the interaction term of student-athletes versus regular students by ingroup ties control was not significant, β = -.05, 95% CI [-.33; .24], *t* = -0.33, *p* = .74.

The overall model testing the moderation effect of group in the control condition on the relationship between ingroup affect and moral intentions was statistically not significant, $F(5, 76) = 1.36$, $p = .25$, $R^2 = .08$. The conditional direct effect of ingroup affect on moral intentions was not significant, β = -.06, 95% CI [-.27; .15], $t = -0.57$, $p = .57$. The conditional direct relationship comparing student-athletes and intramural athletes on moral intentions was not significant, β = -.25, 95% CI [-1.84; 1.34], $t = -0.31$, $p = .76$. The conditional direct relationship comparing student-athletes versus regular students on moral intentions was not significant, β = .33, 95% CI [-1.16; -1.83], $t = 0.44$, $p = .66$. The regression coefficient for the interaction term of student-athletes versus intramural athletes by ingroup affect control was not significant, β = -.03, 95% CI [-.33; .28], $t = -0.17$, $p = .86$. The regression coefficient for the interaction term of student-athletes versus regular students by ingroup affect control was not significant, β = -.11, 95% CI [-.40; .19], $t = -0.72$, $p = .47$.

The overall model testing the moderation effect of group in the control condition on the relationship between cognitive centrality and moral intentions was statistically not significant, $F(5, 76) = 1.25$, $p = .29$, $R^2 = .08$. The conditional direct effect of cognitive centrality on moral intentions was not significant, β = .08, 95% CI [-.37; .53], $t = 0.35$, $p = .73$. The conditional direct relationship comparing student-athletes and intramural athletes on moral intentions was not significant, β = 1.09, 95% CI [-2.34; 4.52], $t = 0.63$, $p = .53$. The conditional direct relationship comparing student-athletes versus regular students on moral intentions was not significant, β = -.32, 95% CI [-3.51; 2.86], $t = -0.20$, $p = .84$. The regression coefficient for the interaction term of student-athletes versus intramural athletes by cognitive centrality control was not significant, β = -.22, 95% CI [-

.76; .31], t = -0.84, p = .41. The regression coefficient for the interaction term of student-athletes versus regular students by cognitive centrality control was not significant, β = .07, 95% CI [-.43; .57], t = 0.29, p = .77.

Social Identity Subscale Analysis Experimental Condition. The overall model testing the moderation effect of group in the experimental condition on the relationship between ingroup ties and moral intentions was statistically not significant, $F(5, 76)$ = 1.09, p = .37, R^2 = .07. The conditional direct effect of ingroup ties on moral intentions was not significant, β = -.14, 95% CI [-.42; .14], t = -1.01, p = .31. The conditional direct relationship comparing student-athletes and intramural athletes on moral intentions was not significant, β = -.97, 95% CI [-3.99; 2.05], t = -0.64, p = .52. The conditional direct relationship comparing student-athletes versus regular students on moral intentions was not significant, β = -.47, 95% CI [-2.45; 1.50], t = -0.48, p = .64. The regression coefficient for the interaction term of student-athletes versus intramural athletes by ingroup ties experimental was not significant, β = .10, 95% CI [-.41; .61], t = 0.39, p = .70. The regression coefficient for the interaction term of interaction of student-athletes versus regular students by ingroup ties experimental was not significant, β = .04, 95% CI [-.31; .39], t = .24, p = .81.

The overall model testing the moderation effect of group in the experimental condition on the relationship between ingroup affect and moral intentions was statistically not significant, $F(5, 76)$ = 1.27, p = .29, R^2 = .07. The conditional direct effect of ingroup affect on moral intentions was not significant, β = -.14, 95% CI [-.35; .07], t = -1.37, p = .17. The conditional direct relationship comparing student-athletes and intramural athletes on moral intentions was not significant, β = -.75, 95% CI [-2.41; .90], t = -0.91, p = .37.

The conditional direct relationship comparing student-athletes versus regular students on moral intentions was not significant, β = -.63, 95% CI [-2.18; .91], t = -0.82, p = .42. The regression coefficient for the interaction term of student-athletes versus intramural athletes by ingroup affect experimental was not significant, β = .05, 95% CI [-.26; .37], t = 0.33, p = .74. The regression coefficient for the interaction term of student-athletes versus regular students by ingroup affect experimental was not significant, β = .08, 95% CI [-.22; .38], t = 0.54, p = .59.

The overall model testing the moderation effect of group in the experimental condition on the relationship between cognitive centrality and moral intentions was statistically not significant, $F(5, 76) = .94$, p = .46, R^2 = .06. The conditional direct effect of cognitive centrality on moral intentions was not significant, β = -.04, 95% CI [-.35; .28], t = -0.23, p = .82. The conditional direct relationship comparing student-athletes and intramural athletes on moral intentions was not significant, β = -1.19, 95% CI [-4.23; 1.85], t = -0.78, p = .44. The conditional direct relationship comparing student-athletes versus regular students on moral intentions was not significant, β = -.91, 95% CI [-3.25; 1.43], t = -0.77, p = .44. The regression coefficient for the interaction term of student-athletes versus intramural athletes by cognitive centrality experimental was not significant, β = .13, 95% CI [-.36; .62], t = 0.54, p = .59. The regression coefficient for the interaction term of student-athletes versus regular students by cognitive centrality experimental was not significant, β = .14, 95% CI [-.24; .52], t = 0.74, p = .46.

Post-Hoc Results

Following preliminary analyses we conducted a post-hoc analysis to provide potential understanding as to why we failed to prove our hypothesis. Specifically we

tested if differences in the social identity ingroup ties scores existed in scenarios when their identity was enhanced (i.e., wearing university affiliated clothing) when compared to when their identity was not manipulated (i.e., wearing non-affiliated clothing). We ran a mixed factorial analyses to evaluate the main group 3 (student-athletes, intramural athletes, regular students) X condition 2 (affiliated clothing, non-affiliated clothing). The mixed factorial analysis results indicated a non significant main effect for condition, $F(1,79) = 1.56$, $p = .22$, $\eta p^2 = .02$ and a significant main effect for group, $F(2,79) = 8.13$, $p < .001$, $\eta p^2 = .17$. Pairwise comparisons showed student-athletes ($M = 5.86$, $SD = .21$) scored higher than regular students ($M = 4.84$, $SD = .20$), $p < .002$. As well, intramural athletes ($M = 5.81$, $SD = .22$) scored higher than regular students, $p < .005$. Results revealed a non-significant interaction effect, $F(2, 79) = .62$, $p = .54$, $\eta p^2 = .02$.

Post-Hoc Qualitative Results

An analysis of the qualitative results from the manipulation check (i.e., how much did you feel like you were 'representing' the UofL and Pronghorn Athletics/ UofL when completing this study?) was also conducted to help explain our non-significant findings. The first research question investigated if university student-athletes intend to behave more morally than non-student-athletes. Although the quantitative results proved to be insignificant, we did find support from the qualitative results indicating student-athletes felt that there was more of an expectation to behave morally due to their role as a university student-athlete. For instance, a Men's Track and Field third year noted the expectation to behave prosocially stating, "*There are different expectations as a student and as a varsity athlete and these expectations dictated a couple of my responses*". Furthermore, a fourth year Women's rugby player commented "*While answering I was*

putting into perspective how these actions may reflect my image as an athlete so I believe I was strongly representing them". These qualitative results suggest that student-athletes were aware that as representatives there were higher expectations for them to behave prosocially and morally.

The second research question investigated whether reminding all students about university affiliation affected their intentions to behave morally (i.e., the Hawthorne effect), and once again our mixed factorial analyses showed no difference between condition. Interestingly, when looking at the qualitative data, we found evidence that reminding all groups of their affiliation may affect their intentions to behave morally. Specifically, a student-athlete commented "*I feel like when I am wearing Pronghorn gear I am representing Pronghorns or if I have my blue backpack on. I often forget I am representing UofL at UofL events, e.g., home basketball games".* The majority of student-athlete responses indicated how being a representative influenced their moral intentions however seldom intramural and regular students also responded this way. We saw mixed evidence in an intramural athletes' response to the study prompt saying: "*More in the teammate based questions. Wearing even UofL gear to this study plays a role immediately in how I think".* As well a regular student responded, *"More so wearing the UofL sweater than last time, but still not much since I have attended other universities".* Similarly, a regular student who was a former student-athlete at a different institution provided support for affiliated apparel affecting moral intentions through her comment, *"Not much, mainly just myself. When I played for UofA I felt like when the team was travelling and in uni gear that I was representing the university".* These qualitative results suggest that

reminding student-athletes of their affiliation did affect them to intend to behave more morally, however the same cannot be said for intramural athletes and regular students.

