Trash Talk Behavior Amongst Collegiate Athletes: An Application of the Theory of Planned Behavior

William Kitchings
FLORIDA STATE UNIVERSITY

COLLEGE OF EDUCATION

TRASH TALK BEHAVIOR AMONGST COLLEGIATE ATHLETES:
AN APPLICATION OF THE THEORY OF PLANNED BEHAVIOR

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WILLIAM KITCHINGS JR

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The members of the supervisory committee were:

Gershon Tenenbaum
Professor Directing Thesis

Alysia Roehrig
Committee Member

Russell Almond
Committee Member

The Graduate School has verified and approved the above-named committee members, and certifies that the thesis has been approved in accordance with university requirements.
Dedicated to my family and friends who have supported me from Day 1 of Graduate School.

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ABSTRACT

Trash talk, a behavior mostly seen during athletic competitions, is defined as disparaging, taunting, or boastful comments especially between opponents to intimidate each other. To look at what determinants cause a behavior to be performed, the theory of planned behavior, was used. The aim of this study was to examine the predictive functionality of the theory of planned behavior for explaining trash talk intention among collegiate athletes. A sample of athletes (N = 102) was surveyed with a newly created questionnaire regarding attitudes, subjective norms, perceived behavioral control, intentions and past behavior towards using trash talk with opponents. Results showed that all three TPB components significantly correlated with an athlete’s intention to use trash talk. Additionally, all of the TPB components, as well as past behavior, were significant predictors of trash talk intentions. Though there was a reliability issue with one of the scales (Perceived Behavioral Control), this study provided insight on sources for the use of trash talk. Finally, implications for the future direction of research on this topic are discussed.
CHAPTER 1
INTRODUCTION

Reggie Miller, former NBA All-Star player, once said, “seventy percent of me [trash] talking on the court is personally for me to get me motivated and going. Thirty percent is to see if I can get into the opponent’s head” (Klores, 2010).

The phenomenon of trash talk has been apparent in sports for decades (LoConto & Roth, 2005). It has been observed and reported in a variety of sports such as soccer, basketball, golf, boxing, mixed martial arts, football, tennis, and volleyball (Conmy, Tenenbaum, Eklund, Roehrig & Filho, 2013; Rainey & Granito, 2010). In addition, trash talk has been used by athletes across a range of skill levels from youth sports to recreational players to elite athletes (Conmy et al., 2013; Eveslege & Delaney, 1998). Seen as a “custom,” trash talk is intertwined with sports and has been used differently by various athletes (Conmy et al., 2013). It is important to note that trash talk is not limited to athletes, as coaches and fans also use trash talk (Rainey, 2012). In recent years more researchers have explored the usage, type, and learning sources of athletes using trash talk (Conmy et al., 2013; Rainey & Granito, 2010; Rainey, 2012).

In the literature trash talk is portrayed as a behavior (LoConto & Roth, 2005; Rainey & Granito, 2010; Rainey, 2012); while trash talk has become more visible in sports, identifying what factors influence athletes to trash talk is essential. However, to-date, no research has thoroughly investigated the reason athletes perform/use trash talk behavior. Therefore, to better understand trash talk, it is important to explore the determinants of trash talk in the athletic domain. Azjen’s theory of planned behavior (TPB; 1991), an established theoretical framework, has been used to explain various motives of behaviors, including those in the sport and exercise domains (e.g., training, dropout; Nache, Bar-Eli, Perrin & Laurencelle, 2005; Theodorakis,
According to the theory of planned behavior, human behavior is shaped by the focal determinant, behavioral intention. Accordingly, intention is affected by three main factors: attitude, subjective norm, and perceived behavioral control, and in turn a certain behavior is apparent (see Figure 1; Collins & Carey, 2007). However, for the current study, the entire TPB model was not tested as the actual behavior of trash was not observed. Additionally, another component (past behavior) was added to the three TPB constructs to predict intention to use TT in the future.

Sports organizations (i.e. NCAA, NFL) have set rules in place to reduce the usage of trash talk among athletes. Yet, trash talk is still performed and used in different settings (e.g., media outlets, during competition, social media). Furthermore, the media highlights this behavior
as it gets major attention. Most recently, after the 2013 NFC Championship game, various sports television networks (i.e. ESPN, NFL Network) focused on the Seattle Seahawks cornerback Richard Sherman’s postgame interviews when he mentioned that he and San Francisco 49ers wide receiver Michael Crabtree had engaged in trash talk throughout the game. It is surprising that a phenomenon that has been around for more than a few decades, and is an integral and important aspect of most sports, has been scarcely examined by researchers in the sport psychology domain (Rainey & Granito, 2010). Therefore, the purpose of this study is to explore the determinants and intentions of performing trash talk behavior by using the TPB as a guiding conceptual framework.
CHAPTER 2
LITERATURE REVIEW

The phenomenon termed “trash talk” and the theory of planned behavior (TPB) are reviewed in this chapter. Trash talk is first assessed to provide a basis for understanding the phenomena. A complimentary component of this study, the theory of planned behavior, is subsequently reviewed through an exploration of the research in the sports and exercise domain.