The third research question investigated if reminding student-athletes about their affiliation would make them uniquely more likely to intend to behave morally than non-student-athletes. Again the results from the mixed factorial analyses suggested no interaction effect. Although the quantitative results were not significant, we found qualitative support suggesting that when wearing team affiliated apparel student-athletes were more aware of how their actions can influence the university, athletic department, and sports team. Specifically, student-athletes indicated feeling more of an expectation to behave prosocially and morally in public settings. A third year Men's Track and Field student-athlete in the control condition responded to the prompt saying, "*particularly in questions about wearing Pronghorn gear and being in public settings with my teammates, those changed my perspective about how to answer them*". Similarly, a fourth year Men's soccer student-athlete noted, "*I think I did feel as if I was representing Athletics more in the situations where it was explicitly stated I was wearing university apparel than in situations where I was just a regular student*". These results indicate that some of the student-athletes were aware of the concept that they were a representative when wearing apparel. Similarly to the aforementioned findings, student-athletes are aware that there are higher expectations for them to behave morally especially while wearing team affiliated apparel. When looking at the qualitative data from intramural athletes and regular students there was not the same evidence.

The fourth research question investigated whether social identity was related to moral intentions, and although the quantitative results proved to be insignificant, we

found qualitative support. The qualitative results suggest that student-athletes who strongly identified with their role as a student-athlete were more likely to intend to behave in a manner that reflected positively for their university, athletic department and sport team. For instance, a fourth year Women's basketball player commented "*felt like every question I was considering more than just myself with each response so I would say I felt I was 'representing' the UofL and Horns often".* Similarly, a third year Women's rugby player stated "*I feel as though being a Pronghorn requires us to have good intentions and morality, so I would say very much so"*. These responses are interpreted as some of the student-athletes strongly identify as Pronghorn student-athlete and that their responses to the moral dilemmas were reflective of this identification. Although the student-athletes indicated they identified strongly in their role as a Pronghorn athlete and representative, the internalized identification was not strong enough to elicit moral behaviour reflective of their role. Of note, these results may be due to the fact that although the student-athletes were representatives of their university, athletic department, and sport team, they were also representatives of themselves. A fourth year Women's soccer player clarified, "*I feel like I was answering the questions as a person first athlete second approach".* This response suggests that the student-athlete was aware of their role as a student-athlete but felt that at the forefront, their actions reflect their own moral values above all else.

Finally looking at whether the relationship between social identity and moral intentions was different for the three groups and building off the previous finding, we did find qualitative results that showed differences between the groups. As discussed above, it is apparent that student-athletes who identified strongly with their teams felt more of a responsibility to behave morally. However, this was not consistent with the responses

from the intramural athletes and regular students. Specifically, an intramural athlete commented *"I hope I represented the UofL well but mostly answered these questions because of my own moral compass and try to do what's best no matter what".* Similarly, a regular student commented *"not much, more so thinking about how I represent myself".* These responses indicate that intramural athletes and regular students feel more responsibility to behave in a way that aligns with their values and individual morals.

Exploratory Qualitative Results

Participants were invited to add comments on the moral dilemmas to help provide insight and rationale to their selections. These comments were useful to help better understand the thought process and decision making that led to the participants' selections. From these comments, we were able to create several themes that explained the participant's moral justifications. As morality is subjective, these comments gave us further insight into the factors that may influence student-athletes' moral decision making. The common justifications student-athletes made were: *depends on situational factors, helping a teammate, depends on the course and/or professor, and not worth it/none of my business.*

Depends on Situational Factors. The first theme provided insight into the range of participants' morality in a moral dilemma. Moral dilemma 14 states: *A teammate of yours says an inappropriate comment in your team group chat. You don't have anything to respond to their comment and go back onto Instagram*. For this moral dilemma, several student-athletes provided comments indicating that their moral response to this dilemma would vary depending on the severity of comment. Specifically, participant 016 wrote "*depends on the comment and who it was directed towards*" and participant 003 and

participant 004 commented "*depends on severity of comment*". These suggest that student-athletes are willing to confront their teammates about immoral behaviour if they see fit. Several student-athletes also indicated they would address the inappropriate comment personally or seek advice from team leaders. Specifically, participant 090 commented "*I would not say in the chat, but I would privately message if it was inappropriate*" and participant 083 commented "*wouldn't respond on the chat but would talk to them in person*". As well, participant 021 commented "*would talk to leadership group*" and participant 092 commented "*would contact the captain*". These comments suggest that participants feel at times it is more appropriate to address immoral behaviour in person or one on one. Furthermore, for an issue like the one in the dilemma reflecting a group chat, the student-athletes would go to their team leaders for guidance before addressing it themselves.

Student-athletes' are likely to experience several moral dilemmas while competing in sport, however while spectating other games with teammates they may also experience moral dilemmas. Specifically, in responding to moral dilemma 15 which states: *You are at a Pronghorn's game with teammates, and they start aggressively heckling and swearing at a player on the visiting team. You tell them to stop because they are being disrespectful*, players were more likely to contextualize their behaviour. This is a dilemma that student-athletes are likely to experience as a spectator and player. Participant 029 commented "*swearing at a player or being offensive I would step in, aggressively heckling I would stay out*". This justification indicates that in a sport setting there are agreed upon norms that have determined the boundaries surrounding appropriate heckling. Participant 042 commented "*it would depend just how inappropriate they were*

being", again suggesting that the participant would tell their teammate to stop if it crossed the boundary and was determined to be inappropriate to them.

Helping a Teammate. The second justification theme provided insight into why a student-athlete might choose to make an immoral decision in order to help or be loyal to their teammate. Moral dilemma 5 states: *A teammate is taking an online course, which you earned an A in during the previous semester. Knowing of your success, they offer to pay you to take their online midterm for them. It is extremely unlikely that you would get caught, so you decide to write the exam for them.* The student-athletes proved to be moral in this dilemma stating that most would not write the test for their teammate, but would in fact help them in various ways. Participant 029 stated "*would offer to help them write it but not write it for them*" and participant 003 stated "*would not take money or write it for them but would be willing to help while they wrote it*". As well participant 088 "*might offer to write it with them or help them study/give notes*". Furthermore, student-athletes' responses were similar in the same dilemma which involved a friend instead of a teammate. Participant 003 stated "*I wouldn't write it for them. I wouldn't take their money. I would help them or do it with them*". The responses to these dilemmas provide insight that student-athletes are willing to help their teammates in appropriate and moral ways but are unlikely to help them in an immoral way.

Depends on the Course and/or Professor. The third theme provided the most variability on student-athletes' morality. Their responses indicated that if the moral decision would negatively affect them, than their decision would be influenced depending on the course and/or the professor. Moral dilemma 3 states: *When checking your grades online you notice your exam grade is 10% higher than the actual grade you got on the*

test. You decide it is the professor's fault for entering the grade wrong and you don't say anything. Participant 029 stated "*depending on the course and professor. History of Rock I wouldn't say anything, 4000 level Kinesiology class I would be honest about it*". Participant 016 wrote "*depends on how well I know the professor (is he/she nice or not) and how good my grade is in the class*". Moreover, moral dilemma 1 states: *Your professor leaves you alone in a room with all of your course material when writing a closed book exam. The professor tells you they will return in about ten minutes. Although you are unlikely to be caught reviewing your material, you don't look at any of your notes and continue writing your exam.* Participant 092 commented "*depends on the class and depends on how well I'm doing*". Similarly, participant 083 commented "*if the course is very hard/unfair then would be more unlikely (to not look at material)*". Therefore, from these comments it appears that student-athletes tend to lack morality in a classroom setting if it was going to negatively impact them. This may be due to the fact that student-athletes are required to maintain good grades in order to compete (Gayles, 2009). As well, student-athletes morality was influenced based on their relationship with the professor and could vary depending on the professor. This adds to the notion that morality is contextual and is subject to vary based on various factors.

Not Worth it/ None of my business. The final theme provided rationale to dilemmas where student-athletes morality was influenced because they felt it did not involve them or they did not think the immoral decision was worth it. Moral dilemma 6 states: *After practice you overhear two of your teammates discussing cheating for their upcoming midterm exam. You know that they have really been struggling and need a good grade to pass the course. You also are aware that playoffs are coming up and that*

both teammates are key players on your team. If you report your teammates for cheating, you know they will be kicked off the team and out of school. Conversely, if they don't cheat and end up failing the exam, you know they will not be able to play in the playoffs, risking your team's chances at winning. You decide to not tell anyone about what you overheard and hope they don't get caught. Participant 036 commented "*it's not really any of my business if they decide to cheat*". As well participant 092 commented "*not my business*". Moral dilemma 10 states: *While writing a midterm you witness a classmate cheating off another student's exam. The professor doesn't notice as they are busy helping another student with a question. You decide not to say anything to the professor about witnessing cheating.* Participant 029 explained their rationale of more or less likely not saying something as "*Part of me would just stay out of it, doesn't affect me not my business type of thing but the other part of me would want to make sure person being copied off of doesn't take a hit*". As well, participant 092 commented "*not for me to say*" and "*I don't like telling on others*". Altogether these justifications suggest in that moral dilemmas that involve other stakeholder's decisions, the student-athletes felt less obligated to behave morally.

Chapter 4: Discussion

The purpose of this study was to test (a) if university student-athletes intended to behave more morally than non-student athletes, (b) whether reminding all students about university affiliation affected their intentions to behave morally (i.e., the Hawthorne effect), and (c) if reminding student-athletes about their affiliation would make them uniquely more likely to intend to behave morally than non-student athletes. Subsequently, we were also interested in (d) whether social identity was related to moral intentions, and (e) whether the relationship between social identity and moral intentions was different for the three groups.

Are Student-Athletes More Moral?

Contrary to our hypothesis, our results showed student-athletes did not intend to behave more morally than other university student groups. These results contrast previous research by Bredemeier and Shields (1986b) which showed non-athletes had higher moral reasoning for life and sport dilemmas than college basketball athletes, but similar moral reasoning with college swimmers. In our analyses, no differences existed even when controlling for sport type. One explanation may be how morality was measured. In Bredemeier and Shields' (1986b) study, moral reasoning was assessed through individual interviews, which consisted of two moral situations within life and two moral situations within sport. One limitation of their study was that the life and sport dilemmas were concerned with different moral issues. For example, a middle-aged married man involved with his young secretary (life) is different than a football player who is told by his coach to try to injure an opposing player (sport). Therefore, the variability of behaviours in the

different contexts made it difficult to accurately compare the differences in participants' moral reasoning in life and sport.

In our study, we addressed this limitation by assessing morality through a range of 16 real life dilemmas all students are likely to experience. We also added an intramural group to control for the influence of previous sport experience. This novel approach allowed for us to accurately compare student-athletes' and intramural athletes' moral decision making in real life dilemmas that involve their teammates and friends. Further we were also able to compare student-athletes', intramural athletes' and regular students' moral decision making using real life dilemmas that are likely to be experienced by all groups at university.

Another explanation for our insignificant results may be that student-athletes' morality is different in the sport context, but similar to non-athletes in general life based scenarios. For instance, Kavussanu and colleagues (2013) had student-athletes complete the Prosocial and Antisocial Behaviour in Sport Scale (PABSS; Kavussanu & Boardley, 2009) and an adapted version to measure their morality in a university context. They found student-athletes engaged in more antisocial behaviour towards opponents in sport than towards students in university. However, a limitation to their study was that the adapted version of the PABSS did not accurately measure equivalent behaviours. For example, items on the adapted version consisted of statements like "tried to injure a student and deliberately hurt a student". This is not equivalent to trying to injure an athlete and deliberately hurt an athlete in competition.

Two concepts (i.e., bracketed morality and game reasoning) help explain why trying to injure a student versus trying to injure an athlete are not equivalent. Bracketed

morality is defined as “a legitimated, temporary suspension of the usual moral obligation to equally consider the needs and desires of all persons” (Bredemeier & Shields, 1986a, p. 257-258). Game reasoning is defined as a reflection on the bracketed morality that is believed to occur in sport that athletes use to justify immoral behaviour (Bredemeier & Shields, 1986a). Thus, in Kavussanu and colleagues (2013) study, it is possible that differences were due to measurement issues. For instance, it is likely that student-athlete populations in previous research were adopting bracketed morality or game reasoning when responding to the sport dilemmas but not when responding to the real-life dilemmas. Therefore, due contextual differences of sport and real life, direct comparisons were problematic.

In our study, our conflicting results, which provide contextually similar dilemmas, suggest that student-athletes are no different in morality compared to other students. In designing our methodology we were deliberate in ensuring the face validity of our moral dilemmas for all student groups within a university context. Specifically, we vetted our moral dilemmas with stakeholders in the university context to ensure that they represented scenarios faced by all student groups. We also used an intramural comparison group when assessing teammate based dilemmas to tease out the influence of previous youth and adolescent sport experience. Thus, current results highlight the importance of using equivalent comparisons when assessing student-athlete and non-student-athlete groups on morality – something that has been done scarcely in our field (c.f., Bredemeier & Shields, 1986a & 1986b).

Does Reminding Student-Athletes about University Affiliation Affect Morality?

Previous research by Rathwell and Young (2018a) suggested student-athletes were aware that they were identifiable members of their university and understood how their behaviours influenced the reputation of their teams and universities. Likewise, at the host university where the current study was conducted, student-athletes were explicitly informed of their role as a representative during their student-athlete orientation. All Pronghorn student-athletes must participate in a student-athlete orientation each year where they are informed of their role as a representative and responsibilities and expectations as a student-athlete. Within this orientation, the student-athletes are provided a statement of athletic responsibilities, as well as personal and athletic conduct (Pronghorn Athletics, 2022) that stated "as a student-athlete, I am a representative of the University of Lethbridge and as such, I am expected to conduct myself at all times in an appropriate manner. Poor conduct and other inappropriate behaviour reflect upon Pronghorn Athletics and the University". Furthermore, this document states "I recognize that being a Pronghorn Athlete carries with it responsibilities and rewards and that as an athlete in the community; I must not only embrace those responsibilities, but also conduct myself both on and off the playing field in a way that exhibits respect for others and myself".

Given previous findings, and the overt focus on student-athletes being representatives at the host university, we hypothesized that student-athletes would have higher average scores on the moral dilemmas when they were reminded of their affiliation (i.e., enhanced by wearing university affiliated clothing and taking a photo) than when their sense of affiliation was not manipulated (i.e., wearing non-affiliated clothing).

Research on the Hawthorne effect suggests individuals' behaviours will change when they feel like they are being observed (Brannigan & Zwerman, 2001). We attempted to initiate a Hawthorne effect (i.e., increase student-athletes' feelings of representing their university) by having student-athletes wear affiliated gear and taking a photo of them. Contrary to our hypothesis, there was no difference in student-athletes' responses to moral dilemmas when wearing university affiliated clothing or not. Thus, one interpretation of our results may be that raising awareness that one is an identifiable university representative is an ineffective strategy (Rathwell & Young, 2018a) for changing moral intentions.

It is also possible that we failed to initiate the Hawthorne effect. For instance, our intervention (wearing affiliated clothing) and special attention (taking a photo) may not have been a sufficiently strong enough dose to elicit changes in participants' feelings regarding representing their university and respective teams. Interesting, our qualitative manipulation check suggested that our intervention worked as student-athletes noted they felt like they were representatives of the university and athletic department while completing our study. However, when using our quantitative post-hoc analysis, we saw no difference between conditions in participants' social identification, suggesting our attempt to enhance student-athletes' feelings of association as representatives failed.

One explanation for why this manipulation may have failed is that student-athletes may be used to wearing affiliated apparel, especially in public settings. In fact, we had to exclude three student-athletes from this study because they wore team affiliated apparel to both data collection sessions. Further, there were five participants who were assigned to the control condition for time 1 but were changed to the experimental condition at time 1

because they were wearing affiliated clothing. Thus, student-athletes may not have felt a heightened responsibility or awareness while wearing team affiliated apparel during this study because of the habitual nature of wearing affiliated clothing may have blunted the effect of doing so.

It is also possible that we initiated a Hawthorne effect during both conditions simply by having the principle investigator present. The Hawthorne effect is influenced by three core factors: environmental, intervening and behavioural (Chiesa & Hobbs, 2008). The researcher's presence in both conditions (i.e., environmental factor) may have been a stronger influence on our participants' feelings of being watched than our intervening variable (i.e., manipulation), reducing the impact of our intervention on responses to the dilemmas (Brannigan & Swerman, 2001; McCambridge et al., 2014). Although, anecdotal, the principle investigator noted that after completing several data collection sessions participants made comments about feeling judged when returning their material (e.g., "please don't judge me"). These anecdotal accounts are inline with the claims from Ellemers and colleagues (2013) which suggest that the behavioural decisions made in moral dilemmas research may not necessarily reflect individuals' own preferences, but are instead determined by their concern of appearing moral in the eyes of others. Notably, in our study we did control for response bias by including the Marlowe-Crowne social desirability scale (Reynolds, 1982) as a covariate in our analyses, which gives us more confidence in our findings. However, it is still possible that some response bias still existed due to participants completing the study twice and the use of self-report data.

Qualitative Contrast

One interesting finding was that when we analyzed our qualitative data (i.e., open ended comments), our results suggested several student-athletes were aware of their role as a representative and indicated that their role influenced them to behave prosocially. These qualitative results are in line with previous qualitative research findings by Rathwell and Young (2018a). However, despite saying that they were aware of their role as a representative and indicating that it made them behave prosocially, when analyzed quantitatively, the same student-athletes were no different than other groups of students when it came to their moral intentions. Similarly, when analyzing the qualitative data from our manipulation check we found that student-athletes felt they completed the study as a representative of the university and athletic department. However, our post hoc quantitative metric used to test our manipulation showed no effect between wearing affiliated apparel and responding to the moral dilemmas as a representative. Taken together, these results (i.e., interpreted through a post-positivist lens) question the external validity of previous qualitative claims. Conversely, our qualitative results may suggest our quantitative design was too strict to capture the incidents that would actually differentiate student-athletes from non athletes. For instance, we only used 16 scenarios created from the student-athlete and student codes of conduct that were deemed "likely to occur" by our expert panel. However, it is possible scenarios not included in the codes of conduct are the ones that differentiate groups.

We also collected data in a lab, not in bar, nor in test taking situations etc. Therefore, we may have missed important contextual factors surrounding intentions, decision making, and behaviours. In our dilemmas, we also "made the decision" for our

participants and then asked how likely they are to engage in the scenario described. There is precedence for phrasing dilemmas in the manner that we chose (e.g., Kavussanu & Ring, 2016), but results may have been different if they were provided scenarios and then given a forced choice (e.g., Barak-Corren et al., 2018).