Trash Talk (TT)

Trash talk is a behavior that has been around sports for years (Eveslage & Delaney, 1998). In the digital age of multiple media outlets and social media mainstreaming, trash talk is seen more often in the public eye than previously (Conmy et al., 2013; Rainey & Granito, 2010; Rainey, 2012). Research on trash talk has been scarce, yet in the literature many factors related to trash talk behavior have been addressed (e.g., types, usage, competitive use)

Trash Talk Types

Trash talk type is the most common aspect explored in the literature as the majority of studies mentioned types (or themes) of trash talk that athletes use (Conmy et al., 2013; Eveslage and Delaney 1998; LoConto & Roth, 2005; Rainey & Granito, 2010; Rainey, 2012). Two studies specifically identified several types of trash talk used by athletes. Eveslage and Delaney (1998) conducted the first study on trash talk, and subsequently addressed the void in the research. They observed a high school boys varsity basketball team for a complete season to capture trash talk behavior among youth athletes. The authors noted three particular types: trash talking on the court, playing the dozens among teammates, and motivational talk from the coach. Out of the three types, only the first type, which involves on court interaction, is of interest to the current study. Specifically, when on the court, athletes direct their trash talk, both verbally and non-
verbally, towards opponents. An example of this style of trash talk was demonstrated in the 2006 World Cup Final, putting trash talk on a global platform (Conmy et al., 2013; Rainey & Granito, 2010). France’s Zinedine Zidane believed Italy’s Marco Materazzi used trash talk towards him during the final stages of the match. This led to Zidane head-butting Materazzi’s chest, an ensuing ejection from the game and subsequently France’s loss in the game. It is important to note that this example illustrates the type of trash talk between opponents that Eveslage and Delaney’s (1998) discussed, and is considered today to be the norm for athletes (Rainey & Granito, 2010).

While Eveslage and Delaney (1998) provided the foundation regarding forms of trash talk, it was further expanded by LoConto and Roth (2005). They interviewed and observed Division II college athletes from 11 different sports ranging from football and basketball to tennis and golf. The authors found four different types of trash talk towards opponents: *intimidation*, *getting ugly*, *sexual harassment*, and *body language*. Furthermore, the authors provided examples of trash talk under each category. *Intimidation* involved saying things to unnerve opponents, either verbally or non-verbally. One example comes from a soccer player saying, “You don’t even know what you’re messing with” (Loconto & Roth, 2005, p. 223). *Getting ugly* was trash talking that is short in words and includes expletive words. This was the most common type of trash talk and involved the least amount of creativity. Verbal examples included “You suck” and “Shut the fuck up” (Loconto & Roth, 2005, p. 224). *Sexual harassment* consisted of talking about an opponent’s girlfriend or mother, such as “You’re almost as good as your momma” (Loconto & Roth, 2005, p. 225). In the previously mentioned World Cup incident, this was the form Materazzi allegedly used towards Zidane, relating to his mother and sister (Rainey & Granito, 2010). *Body language*, another common form of trash talk, was described as
non-verbal actions that taunted an opponent. Other trash talk studies have documented at least one of these categories, showing that athletes perform this behavior regardless of the sport setting (Conmy et al., 2013; Rainey & Granito, 2010; Rainey, 2012).

**Frequency and Usage of Trash Talk**

Trash talk behavior has been examined and observed in more than 15 various sports (e.g., football, soccer, basketball, tennis, hockey). Consequently, it is evident that trash talk behavior is prevalent in many sports. Rainey and Granito (2010) examined trash talk with Division I and Division III college athletes to determine how often they used trash talk with opposing players, coaches and fans. Participants reported using trash talk in 30% of games to target opponents, 15% of games towards coaches, and 17% of games towards fans. In a follow-up study, Rainey (2012) explored trash talk from high school officials’ perspective. Specifically, the frequency of trash talk during games and percentage of players using trash talk were examined. The results indicated that officials reported hearing trash talk in all of the sports explored (i.e., football, hockey, baseball), that trash talk occurred in more than 15% of the games, and that more than 8% of the athletes used trash talk. Additionally, football and hockey were reported to have the most frequent use of trash talk both in games (41.38% and 58.20%, respectively) and by athletes (16.73% and 28.06%, respectively). However, these percentages must be carefully considered as they came from two universities in the same city. Additionally, questionnaires were administered to all students currently or previously on teams, either in person in a varsity athlete meeting or via email based on team rosters. Therefore, no random sampling had occurred in determining who would participate in the authors’ study.