Despite being incongruent with our quantitative analyses, our open-ended comment data enabled us to better understand factors that impacted how our participants were responding to our dilemmas. For instance, our deductive semantic analysis resulted in four themes surrounding moral justification: depends on situational factors; helping a teammate; depends on the course and/or professor; not worth it/none of my business. These real life justification themes are complimentary to the concept of bracketed morality within sport discussed above (Bredemeier & Shields, 1986a, 1986b), and help explain why and when student-athletes may be willing to suspend their usual moral values.

Is Social Identity Related to Moral Intentions?

The fourth research question investigated whether social identity was related to moral intentions, and we hypothesized that there would be a positive relationship between social identity scores and the moral dilemmas. Once again, the results from our eight moderation analyses failed to confirm our hypothesis. One explanation is that social identity is not related to moral intentions. More specifically, how strongly an athlete feels connected with other team members or feels good about being a member of their team, as well as how often they think about being a member of their team (Cameron, 2004) does not contribute to them intending to behave morally outside of their team context.

Contrary to our findings, previous research on social identity and prosocial and antisocial behaviour in sport has found athletes who reported stronger feelings of association with their team also reported engaging in more prosocial behaviours (Bruner et al., 2014). Specifically, Bruner and colleagues (2014) found when athletes had positive feelings associated with being a team member, they also reported prosocial behaviour towards teammates. Once again, differences between our results and past studies may be due to how morality was assessed. In our study, we used real life moral dilemmas, whereas Bruner and colleagues used the PABSS. Together, these contrasting results suggest maybe social identity only has an effect on athletes' moral behaviour in sport scenarios that involve their team.

Another explanation for our non-significant results may be that our moral dilemmas did not involve scenarios that involved the team. Although the format 2 moral dilemmas did involve teammates, the dilemmas themselves did not consist of team/sport related dilemmas (i.e., scenarios where the strength of a participants' identification within a team may influence their moral intentions more strongly). Notably, we also did not collect data on team norms for this study. Thus it is possible that dilemmas that concerned drinking the night before a game, skipping workouts, or taking performance enhancing drugs may have been responded to differently by student-athletes whose norms were congruent/incongruent with the behaviour represented in the moral dilemma.

Team norms have been researched in the past to identify acceptable and unacceptable behaviour within teams. Munroe and colleagues (1999) identified team norms for practices, competitions, social situations, and off-season. Specifically, they identified five team norms that may influence athletes' behaviours in social situations:

respecting others; attitude; respecting team identity; supportive behaviour; and shop talk. Although one would assume the abovementioned team norms would be related to social identity and moral behaviour outside of sport, the team norms found by Munroe and colleagues did not encompass behaviours related to respecting others (i.e., bad mouth teammates behind their backs) and respecting team identity (i.e., embarrass the group in a social situation). Taken together, these results suggest that more research is needed to understand how social identity and moral behaviour is related outside of the sport setting.

Qualitative Contrast

Interestingly, similar to our findings on being a representative, our qualitative data contrast our quantitative results. Specifically, student-athletes indicated in the study prompt how their identity as a student-athlete influenced them to behave morally. Our qualitative findings align with research on moral identity, which suggests that group moral norms that individuals internalize are part of an individual's social identity (Rehman Khan, 2020). In our study, student-athletes may have felt they internalized the group norm to behave morally in general, but when it came to our quantitative assessment of intention related to specific moral dilemmas, their responses were not influenced by their social identity.

Is Social Identity Enhanced When Wearing Affiliated Apparel?

Once again, our qualitative data from our manipulation check suggested that we succeeded in enhancing athletes' awareness of their affiliation. Specifically student-athletes noted they felt more of a responsibility to behave morally in public scenarios where they are visible as a student-athlete. These qualitative results align with Rathwell and Young's (2018) findings where participants felt they were identifiable members of

the university, and this came with a sense of responsibility. However, when analyzed quantitatively, we found contradictory evidence to suggest we failed to enhance student-athletes' affiliation with our intervention. In fact, we found average scores on the social identity questionnaire for sport were no different in the condition that was supposed to increase their sense of affiliation (i.e., wearing university affiliated clothing) than when their athletic identity affiliation was not manipulated (i.e., wearing non-affiliated clothing). These mixed findings once again suggest it is important to consider how the study design can impact results, and highlights the need for greater reflection when comparing quantitative and qualitative findings.

Chapter 5: General Discussion

The present results contribute significantly to the body of literature from a theoretical, methodological and applied perspective.

Theoretical Implications

Researchers in the past have suggested student-athletes have less moral reasoning than non-athletes (Bredemeier & Shields, 1986b), and have used bracketed morality and game reasoning to help explain differences between athlete and non-athlete populations. From a theory perspective, we agree that bracketed morality and game reasoning can influence athletes' morality within a sport context, but our results suggest that findings on morality are not transferrable to non-sporting contexts. Specifically, we found when assessing student-athletes' morality in contexts outside of sport, they were no different in their moral intentions than intramural athletes and regular students. Therefore, our results suggest that when bracketed morality or game reasoning is suspended (i.e., student-athletes are in scenarios where they do not apply), student-athletes' moral intentions are more in line with other student groups. Our qualitative results also add to our theoretical knowledge by adding alternative explanations to bracketed morality and moral reasoning that are more appropriate for contexts outside of sport. Specifically, we found four themes (i.e., depends on situational factors, helping a teammate, depends on the course and/or professor, and not worth it/none of my business), which may help explain when or why student-athletes suspend their moral values in real-life contexts. These themes require additional empirical attention to test their validity.

Our findings also have implications related to the Hawthorne effect. The Hawthorne effect has been highly debated in educational and psychology research

(Brannigan & Swerman, 2001; Chiesa & Hobbs, 2008; McCambridge, 2015). The Hawthorne effect has been used to explain a change in behaviour that occurs when participants are aware they are being observed or studied (McCambridge et al., 2014). However, few studies to our knowledge have explicitly tried to create a Hawthorne effect (most try to control for it). In our study we attempted to initiate a Hawthorne effect but failed to create behaviour change. Unfortunately, our study findings suggest that the researcher's presence may been a stronger influence on participants' behaviour and intention than our manipulation. Therefore, better care is needed in future studies when trying to manipulate a variable to cause a Hawthorne effect (i.e., behaviour change). Specifically, there needs to be measures taken to better control for the researcher's presence.

It is also possible that a different psychological phenomenon known as the Pygmalion effect is better suited for influencing student-athletes' moral intentions and behaviours. The Pygmalion effect is where high expectations lead to improved performance and productivity (Costlow & Bornstein, 2018). Previous research on the Pygmalion effect has focused on the relation between teacher expectations and student academic performance (Boser et al., 2014), but has also been applied to a leader-follower environment (Costlow & Bornstein, 2018). Like the Hawthorne effect, we believe this phenomenon could be adopted to assess university student-athletes' moral behaviour. In our present study we reminded student-athletes of their group affiliation, but to create a Pygmalion effect we would need to remind student-athletes of how important their group is and how the group is perceived by the public. This could be done prior to data collection by highlighting how great Pronghorn athletes are and how they are role models

in our community. Another manipulation could be to have student-athletes read a story of an exemplary Pronghorn athlete prior to beginning data collection. By reinforcing the high expectations for student-athletes' behaviour, we may create a Pygmalion effect that may better influence moral intentions than the Hawthorne effect – something that may be more in line with the intentions of members of the athletics department (i.e., information provided at orientation).

Methodological Implications

Our study relied on self reported data, which is consistent with previous research evaluating student-athletes' morality (Kavussanu et al., 2002; Kavussanu & Ntoumanis, 2003). Since there can be issues with the reliability of self reporting surveys, we added a social desirability scale (Reynolds, 1982) to control for response bias, although controlling for social desirability did not change our findings. The moral dilemmas used in our study were also different from previous research (Bredemeier & Shields, 1986b). We created our moral dilemmas based on the student-athlete and student codes of conduct and had them validated by a panel of university stakeholders to ensure the dilemmas consisted of scenarios that student groups are likely to experience. Thus, we believe our moral dilemmas provided more accurate situations when compared to moral dilemmas used in previous research, which may have accounted for our non-significant findings. Thus, the first methodological contribution of this study was the creation of morally equivalent scenarios that can be used when comparing athlete and non-athlete groups.

Our next contribution was the use of a randomized control trial. To our knowledge, this is the first study to do so when looking at morality in athlete populations. Randomized control trials reduce bias and are a rigorous design for examining cause-

effect relationships between an intervention and outcome (Abdi et al., 2009). We also included intramural athletes as a novel comparison group to control for sport experience in general as a potential confounding variable related to morality outside of sport. Finally, we pre-registered our study through OSF to ensure our experimental design was documented prior to data collection. By pre-registering our study, we made our entire research process clear prior to data collection to control for publication bias. Altogether, despite offering alternative explanations to past studies (Bredemeier & Shields, 1986b; Rathwell & Young, 2018), we are confident in our interpretation that there is no difference in student-athletes' and non-athletes' morality given the rigour of our study (randomized control trials are the gold standard of evidence based design). Thus, another contribution of this study is the precedent set for using pre-registered controlled designs if possible when studying morality in sport.

Applied Implications

From an applied perspective, our findings suggest the current efforts (i.e., student-athlete orientations) to enhance student-athletes' concept of their role as a representative are likely not working. We suggest there is a need for alternative or complementary efforts to increase student-athletes' awareness of their roles and responsibilities as a university representative. We suggest that informing student-athletes of their role as representatives and how their actions can influence public perceptions of the university, athletic department and sport teams is a good starting point, but insufficient on its own. One strategy that may help produce changes in intention and behaviour would be to explicitly inform student-athletes of the high expectations the university and athletic department hold for them to behave morally (i.e., Pygmalion effect). Moreover, a

dedicated intervention program for promoting moral reasoning may be useful for universities and athletic departments (Kavussanu et al., 2002). It may be beneficial to first implement the intervention program with individual teams to explore and improve their respective team norms. Subsequently, implementing a larger scale intervention program to create and establish moral norms and an ethical culture for the entire athletics department could be beneficial. Altogether, these initiatives may help to develop student-athletes into better university representatives.

Limitations and Future Directions

Although our study has made significant theoretical, methodological, and applied implications, it is not without limitations. For instance, the first limitation we identified was that our intervention method used may not have been intense enough to influence a Hawthorne Effect for the different groups. Student-athletes tend to wear team apparel frequently, such as some wear team backpacks and/or affiliated apparel everyday. Therefore, by having student-athletes wear affiliated apparel for data collection as our intervention, we may not have elicited enough of a "change" to result in a change in moral intentions for the student-athlete group. Similarly for the other groups, the participants indicated not feeling like a representative at all and that they represent themselves not the university. The regular student and intramural athlete responses to our prompt indicated that these participants had limited feelings of being university representatives. This also suggests that the intervention of wearing university affiliated apparel was not strong enough to elicit feelings of being a representative. Therefore, we suggest future research replicate this study by implementing a stronger intervention

strategy to enhance the Hawthorne effect for assessing student-athletes' moral intentions as university representatives.

Another limitation is that we did not assess the influence of team norms. Previous research has discussed the influence of social identity and team norms on student-athletes' behaviour (Ellemers et al., 2013; Kroshus et al., 2015). Team norms provide consistency and predictability regarding behaviours expected from team members as well as express the central values of the team (Taggar & Ellis, 2007), which may influence moral behaviour. Future research should use team norms as a mediator of student-athletes' moral intentions.

Another important, but unforeseen limitation to this study, was that the host university faculty strike in the 2021-2022 academic year. The strike lasted a total of six weeks and resulted in the semester being extended. Data collection for this study began after the strike ended, however, the negative effects of the strike impacted several participants' responses. This was evident in participants' comments on their ASIQS responses. In response to the prompt *The fact that I am a student at this university often enters my mind,* participant 025 commented "*Not for positive reasons*" and participant 004 commented, "*Not in a positive way- Strike*". Furthermore, following the prompt *Generally, I feel good when I think about myself as a student at this university,* participant 036 commented "*Not after the strike*". Furthermore, a fourth year student-athlete with the women's soccer team provided the qualitative response "*somewhat feel I represent the university, taking into consideration the UofL strike and online school impacted my feelings about the questions*". Altogether it is evident that the faculty strike negatively influenced all university student groups' feelings and associations with the university.

The small population size of the University of Lethbridge was also a limiting factor for our sample size. Due to the fact that we collected data at a smaller university, we were only able sample five different U SPORTS, limiting our understanding of moral intentions to basketball, soccer, track and field, swimming and rugby. Thus, it is possible that including other sports such as cross-country, curling, field hockey, football, hockey, volleyball and wrestling could change our results. We suggest future research be conducted at several universities to ensure a larger sample size and to expand the scope of university sports teams being assessed. On a similar note, our eligibility requirements limited the number of student-athletes who were able to participate in our study. It is possible with larger samples in all of our groups that we may have been able to detect differences between groups. However, we did calculate a power analysis and reached our target sample sizes. We also only found small to medium effect sizes of ηp^2 range = 0.00 – 0.06. These factors give us confidence in our findings.

Another issue with being at a small university was reduced anonymity. Specially, the principal investigator is a known student-athlete and participants were familiar with her. Thus, the fact that this study was conducted at a small university may have contributed to all students intending to behave more morally as their actions are more easily scrutinized (i.e., the Hawthorne effect associated with the principle investigators' presence). Taken together, we suggest collecting data from multiple institutions and using an unfamiliar person to collect participants' data in future studies.

A final limitation of this study was the nature of several moral dilemmas. Specifically, some participants interpreted that they were choosing between acting "morally" towards the school and acting "morally" to their teammate/friend or vice versa.

Several participants referred to these moral dilemmas as “snitching” and this dissonance influenced their moral intentions around. Of note, we interpreted that that some participants conflicted morality with loyalty; making a decision where they are either being moral to the university and disloyal to their teammate/friend or being immoral to the university and loyal to their teammate/friend. Therefore, we suggest future research add moral dilemmas through the lens of a stranger to assess participants’ moral intentions without having personal bias.

Conclusion/ Contributions of this Literature to the Field

To the best of our knowledge there has been no research that has explicitly evaluated the effect of being a representative of a university on student-athletes’ moral intentions. By creating moral dilemmas in a context outside of sport we were able to assess student-athletes’ moral intentions through a different lens than previous research. Our findings add to the literature of sport and moral and ethical behaviour by suggesting that being an identifiable member has no impact.

Specifically, we found no differences in student-athletes’ and other students’ moral intentions. These findings help to extend our knowledge by exploring student-athletes’ morality and moral intention in social settings where they may be viewed as representatives of their teams and universities. Future research should consider using current dilemmas or creating and validating additional real-life moral dilemmas that can be used to assess morality within a university context.

By identifying the insignificant connection between social identity and the Hawthorne effect for athletes wearing team apparel on moral intentions, these results provide useful information for universities and athletic departments. Specifically,

universities and athletic departments need alternative or complimentary ways to better emphasize to student-athletes that they are representatives and are responsible for upholding the values of the university. Since current strategies appear ineffective, future research is needed that continues to evaluate student-athletes' moral functioning as representatives outside of the sport context.

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Appendix A

Recruitment Letter

To whom it may concern,

You are being invited to participate in a research study on moral dilemmas. Data for this study will be collected for the purposes of Keegan Brantner's Master's Thesis at the University of Lethbridge under the supervision of Dr. Scott Rathwell.

For this study, you will be asked to visit the Psychology for Active Living and Sport Lab at the University of Lethbridge. For the first visit, you will be asked to complete a brief questionnaire that asks questions about demographic information, social identity, and social desirability. You will also be asked to respond to a set of moral dilemmas. In total, the first visit should take approximately 20-30 minutes. The second visit will occur to weeks later and you will be asked to complete another brief questionnaire that asks questions about social identity and social desirability, and you will be asked to respond to a set of moral dilemmas again. The second visit should take approximately 20 minutes to complete.

If you are interested in participating in this study, contact the primary researcher, Keegan Brantner, via email at Keegan.brantner@uleth.ca to inform her of your interest. Afterwards, you will be sent a Letter of Consent that will need to be signed and returned to Keegan Brantner prior to participating. Once this form has been signed and returned, you will be emailed a demographic questionnaire that asks for various personal and sport-related information. Following this, the primary researcher will email you to arrange a time and date that is most convenient for you to begin data collection.
If you have any questions about the study, please feel free to email the primary researcher at Keegan.brantner@uleth.ca. If you have any questions about your rights as a participant in research, you may also contact the Office of Research & Innovation Services at the University of Lethbridge by phone at 403-329-2431 or by email at oris@uleth.ca.

Thank you for your consideration,

Keegan Brantner, BA.
Scott Rathwell, PhD
University of Lethbridge
Faculty of Arts & Science
Department of Kinesiology & Physical Education
4401 University Drive
Lethbridge, Alberta, Canada
T1K 3M4

Appendix B

Recruitment Poster

Appendix C

Letter of Consent

We invite you to participate in a study conducted by Keegan Brantner examining moral dilemmas in university populations. Data for this study will be collected for the purposes of a Master's Thesis at the University of Lethbridge for Keegan Brantner under the supervision of Dr. Scott Rathwell.

Procedures & Participant Responsibilities

Participation involves two visits to the Psychology for Active Living and Sport Lab at the University of Lethbridge. The first visit will take 20-30 minutes and the second visit will take 20-30 minutes.

Participation includes the following:

1. Completing a brief questionnaire about your age, gender, education, sport played (if applicable), year of eligibility (if applicable) and leadership Role (if applicable). Your answers are strictly confidential and will be used to ensure that you are eligible to participate in the study. Your responses to this questionnaire will also be used during data analysis to adjust for variables that may affect the results of this study.
2. During both visits you will respond to moral dilemmas and complete a Social Identity Questionnaire, and a Social Desirability Scale. Your answers are strictly confidential and will be used to ensure that you are eligible to participate in the study. Your responses will be used during data analysis. All analyses will be completed in the Psychology for Active Living and Sport Lab.

Potential Risks and Discomforts

For all in-person visits to the Psychology for Active Living and Sport Lab, appropriate COVID-19 precautions will be taken to ensure your health and well-being. When you first arrive at the laboratory for each visit, you will be asked to don a face mask and sanitize your hands. The researcher will ask all participants if they have any signs or symptoms of COVID-19 or have travelled outside Canada in the last 14 days in order to minimize the risk of COVID-19 exposure as a result of participating in this study. Within the Psychology for Active Living and Sport Lab, routine sanitary procedures are regularly

followed including sanitizing all laboratory surfaces and equipment before and after each visit. The researcher will wear a face mask at all times and physical distancing will be practiced whenever possible, and only one participant will be allowed in the laboratory at a time.