In addition to frequency of trash talk behavior, reasons for trash talk were also examined (Rainey & Grainto, 2010). Findings revealed that athletes perform trash talk for two reasons: (a)
to motivate themselves, and (b) to distract their opponent. The first revolves around the athletes’
themselves performing trash talk acts as a motivator. Research has shown that athletes used trash
talk 37.4% of the time to “psych up themselves” (Rainey & Grainto, 2010, p.285). Furthermore,
participants believed that trash talking was a tool for motivation when competing in physical or
virtual sports environments (i.e., video game competitions) (Conmy et al., 2013). The second
reason focuses on the competition as athletes used trash talk to “psych out” their opponents
(LoConto & Roth, 2005, p. 222). More specifically, athletes reported using trash talk to psych
out, intimidate, and to hinder the performance of their opponents (Rainey & Granito, 2010).

Trash Talk During Competition

The studies presented so far examined trash talk behavior in past performances (i.e.,
retrospectively). However, in a recent study, Conmy et al. (2014) tested experimentally the
motivational consequences of trash talk. Specifically, they examined the effect of trash talk on
self-efficacy, affect, and performance in competition. Participants competed in the video game
Madden NFL 08 in one of two conditions: silent-talk or talk-silent. The silent-talk condition
meant that participants had to be silent during the first game while they could use trash talk
during the second game; while in the talk-silent condition the order of using trash talk was
reversed (i.e., trash talk first). The authors reported that the ability to use trash talk increased
participants’ self-efficacy and positive affect while reducing negative affect. On the other hand,
being restrained from using trash talk decreased self-efficacy and positive affect. The findings
also indicated that participants used trash talk as an instrument of motivation and admitted that
they used trash talk in physical sport competitions. Conmy et al. (2014) showed that the use of
trash talk affects athletes’ cognitive processes and emotions, providing the foundation for future
research in both competitive settings and experimental designs.
Theory of Planned Behavior (TPB)

To better explain the trash talk phenomenon, the theoretical framework of the theory of planned behavior is utilized. The TPB is “perhaps the most popular conceptual framework… for thinking about the determinants of a particular behavior” (Ajzen & Manstead, 2007, p.47). According to the TPB, human behavior is shaped mainly by the determinant, behavioral intention. In addition, three main factors- attitude, subjective norm, and perceived behavioral control- combine to predict intention, and subsequently predict behavior (see Figure 1; Collins & Carey, 2007).

Conceptual Background of TPB

According to the TPB, attitude is the approving or disapproving evaluation of the behavior (i.e., how a person feels about the behavior as it is performed). Athletes tend to approve the use of trash talk behavior when it provides motivation for them while competing (Conmy et al., 2013; LoConto & Roth, 2005). Subjective norm is the social pressure to proceed in acting out the behavior or not. This factor allows for the behavior to be performed conditionally upon the favorable perceptions of others. Teammates and coaches usage of trash talk teaches and encourages the behavior in athletes (Eveslage & Delaney, 1998). Lastly, perceived behavior control is the potential to perform the behavior. This is described as the easiness or toughness for one to perform a behavior. Conmy et al. (2014) explored the effect of trash talk on self-efficacy in video game performance. Self-efficacy was related to perceived behavior control as it is defined as an individual’s belief in their abilities to arrange and perform actions (Conmy et al., 2014). The TPB components (e.g., attitudes, subjective norm, perceived behavioral control) combine to predict intention. Intention is a signal of a person’s willingness to perform a given behavior due to the planned exertion of effort. A behavior is more likely to be performed the
stronger the intentions are to participate in the behavior. This theoretical component is seen as the central determinant of a behavior; thus, the direct precursor to behavior.

An example can help clarify how the process of trash talk behavior can be analyzed in accordance with the theory of planned behavior (see Figure 1). If an athlete is motivated by trash talk behavior (i.e., attitude), receives support from teammates to use trash talk (i.e., subjective norm), and feels that the trash talk behavior can be regulated (i.e., perceived behavior control), he/she will likely continue, and perhaps even increase, the use of trash talk by first increasing intentions and subsequently actual behavior.