Benefits to Participants and/or Society

The benefits of this study may be the contribution of applied insight and useful information from the study results for universities and athletic departments. You will not benefit directly from participation in this research.

Confidentiality

Your anonymity will be protected by assigning an ID number to you, which will be used within the data set and to label your moral questionnaire, Social Identity Questionnaire in Sport (SIQS), and Social Desirability Scale. A master list linking your name to your ID number will be stored on a password-protected computer, which will be kept in the principal investigator's locked laboratory. Only researchers associated with this study will have access to the master list and the data set, and all researchers will sign a confidentiality agreement. The mast list and any other personally identifying information (such as consent forms) will be destroyed one year after the study has been completed. Other anonymous data including the questionnaire, SIQS and Social Desirability Scale responses may be kept indefinitely. The data collected in this study will be used for research purposes only, which include a Master's thesis.

Freedom to Withdraw

Your participation in this research is **completely voluntary**. You are free to withdraw from this study at any time until the time of publication by contacting Keegan Brantner (Keegan.brantner@uleth.ca) or Scott Rathwell (Scott.Rathwell@uleth.ca). Upon withdraw, you may choose to have the data you have contributed until that point permanently destroyed (up until the time of publication).

Anticipated uses of the data

The results from this study will be used for research purposes, including a Master's thesis. If you wish to receive a summary of the results from this study, you may contact Keegan Brantner (Keegan.brantner@uleth.ca).

This letter is yours to keep. If you have further questions about this research, please contact either:

Scott Rathwell, PhD
Dept. of Kinesiology
University of Lethbridge
(403) 329-5188
Scott.Rathwell@uleth.ca

Keegan Brantner, BA
Dept. of Kinesiology
University of Lethbridge
(403) 382-7423
Keegan.brantner@uleth.ca

I have read (or have been read) the above information regarding this research study, and consent to participate in this study.

Consent Statement

Title of Study: **Moral Dilemmas in University Populations**

By signing below, I agree to participate in this study:

Participant's Name Signature Date

Investigator's Name Signature Date

Appendix D

Debriefing Document

Thank you for your participation in our study. For this study we specifically looked at three research questions (a) if university student-athletes behave more morally and prosocially than non-student athletes, (b) whether moral and prosocial behaviour is explained by athletes' social identity, and (c) whether social identity is enhanced through athletes' perceptions of being a visible representative of the university (i.e., the Hawthorne effect). In order to answer our research question, participants responded to moral dilemmas, and completed the Social Identity Questionnaire in Sport (SIQS).

We hypothesized that being recognized as a representative of the university would result in student-athletes engaging in more moral behaviour. One explanation for why student-athletes may behave more morally is that athletes' social identity partially shaped by the values of their teams and universities. A scientific phenomenon known as the Hawthorne offers a complimentary explanation for why being a visible representative of one's university might alter student-athletes' behaviours. The Hawthorne effect has been defined as a change in behaviour that results from being observed.

In order to evaluate the Hawthorne Effect, we asked all participants to wear affiliated apparel during one of the sessions and asked to take their picture. The request to take individuals picture was a form of deception to hide our true intent. That is, by having participants wear university affiliated clothing, and by taking a photo, we hoped to enhance participants' awareness of their association to the university and/or their respective team when wearing affiliated apparel.

With knowing the full extent of this research, we want to clarify your participation in this research is still **completely voluntary**. You are free to withdraw from this study at any time until the time of publication by contacting Keegan Brantner (Keegan.brantner@uleth.ca) or Scott Rathwell (Scott.Rathwell@uleth.ca). Upon withdraw, you may choose to have the data you have contributed until that point permanently destroyed (up until the time of publication).

Should you choose to remain in the study, your anonymity will continue to be protected

by assigning an ID number to you, which is used within the data set and to label your moral questionnaire, SIQS, Adapted Social Identity Questionnaire in Sport (ASIQS), and Social Desirability Scale. A master list linking your name to your ID number is stored on a password-protected computer, which will be kept in the principal investigator's locked laboratory. Only researchers associated with this study will have access to the master list and the data set, and all researchers will sign a confidentiality agreement. The master list and any other personally identifying information (such as consent forms) will be destroyed one year after the study has been completed. Other anonymous data including the questionnaire, SIQS and Social Desirability Scale responses may be kept indefinitely. The data collected in this study will be used for research purposes only, which include a Master's thesis.

This letter is yours to keep. If you have questions about this research, please contact either:

Scott Rathwell, PhD
Dept. of Kinesiology
University of Lethbridge
(403) 329-5188
Scott.Rathwell@uleth.ca

Keegan Brantner, BA
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University of Lethbridge
(403) 382-7423
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Appendix E

Demographics Questionnaire

What is your gender?

a. Male
b. Female
c. Transgender female
d. Transgender Male
e. Gender Variant/ Non-Conforming
f. Prefer Not to Answer

What is your age?

_____

What year of university are you in?

a. First year
b. Second year
c. Third year
d. Fourth year
e. Fifth year
f. Sixth year and up
g. Master's degree (e.g., MA, MS, MEd)
h. Doctorate or professional degree (e.g., MD, DDS, PhD)

Are you a Pronghorn Athlete?

a. Yes
b. No

If you answered yes, which Pronghorn Athletics team are you on?

a. Women's Soccer
b. Men's Soccer
c. Women's Rugby
d. Women's Basketball
e. Men's Basketball
f. Women's Swim
g. Men's Swim
h. Women's Track and Field
i. Men's Track and Field
j. None

If you are a Pronghorn athlete what year of eligibility are you in?

a. First year
b. Second year
c. Third year
d. Fourth year
e. Fifth year
f. N/A

Are you a formal leader on your team?

a. No
b. Yes
c. N/A

Are you on an intramural team at the University of Lethbridge?

a. No
b. Yes

What is your email?

_____

Appendix F

Moral Dilemma Validation Email

Good afternoon,

I hope you are doing well. You are being invited to participate in a research study where we are appraising moral dilemmas based on their relevance to university populations. Thus, as an important stakeholder at the University of Lethbridge, we ask for this study that you assess whether each moral dilemma is appropriate for understanding student-athlete moral behaviour in the university context. Specifically, you will be asked your level of agreement to statements about the moral dilemmas and to offer comments/recommendations where you think it is important.

The moral dilemmas were created from the University's student-athlete and student codes of conduct to assess participants' moral judgement and intention. The questionnaire should take about 15-20 minutes of your time. Please complete the questionnaire by **April 5th**. Please let me know if you have any questions. Below is the link to the questionnaire.

https://qfreeaccountssjc1.az1.qualtrics.com/jfe/form/SV_d0uLQp2lGUMY0Jw

All the best,

Keegan Brantner, BA

Dept. of Kinesiology

University of Lethbridge

403-382-7423

Keegan.brantner@uleth.ca

Appendix G.1

Moral Dilemmas- Student-Athletes

Please read the below scenarios and indicate how likely you are to engage in each of the scenarios described by circling a response on a scale of 1-7 (1: *extremely unlikely*, 7: *extremely likely*).

1. Your professor leaves you alone in a room with all of your course material when writing an exam. The professor tells you they will return in about ten minutes. Although you are unlikely to be caught reviewing your material, you don't look at any of your notes and continue writing your exam.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

2. You are out for dinner with several teammates and one makes an inappropriate flirty statement to your waitress/waiter. The waitress/waiter seems uncomfortable but your teammate keeps flirting. You don't say anything to your teammate the whole meal.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

3. When checking your grades online you notice your exam grade is 10% higher than the actual grade you got on the test. You decide it is the professor's fault for entering the grade in wrong and you don't say anything.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

4. You are studying for a big exam and go on Moodle to download some lectures. While on Moodle, you click a tab labelled “EXAM” and notice there is a document available. Thinking it is a study guide, you download the document. Once you open the document you realize it is the exam key. Upon discovering this mistake, you immediately email your professor and notify them that the exam key is available to students.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

5. A teammate is taking an online course, which you earned an A in during the previous semester. Knowing of your success, they offer to pay you to take their online midterm for them. It is extremely unlikely that you would get caught, so you decide to write the exam for them.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

6. After practice you over hear two of your teammates discussing about cheating for their midterm exam. You know that they have really been struggling and need a good grade to pass the course. You also are aware that playoffs are coming up and that both teammates are key players on your team. If you report your teammates for cheating, you know they will be kicked off the team and out of school. Conversely, if they don’t cheat and end up failing the exam, you know they will not be able to play in playoffs, risking your team’s chances at winning. You decide to not tell anyone about what you overheard and hope they don’t get caught.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

7. One of your teammates asks if you want to sneak into the school's sports stadium for a party to celebrate the fact that they are graduating. You know it is against the rules to go into the stadium, but you want to celebrate with your teammates. You decide to go.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

8. In class your professor asks everyone to show the person sitting beside you their green QR code, which indicates they are allowed on campus. The person beside you shows you a red QR code, meaning they are not allowed access to campus. You decide to inform the professor and let them handle the rest.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

9. You are wearing your team apparel while out at a restaurant with your teammates. Everyone at the table orders a beer, so you order one as well.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

10. While writing a midterm you witness a classmate cheating off another student's exam. The professor doesn't notice as they are busy helping another student with a question. You decide not to say anything to the professor about witnessing cheating.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

11. You are out for dinner with your teammates and everyone gets their bills but you. You decide to find the waitress and tell them they forgot your bill.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

12. Your teammate is taking a course that you aced the previous year. Before their midterm, your teammate asks you if you can share your old midterm with them. You are aware that it is an academic offense, but at the same time, it is an old test and you are no longer in that course. You decide the risk is low and you help out your teammate by giving them your old exam.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

13. Leaving the bar one night you see a male member from another sports team talking to a female. Throughout the night you saw him drinking a lot. The two are talking quite closely and the female seems very uncomfortable during the conversation. You decide that the situation is probably fine, so you leave the bar.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

14. A teammate of yours says an inappropriate comment in your team group chat. You don’t have anything to respond to their comment and go back onto Instagram.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

15. You are at a Pronghorn's game with teammates, and they start aggressively heckling and swearing at a player on the visiting team. You tell them to stop because they are being disrespectful.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

16. A teammate offers to make you a fake parking pass for the university. This would save you a lot of money and time from walking to the school. You aren't the one making it so you accept the fake parking pass.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

17. You are out for dinner with your friends and everyone gets their bill but you. You decide to find the waitress and tell them they forgot to charge you.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

18. While writing a midterm you witness a friend from class cheating off another student's exam. The professor doesn't notice as they are busy helping another student with a question. You decide not to say anything to the professor about witnessing cheating.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

19. When checking your grades online you notice your exam grade is 10% higher than the actual grade you got on the test. You decide it is the professor's fault for entering the grade wrong and you don't say anything.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

20. A friend of yours says an inappropriate comment in your group chat. You don't have anything to respond to their comment and go back onto Instagram.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

21. A friend is taking an online course, which you earned an A in during the previous semester. Knowing of your success, they offer to pay you to take their online midterm for them. It is extremely unlikely that you would get caught, so you decide to write the exam for them.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

22. After class you overhear two of your friends discussing cheating for their upcoming midterm exam. You know that they have really been struggling and need a good grade to pass the course. You also are aware that you have a group project coming up and that they are members of your group. If you report your friends for cheating, you know they will be kicked out of class and school. Conversely, if they don't cheat and end up failing the exam, they will probably drop the class, leaving you alone for your group project. You decide to not tell anyone about what you overheard and hope they don't get caught.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

23. Your friend is taking a course that you aced the previous year. Before their midterm, your friend asks you if you can share your old midterm with them. You are aware that it is an academic offense, but at the same time, it is an old test and you are no longer in that course. You decide the risk is low and you help out your friend by giving them your old exam.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

24. In class your professor asks everyone to show the person sitting beside you their green QR code, which indicates they are allowed on campus. A friend from class beside you shows you a red QR code, meaning they are not allowed access to campus. You decide to inform the professor and let them handle the rest.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

25. You are wearing university apparel while out at a restaurant with your friends. Everyone at the table orders a beer, so you order one as well.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

26. You are out for dinner with several friends and one makes an inappropriate flirty statement to your waitress/waiter. The waitress/waiter seems uncomfortable, but your friend keeps flirting. You don't say anything to your friend the whole meal.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

27. Your professor leaves you alone in a room with all of your course material when writing a closed book exam. The professor tells you they will return in about ten minutes. Although you are unlikely to be caught reviewing your material, you don't look at any of your notes and continue writing your exam.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

28. One of your friends asks if you want to sneak into the school's sports stadium for a party to celebrate the fact that they are graduating. You know it is against the rules to go into the stadium, but you want to celebrate with your friends. You decide to go.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

29. Leaving the bar one night you see a male friend from class and friend of yours talking to a female. Throughout the night you saw him drinking a lot. The two are talking quite closely and the female seems very uncomfortable during the conversation. You decide that the situation is probably fine, so you leave the bar.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

30. You are studying for a big exam and go on Moodle to download some lectures. While on Moodle, you click a tab labeled "EXAM" and notice there is a document available. Thinking it is a study guide, you download the document. Once you open the document you realize it is the exam key. Upon discovering this mistake, you immediately email your professor and notify them that the exam key is available to students.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

31. You are at a Pronghorns game with your friends from class and they start aggressively heckling and swearing at a player on the visiting team. You tell them to stop because they are being disrespectful.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

32. A friend offers to make you a fake parking pass for the university, which would save you a lot of money and time from walking to the school. You aren't the one making it so you accept the fake parking pass.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

33. How much did you feel like you were 'representing' the UofL and Pronghorn Athletics when completing this study?

_____

_____

_____

Appendix G.2

Moral Dilemmas- Intramural Athletes

Please read the below scenarios and indicate how likely you are to engage in each of the scenarios described by circling a response on a scale of 1-7 (1: *extremely unlikely*, 7: *extremely likely*).

1. Your professor leaves you alone in a room with all of your course material when writing an exam. The professor tells you they will return in about ten minutes. Although you are unlikely to be caught reviewing your material, you don't look at any of your notes and continue writing your exam.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

2. You are out for dinner with several teammates and one makes an inappropriate flirty statement to your waitress/waiter. The waitress/waiter seems uncomfortable but your teammate keeps flirting. You don't say anything to your teammate the whole meal.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

3. When checking your grades online you notice your exam grade is 10% higher than the actual grade you got on the test. You decide it is the professor's fault for entering the grade in wrong and you don't say anything.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

4. You are studying for a big exam and go on Moodle to download some lectures. While on Moodle, you click a tab labelled "EXAM" and notice there is a document available. Thinking it is a study guide, you download the document. Once you open the document you realize it is the exam key. Upon discovering this mistake, you immediately email your professor and notify them that the exam key is available to students.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

5. A teammate is taking an online course, which you earned an A in during the previous semester. Knowing of your success, they offer to pay you to take their online midterm for them. It is extremely unlikely that you would get caught, so you decide to write the exam for them.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

6. After practice you over hear two of your teammates discussing about cheating for their midterm exam. You know that they have really been struggling and need a good grade to pass the course. You also are aware that playoffs are coming up and that both teammates are key players on your team. If you report your teammates for cheating, you know they will be kicked off the team and out of school. Conversely, if they don't cheat and end up failing the exam, you know they will not be able to play in playoffs, risking your team's chances at winning. You decide to not tell anyone about what you overheard and hope they don't get caught.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

7. One of your teammates asks if you want to sneak into the school's sports stadium for a party to celebrate the fact that they are graduating. You know it is against the rules to go into the stadium, but you want to celebrate with your teammates. You decide to go.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

8. In class your professor asks everyone to show the person sitting beside you their green QR code, which indicates they are allowed on campus. The person beside you shows you a red QR code, meaning they are not allowed access to campus. You decide to inform the professor and let them handle the rest.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

9. You are wearing your team apparel while out at a restaurant with your teammates. Everyone at the table orders a beer, so you order one as well.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

10. While writing a midterm you witness a classmate cheating off another student's exam. The professor doesn't notice as they are busy helping another student with a question. You decide not to say anything to the professor about witnessing cheating.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

11. You are out for dinner with your teammates and everyone gets their bills but you. You decide to find the waitress and tell them they forgot your bill.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

12. While writing a midterm you witness a classmate cheating off another student's exam. The professor doesn't notice as they are busy helping another student with a question. You decide not to say anything to the professor about witnessing cheating.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

13. Leaving the bar one night you see a male member from another sports team talking to a female. Throughout the night you saw him drinking a lot. The two are talking quite closely and the female seems very uncomfortable during the conversation. You decide that the situation is probably fine, so you leave the bar.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

14. A teammate of yours says an inappropriate comment in your team group chat. You don't have anything to respond to their comment and go back onto Instagram.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

15. You are at a Pronghorn's game with teammates, and they start aggressively heckling and swearing at a player on the visiting team. You tell them to stop because they are being disrespectful.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

16. A teammate offers to make you a fake parking pass for the university. This would save you a lot of money and time from walking to the school. You aren't the one making it so you accept the fake parking pass.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

17. You are out for dinner with your friends and everyone gets their bill but you. You decide to find the waitress and tell them they forgot to charge you.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

18. While writing a midterm you witness a friend from class cheating off another student's exam. The professor doesn't notice as they are busy helping another student with a question. You decide not to say anything to the professor about witnessing cheating.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

19. When checking your grades online you notice your exam grade is 10% higher than the actual grade you got on the test. You decide it is the professor's fault for entering the grade wrong and you don't say anything.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

20. A friend of yours says an inappropriate comment in your group chat. You don't have anything to respond to their comment and go back onto Instagram.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

21. A friend is taking an online course, which you earned an A in during the previous semester. Knowing of your success, they offer to pay you to take their online midterm for them. It is extremely unlikely that you would get caught, so you decide to write the exam for them.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

22. After class you overhear two of your friends discussing cheating for their upcoming midterm exam. You know that they have really been struggling and need a good grade to pass the course. You also are aware that you have a group project coming up and that they are members of your group. If you report your friends for cheating, you know they will be kicked out of class and school. Conversely, if they don't cheat and end up failing the exam, they will probably drop the class, leaving you alone for your group project. You decide to not tell anyone about what you overheard and hope they don't get caught.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