In the TPB literature, there have been multiple meta-analyses considering various behaviors while focusing on the TPB constructs and intention (Albarracin, Johnson, Fishbein & Muellerbile, 2001; Cooke & French, 2008; Godin & Kok, 1996; Hagger, Chatizisarantis, & Biddle, 2002; Hausenblas, Carron, & Mack, 1997). They found that both attitude and perceived behavioral control had the most influence on intentions. Further exploration into these meta-analyses revealed that more studies showed attitude to have a more influence on intention than perceived behavioral control in both correlational (Cooke & French, 2008; Hagger, Chatizisarantis, & Biddle, 2002) and regression analyses (Godin & Kok, 1996). Hagger, Chatizisarantis, and Biddle (2002) stated, “According to narrative reviews, the majority of studies using the TRA/TPB in physical activity behavioral research have shown that attitudes have the most pervasive influence on intentions” (p. 8). Therefore, the current study I have perceived “attitude” to be a main predictor of intended use of TT.

The TPB has been useful in explaining various behaviors, yet researchers have indicated that additional factors could be helpful in obtaining a better prediction of behavior (Kwan, Bray, & Martin Ginis, 2009). One such construct is past behavior. Past behavior refers to an
individuals’ previous use of a behavior, often measured through its frequency (Hagger, Chatizisarantis, & Biddle, 2002). As noted in Figure 1, past behavior was added to the TPB model together with the original TPB constructs. Findings revealed that past behavior has a significant influence on intention and subsequent behavior (Gagné & Harnois, 2013; Kwan, Bray, & Martin Ginis, 2009). A meta-analysis conducted by Hagger, Chatizisarantis, and Biddle (2002) showed that as a significant predictor of intentions and behavior, past behavior accounted for 15.5% and 20% of the variance in physical activity intentions and behaviors, respectively. Additionally, the majority of research on trash talk has been from a retrospective viewpoint, with participants reporting their past use of trash talk (Conmy et al., 2014; Rainey & Granito, 2010). This viewpoint shows the established use of trash talk from athletes in previous competitions. Therefore, it is important to examine past behavior as a factor in athletes’ intentions when using trash talk.

**TPB in Sport and Exercise**

The theory of planned behavior has been used to explain and predict future behavior in various settings. Some of these settings include binge drinking (Collins & Carey, 2007; Norman, 2011; Norman, Bennett, Lewis, 1998), smoking (Bledsoe, 2006; Hanson, 1997) and driving violations (Leandro, 2012; Parker, Manstead, Stradling, Reason, & Baxter, 1992). Furthermore, the theory of planned behavior has been used to examine behaviors in the sport and exercise domain including fan participation in the sports of baseball and volleyball (Cheng, Chen, Chen, & Lu, 2012; Lu, Lin, &Cheng, 2011), and participation in physical activity and exercise. In addition, in Downs and Hausenblas’s (2005) meta-analysis, results indicated that out of 111 studies examining exercise and physical activity behaviors, 83 (74.8%) involved the theory of planned behavior.
Although previous studies have used the theory of planned behavior in association with physical activity and exercise, the current study focuses on the use of the TPB in the sport domain. Furthermore, it is the first to explore trash talk behavior using the TPB framework. Researchers have used the TPB to observe sport-related behaviors including: dropout (Nache, Bar-Eli, Perrin & Laurencelle, 2005), proper technique (White, Ullah, Donaldson, Otago, Saunders, Romitit & Finch, 2012), reporting concussions (Register-Mihalik, Linnan, Marshal, McLeod, Mueller, & Guskiewicz, 2013), and injury rehabilitation and prevention (Chan & Hagger, 2012). Moreover, researchers have used the TPB to explore training behaviors in youth swimming (Mummery & Wankel, 1999; Theodorakis, 1992) and netball players (Palmer, Burwitx, Dyere & Spray, 2005). Training has been studied numerous times as it is critical to the improvement of an athlete’s performance. Theodorakis (1992) used the TPB in predicting the frequency in which young swimmers intended to train. Results showed that intention, past behavior, and perceived behavioral control were positively correlated with participation in training. Similarly, results in two additional studies in which the theory of planned behavior was used to predict training adherence in youth athletes showed that training intention was significantly predicted through attitude, subjective norm and perceived behavioral control (Mummery & Wankel, 1999; Palmer, Burwitx, Dyere & Spray, 2005).