23. Your friend is taking a course that you aced the previous year. Before their midterm, your friend asks you if you can share your old midterm with them. You are aware that it is an academic offense, but at the same time, it is an old test and you are no longer in that course. You decide the risk is low and you help out your friend by giving them your old exam.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

24. In class your professor asks everyone to show the person sitting beside you their green QR code, which indicates they are allowed on campus. A friend from class beside you shows you a red QR code, meaning they are not allowed access to campus. You decide to inform the professor and let them handle the rest.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

25. You are wearing university apparel while out at a restaurant with your friends. Everyone at the table orders a beer, so you order one as well.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

26. You are out for dinner with several friends and one makes an inappropriate flirty statement to your waitress/waiter. The waitress/waiter seems uncomfortable, but your friend keeps flirting. You don’t say anything to your friend the whole meal.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

27. Your professor leaves you alone in a room with all of your course material when writing a closed book exam. The professor tells you they will return in about ten minutes. Although you are unlikely to be caught reviewing your material, you don't look at any of your notes and continue writing your exam.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

28. One of your friends asks if you want to sneak into the school's sports stadium for a party to celebrate the fact that they are graduating. You know it is against the rules to go into the stadium, but you want to celebrate with your friends. You decide to go.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

29. Leaving the bar one night you see a male friend from class and friend of yours talking to a female. Throughout the night you saw him drinking a lot. The two are talking quite closely and the female seems very uncomfortable during the conversation. You decide that the situation is probably fine, so you leave the bar.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

30. You are studying for a big exam and go on Moodle to download some lectures. While on Moodle, you click a tab labeled "EXAM" and notice there is a document available. Thinking it is a study guide, you download the document. Once you open the document you realize it is the exam key. Upon discovering this mistake, you immediately email your professor and notify them that the exam key is available to students.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

31. You are at a Pronghorns game with your friends from class and they start aggressively heckling and swearing at a player on the visiting team. You tell them to stop because they are being disrespectful.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

32. A friend offers to make you a fake parking pass for the university, which would save you a lot of money and time from walking to the school. You aren't the one making it so you accept the fake parking pass.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

33. How much did you feel like you were 'representing' the UofL when completing this study?

_____

_____

_____

Appendix G.3

Moral Dilemmas- Students

Please read the below scenarios and indicate how likely you are to engage in each of the scenarios described by circling a response on a scale of 1-7 (1: *extremely unlikely*, 7: *extremely likely*).

1. Your professor leaves you alone in a room with all of your course material when writing an exam. The professor tells you they will return in about ten minutes. Although you are unlikely to be caught reviewing your material, you don't look at any of your notes and continue writing your exam.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

2. You are out for dinner with several friends and one makes an inappropriate flirty statement to your waitress/waiter. The waitress/waiter seems uncomfortable, but your teammate keeps flirting. You don't say anything to your teammate the whole meal.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

3. When checking your grades online you notice your exam grade is 10% higher than the actual grade you got on the test. You decide it is the professor's fault for entering the grade in wrong and you don't say anything.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

4. You are studying for a big exam and go on Moodle to download some lectures. While on Moodle, you click a tab labelled “EXAM” and notice there is a document available. Thinking it is a study guide, you download the document. Once you open the document you realize it is the exam key. Upon discovering this mistake, you immediately email your professor and notify them that the exam key is available to students.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

5. A friend is taking an online course, which you earned an A in during the previous semester. Knowing of your success, they offer to pay you to take their online midterm for them. It is extremely unlikely that you would get caught, so you decide to write the exam for them.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

6. After class you overhear two of your friends discussing cheating for their midterm exam. You know that they have really been struggling and need a good grade to pass the course. You also are aware that you have a group project coming up and that they are members of your group. If you report your friends for cheating, you know they will be kicked out of class and school. You also know that if they don’t cheat and end up failing the exam, they will probably drop the class, leaving you alone for your group project. You decide to not tell anyone about what you overheard and hope they don’t get caught.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

7. One of your friends asks if you want to sneak into the school's sports stadium for a party to celebrate the fact that they are graduating. You know it is against the rules to go into the stadium, but you want to celebrate with your friends. You decide to go.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

8. In class your professor asks everyone to show the person sitting beside you their green QR code, which indicates they are allowed on campus. A friend from class beside you shows you a red QR code, meaning they are not allowed access to campus. You decide to inform the professor and let them handle the rest.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

9. You are wearing university apparel while out at a restaurant with your friends. Everyone at the table orders a beer, so you order one as well.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

10. While writing a midterm you witness a friend from class cheating off another student's exam. The professor doesn't notice as they are busy helping another student with a question. You decide not to say anything to the professor about witnessing cheating.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

11. You are out for dinner with your friends and everyone gets their bills but you. You decide to find the waitress and tell them they forgot your bill.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

12. Your friend is taking a course that you aced the previous year. Before their midterm, your friend asks you if you can share your old midterm with them. You are aware that it is an academic offense, but at the same time, it is an old test and you are no longer in that course. You decide the risk is low and you help out your friend by giving them your old exam.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

13. Leaving the bar one night you see a male friend from class and friend of yours talking to a female. Throughout the night you saw him drinking a lot. The two are talking quite closely and the female seems very uncomfortable during the conversation. You decide that the situation is probably fine, so you leave the bar.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

14. A friend of yours says a misogynist comment in your group chat. You don’t have anything to respond to their comment and go back onto Instagram.

Extremely unlikely	Unlikely	More or less unlikely	Neutral	More or less likely	Likely	Extremely likely
1	2	3	4	5	6	7

15. You are at a Pronghorns game with your friends from class and they start aggressively heckling and swearing at a player on the visiting team. You tell them to stop because they are being disrespectful.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

16. A friend offers to make you a fake parking pass for the university. This would save you a lot of money and time from walking to the school. You aren't the one making it so you accept the fake parking pass.

Extremely unlikely	**Unlikely**	**More or less unlikely**	**Neutral**	**More or less likely**	**Likely**	**Extremely likely**
1	2	3	4	5	6	7

17. How much did you feel like you were 'representing' the UofL when completing this study?

_____

_____

_____

Appendix H

Social Identity Questionnaire for Sport (SIQS)

The following questions are designed to reflect **how you feel about being a part of your team**. Please CIRCLE a number from 1 (strongly disagree) to 7 (strongly agree) to indicate your agreement with each of the statements.

	Strongly disagree	**Disagree**	**Somewhat disagree**	**Neutral**	**Somewhat agree**	**Agree**	**Strongly agree**
I feel strong ties to other members of this team.	1	2	3	4	5	6	7
I find it easy to form a bond with other members in this team.	1	2	3	4	5	6	7
I feel a sense of being "connected" with other members in this team.	1	2	3	4	5	6	7
Overall, being a member of this team has a lot to do with how I feel about myself.	1	2	3	4	5	6	7
In general, being a member of this team is an important part of my self-image.	1	2	3	4	5	6	7
The fact that I am a member of this team often enters my mind.	1	2	3	4	5	6	7
In general, I'm glad to be a member of this team.	1	2	3	4	5	6	7
I feel good about being a member of this team.	1	2	3	4	5	6	7
Generally, I feel good when I think about myself as a member of this team.	1	2	3	4	5	6	7

Appendix I

Adapted Social Identity Questionnaire for Sport (SIQS)

The following questions are designed to reflect **how you feel about being a part of your university**. Please CIRCLE a number from 1 (strongly disagree) to 7 (strongly agree) to indicate your agreement with each of the statements.

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
I feel strong ties to other students at this university.	1	2	3	4	5	6	7
I find it easy to form a bond with other students in this university.	1	2	3	4	5	6	7
I feel a sense of being "connected" with other students in this university.	1	2	3	4	5	6	7
Overall, being a student at this university has a lot to do with how I feel about myself.	1	2	3	4	5	6	7
In general, being a student at this university is an important part of my self-image.	1	2	3	4	5	6	7
The fact that I am a student at this university often enters my mind.	1	2	3	4	5	6	7
In general, I'm glad to be a student at this university.	1	2	3	4	5	6	7
I feel good about being a student at this team.	1	2	3	4	5	6	7
Generally, I feel good when I think about myself as a student at this university.	1	2	3	4	5	6	7

Appendix J

Marlowe-Crowne 13-item Social Desirability Scale

Listed below are statements concerning personal attitudes and traits. Read each item and decide how it pertains to you. Indicate your response by circling either TRUE (T) or FALSE (F) next to the item.

It is sometimes hard for me to go on with my work if I am not encouraged	T	F
I sometimes feel resentful when I don't get my way	T	F
On a few occasions, I have given up doing something because I thought too little of my ability	T	F
There have been times when I felt like rebelling against people in authority even though I knew they were right	T	F
No matter who I'm talking to, I'm always a good listener	T	F
There have been occasions when I took advantage of someone	T	F
I'm always willing to admit it when I make a mistake	T	F
I sometimes try to get even rather than forgive and forget	T	F
I am always courteous, even to people who are disagreeable	T	F
I have never been irked when people expressed ideas very different from my own	T	F
There have been times when I was quite jealous of the good fortune of others	T	F
I am sometimes irritated by people who ask favors of me	T	F
I have never deliberately said something that hurt someone's feelings	T	F