**TPB and Unsportsmanlike Conduct**

Trash talk falls under the category of unsportsmanlike conduct, which is the reason many sport organizations created rules and regulations limiting trash talk behavior. For example, Rainey and Granito (2010) pointed out that the National Collegiate Athletic Association (NCAA) administers rules regarding trash talk in football. Specifically, trash talk behavior falls under Rule 1 in the section of *Unsportsmanlike Acts*, “No player, coach, substitute, or other person
subject to the rules shall use abusive, threatening, or obscene language or gestures, or engage in such acts that provoke ill will or are demeaning to an opponent, to game officials, or to the image of the game” (NCAA, 2012, p. 90). Though there have been many behaviors examined in the sport and exercise domain, the closest behavior related to the present study was moral functioning in contact sports. Bebetsos and Konstantoulas (2006) used the TPB and looked at male and female Greek athletes, ages 12 to 35, who played soccer, basketball, and water polo. The researchers examined the intentions of these athletes in four behaviors of unsportsmanlike conduct: lying to an official, breaking a rule, risking injury to an opposing player, and deliberately hurting an opponent. All the components of the TPB (i.e., attitudes, subjective norms, and perceived behavioral control) predicted athletes’ unmoral behavior during a game based on the four behavioral conducts. Regardless of the rules set in place to limit this behavior, results indicate that athletes knowingly continue to use trash talk and that the theory of planned behavior can be used to explore trash talk behavior (Bebetsos & Konstantoulas, 2006).

Limitations in the Literature

Both the trash talk and TPB had some limitations. First and foremost, the sampling amongst the trash talk research was a convenience sampling (Conmy et al., 2013; Eveslage and Delaney, 1998; LoConto & Roth, 2005; Rainey & Granito, 2010; Rainey, 2012). Authors selected any and all participants that were easily available to the location of their research. Participants weren’t randomly sampled, whether in a city, region, or nationally. Furthermore, the majority of trash talk and TPB research focused on past behavioral performances (Eveslage & Delaney, 1998; LoConto & Roth, 2005; Rainey & Granito, 2010; Rainey, 2012), allowing for recollection of information from participants, which could be distorted due to the length in-between the event occurring and the recall, producing potential inaccuracy of information.
Additionally, there could be a bias as participants may only remember specific instances and not all instances.

**Purpose and Hypothesis**

The main objective of the study was to expand the literature on trash talk. The earliest instances of trash talk behavior date back to the 1930s (Rainey & Granito, 2010), followed by the surge of trash talk in the 1980s (LoConto & Roth, 2005). Surprisingly, the initial study on trash talk did not occur until Eveslage and Delaney’s (1998) debut study. As Rainey and Granito (2010) clearly stated,

> Despite all the concern about trash talk, there has been little empirical research examining this behavior. Searches of the relevant databases reveal very few studies of any type that examine the nature, incidence, development, functions, or consequences of trash talk. (p. 278).

Although trash talk is a popular topic and is observed in various sports and competition levels, it has not been studied in depth as evidenced by the available literature. Bebetsos and Konstantoulas (2006), however, did use the theory of planned behavior to explore unsportsmanlike conduct in relation to future behaviors during games. Similarly, the current study ventured into the intentions of athletes performing trash talk, considered an unsportsmanlike conduct, in future competitions using the theory of planned behavior. In most of the literature, trash talk behavior has either reflected past competitions (LoConto & Roth, 2005; Rainey & Granito, 2010; Rainey, 2012) or explored current competitions (Conmy et al., 2013; Eveslage & Delaney, 1997) of athletes. Thus, exploring antecedents of potential future trash talk actions is important as it helps fill a gap in the literature.
The purpose of the study was to examine the predictive functionality of the theory of planned behavior for explaining trash talk behavior among collegiate athletes. Consistent with previous research within the TPB framework, the first hypothesis stated that: (1) All three of the TPB components (attitudes, subjective norms and perceived behavioral control) will be positively related to an athletes’ intention to perform trash talk. This hypothesis is supported by research findings indicating that athletes perform trash talk behavior because it increases self-efficacy and provides motivation (Conmy et al., 2013; LoConto & Roth, 2005; Rainey & Granito, 2010). As mentioned previously, meta-analyses in the TPB literature have shown that attitude is the best predictor amongst the TPB constructs in predicting intention. Therefore, the second hypothesis postulated that: (2) All three of the TPB components will predict athlete’s trash talk intention, with attitude being the strongest determinant. The last hypothesis was based on the TPB research involving past behavior as an additional variable examining intention. Furthermore, trash talk literature has been retrospective in nature, displaying that athletes self-report their past use of the behavior. The final hypothesis stated that: (3) Past behavior will be a significant predictor of athletes’ trash talk intention.
CHAPTER 3  
METHODS  

Power Analysis and Participants  

An a priori power analysis was employed to determine the number of participants needed to be recruited for the study. G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007) was used for the analysis. The analysis revealed that with four predictor variables (i.e., attitudes, subjective norms, perceived behavioral control, past behavior), a power of .80, and an alpha of .05, the total sample size should be 85 to detect a medium effect size.

\textbf{F tests} - Linear multiple regression: Fixed model, $R^2$ deviation from zero

\begin{tabular}{l c}
\textbf{Analysis:} & A priori: Compute required sample size \\
\textbf{Input:} & Effect size $f^2$ \quad \text{=} \quad 0.15 \\
 & $\alpha$ err prob \quad \text{=} \quad 0.05 \\
 & Power (1-$\beta$ err prob) \quad \text{=} \quad 0.80 \\
 & Number of predictors \quad \text{=} \quad 4 \\
\textbf{Output:} & Noncentrality parameter $\lambda$ \quad \text{=} \quad 12.7500000 \\
 & Critical F \quad \text{=} \quad 2.4858849 \\
 & Numerator df \quad \text{=} \quad 4 \\
 & Denominator df \quad \text{=} \quad 80 \\
 & Total sample size \quad \text{=} \quad 85 \\
 & Actual power \quad \text{=} \quad 0.8030923 \\
\end{tabular}

\textbf{t tests} - Correlation: Point biserial model

\begin{tabular}{l c}
\textbf{Analysis:} & A priori: Compute required sample size \\
\textbf{Input:} & Tail(s) \quad \text{=} \quad One \\
 & Effect size $|\rho|$ \quad \text{=} \quad 0.3 \\
 & $\alpha$ err prob \quad \text{=} \quad 0.05 \\
 & Power (1-$\beta$ err prob) \quad \text{=} \quad 0.8 \\
\textbf{Output:} & Noncentrality parameter $\delta$ \quad \text{=} \quad 2.5158836 \\
 & Critical t \quad \text{=} \quad 1.6698042 \\
 & Df \quad \text{=} \quad 62 \\
 & Total sample size \quad \text{=} \quad 64 \\
 & Actual power \quad \text{=} \quad 0.8005036 \\
\end{tabular}
Accordingly, athletes were recruited from all collegiate divisions and from football and basketball (both men and women). Each sport was involved in five out of the six studies that focused on trash talk, with both sports showing more frequency and usage than most sports examined (Rainey, 2012; Rainey & Granito, 2010). Rainey and Granito (2012) looked at college athletes only from Division I and Division III, whereas LoConto and Roth (2005) primarily focused on Division II. In the current study, NCAA Divisions I and II, as well as National Association of Intercollegiate Athletics (NAIA), were included.

The final sample included 102 athletes (73 men, 29 women) from six post-secondary schools, majority of which were located in the Southeast region on the United States. Athletes’ age ranged from 19 - 27 ($M = 20.41, SD = 1.56$). Overall, 40 (39.2%) were from the sport of basketball and 62 (60.8%) from the sport of football. Athletes had experience between 1 and 15 years ($M = 9.88, SD = 4.72$), with football participants having 9.3 years on average and basketball participants having 10.8 years on average. Of the participants, 61 (59.8%) were athletes at a Division I school, 10 (9.8%) at a Division II school, and 31 (30.4%) at a NAIA school. In regards to their year in school, 38 (37.3%) were sophomores, 39 (38.2%) were juniors, 24 (23.5%) were seniors, and 1 (1%) was a graduate student. The analysis also indicated that 73 athletes (71.6%) were African American, while 29 athletes (28.4%) were Caucasian. Finally, 7 athletes (6.9%) were international athletes.

**Measures**

**Informed Consent Form**

The informed consent form (see Appendix A) explained the purpose of the study, procedures, any possible risks, confidentiality of information, and that participants could withdraw at any time without any penalty.
Trash Talk Questionnaire

The Trash Talk Questionnaire (see Appendix B) consisted of questions that were included in the self-report survey pertaining to attitudes, subject norms, and perceived behavioral control towards the intention to trash talk with an opponent. Trash talk lacks a consistent definition in the literature. Accordingly, in the context of this study, trash talk was defined as “disparaging, taunting, or boastful comments especially between opponents to intimidate each other” (Merriam-Webster Collegiate Dictionary, 2003). Furthermore, all variables of the TPB were defined operationally in a similar fashion in conjunction with the recommendations of Azjen (1991). Because there is no standard measure in examining athletes about trash talk in regards to TPB, a questionnaire was developed for this study. All items employing the TPB were developed using the instructions and suggestions provided by Ajzen (2006). It is important to note that all items used in the questionnaire were taken from previous TPB research and modified to reflect the behavior studied in the current study (i.e., trash talk). Therefore, the newly developed measures psychometric properties were reported after completing the current study. There were five scales that this questionnaire used: attitudes, subjective norm, perceived behavioral control, intention, and past behavior.

**Attitude Scale.** The attitude scale was comprised of seven items measuring participants' attitude towards trash talk. This scale used seven semantic-differential adjective pairs (e.g., bad-good, pleasant-unpleasant, harmful-beneficial) based on suggestions from Ajzen (1991) and Ajzen and Madden (1986) and used in previous research (Brickell, Chatzisarantis, & Pretty, 2006; Courneya & Bobick, 2000; Gardner & Hausenblas, 2004; Mummery & Wankel, 1999). The seven items were rated on a 7-point unipolar scale ranging from 1 (*harmful*) to 7 (*beneficial*). The statement that preceded the pair of adjectives is, "For me to trash talk with
opponents is". Additionally, the scale contained items that are both positively and negatively coded to minimize participants' propensity to answer in a specific manner. The higher the score, the more favorable the attitude was towards the behavior. These seven items are numbered 3, 7, 9, 11, 13, 16, and 18 in Appendix B.

All the items were derived from previous research. However, the TPB requires specific adaptation to trash talking behavior. Therefore for the current study, all items in the attitude scale were modified as they come from original items that looked at the behaviors of exercising, dieting, and training. For example, in regards to the behavior of exercising, a statement that preceded the adjectives was, “For me to participate in regular physical exercise…” (Courneya & Bobick, 2000). Internal consistencies (α) ranged between .71 - .83 when using these specific items for the attitude scale (Gardner & Hausenblas, 2004; Mummery & Wankel, 1999). Additionally, the TPB literature has shown a range of moderate to strong test-retest reliability (r = .56-.81) (Armitage, 2005; Armitage & Connor, 1999; Blue & Marrero, 2006; Knowlden, Sharma, & Bernard, 2012). Research in various domains (i.e., exercise, road safety, technology) have reported content validity, discriminant validity and convergent validity for the original items in the attitude scale (Barrero, Quintana, Sanchez, Forero, Quiroga, & Felknor, 2012; Blue & Marrero, 2006; Fen & Sabaruddin, 2008; Sentosa & Mat, 2012). Content validity was evaluated by the scale being reviewed by a panel of TPB experts (Knowlden, Sharma, & Bernard, 2012). Factor analysis confirmed convergent validity by all items for the construct loading to at least an estimate of .50 and were significant (Hair et al., 2006). All items’ loadings were significant (p < .05) and loaded on a range between .68 - .88 (Stone, Jawahar & Kisamore, 2010). Additionally, Stone, Jawahar and Kisamore (2010) established discriminant validity using chi-square difference test which provided significant results between models tested.
Subjective Norms Scale. The subjective norms component was measured by three items to determine the perception of others’ (family, coaches, teammates, and other important people) approval or disapproval of trash talking. These items were similar to those suggested by Ajzen (1991), Ajzen and Madden (1986), and employed in previous exercise research (e.g., Jones, Guill, Keir, Carter, Friedman, Bigner, & Reardon, 2007). The items were: (1) “Most people who are important to me think that I should trash talk with opponents”; (2) “Most people who are important to me think would approve of my trash talking with opponents”; and (3) “Most people who are important to me encourage me to trash talk with opponents.” All items were rated on a 7-point Likert type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicated approval and support from others to perform the behavior. These three items are numbered 2, 8, and 15 in Appendix B.

Similar to the attitudes scale, all items were derived from previous research but were modified to represent the behavior of trash talk. For example, an original subjective norm scale item exploring exercise was, “Most people who are important to me would encourage me to exercise over the next month” (Jones et al., 2007). For all of the original items, concurrent and discriminant validities were confirmed by observing behaviors such as consumer acceptance of online services (Truong, 2009). Truong found that higher correlations between subjective norm and intention ($r = .44$), as well as subjective norm and behavior ($r = .33$) establishing concurrent validity. Discriminant validity was established through inter-construct correlations being significantly less than 1 to show that each is a distinct variable ($r = .34$) (Truong, 2009). Internal consistency for the original items was reported to be .92 (Jones et al., 2007). Temporal stability of the questionnaire ranged between .65 - .96 (Armitage, 2005; Armitage & Connor, 1999; Blue & Marrero, 2006; Knowlden, Sharma, & Bernard, 2012).
Perceived Behavioral Control Scale. Consistent with previous research (Courneya & Bobick, 2000; Downs, 2006), 4 items were used to assess perceived behavioral control to reflect a participant’s perceived control over trash talking. The four items were: (1) “For me to trash talk with opponents is” ranging from 1 (extremely difficult) to 7 (extremely easy); (2) “If I wanted to, I could easily trash talk with opponents” ranging from 1 (strongly disagree) to 7 (strongly agree); (3) “How much control do you have over trash talking with opponents?” ranging from 1 (no control) to 7 (complete control); and (4) “I would be happy to give up using trash talk towards opponents if that meant opponents could not use trash talk towards me” ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicated high perceived behavioral control when performing the behavior. These four items are numbered 1, 5, 10, and 19 in Appendix B.

The first three items were modified from the original items used in previous research. For example, an original perceived behavioral control scale item exploring exercise was, “If I wanted to, I can easily exercise regularly during my postpartum” (Downs, 2007). Cronbach’s coefficient alpha for the original items for this scale ranged between .71 - .83 (Courneya & Bobick, 2000; Downs, 2006). Moderate to strong test-retest reliability correlation ranged between .58 - .95 (Armitage, 2005; Armitage & Connor, 1999; Blue & Marrero, 2006; Knowlden, Sharma, & Bernard, 2012). Convergent validity was derived through factor analysis (Fen & Sabaruddin, 2008) where it was confirmed that all original items for the perceived behavioral norm construct loaded to at least an estimate of .50 and significantly (Hair et al., 2006). Fen and Sabaruddin reported that the loadings ranged between .62 - .89 and significant ($p < .001$).

Intentions Scale. The intentions scale consisted of three items to determine collegiate athlete’s possible intentions to trash talk in the upcoming season. These three items were based
on recommendations from Ajzen (1991), and used in previous research (Brickell, Chatzisarantis, & Pretty, 2006; Burkhalter, Warren, Shuk, Primavera & Ostroff, 2009; Courneya and Bobick, 2000; Norman & Hoyle, 2004). The items were: (1) “How likely is it that you will trash talk with opponents in the upcoming season” ranging from 1 (never) to 7 (frequently); (2) “I am determined to trash talk with opponents in the upcoming season” ranging from 1 (definitely not) to 7 (definitely); and (3) “I intend to trash talk with opponents in the upcoming season” ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicated greater intentions to perform the behavior. These three items are numbered 4, 12, and 17 in Appendix B. Each question listed above was modified from an intentions scale used in previous TPB research. For example, an original item stated, “I intend to perform BSE in the next month” (Norman & Hoyle, 2004). Sentosa and Mat (2012) demonstrated construct validity for their scale using confirmatory factor analysis; items loaded on the construct in the range of .56 - .75. Internal consistencies for the original items ranged between .83 - .96 and temporal stability between .70 - .83 (Armitage, 2005; Armitage & Connor, 1999; Brickell, Chatzisarantis, & Pretty, 2006; Courneya and Bobick, 2000; Knowlden, Sharma, & Bernard, 2012).

**Past Behavior Scale.** Consistent with previous research (Kidwell & Jewell, 2008), two items were used to assess the athlete’s use of trash talk in the previous season. The two items were: (1) “In the past season, I trash talked with opponents.” The response rank ranges from 1 (not at all) to 7 (very many times); and (2) “How often have you trash talked with opponents in the past season” with a response ranging from 1 (never) to 7 (frequently). These two items are numbered 6 and 14 in Appendix B.

Both of the items were modified from original items used in previous research. For example, a perceived behavioral control scale item exploring exercise was, “If I wanted to, I can
easily exercise regularly during my postpartum” (Downs, 2007). Higher scores indicated a greater history to perform the behavior. Cronbach’s alpha was high for these two items ($\alpha = .88$) (Kidwell & Jewell, 2008). Yet, there has been no research testing for temporal stability and other validity indices.

**Demographics Questionnaire**

The demographic questionnaire (see Appendix C) gathered both general and sport information about each participant. The items included ethnicity, year in school, school attended, sport type, gender, and age.

**Procedure**

Emails addresses for football, men’s basketball and women’s basketball coaches were collected from Athletic Department websites for multiple Division I, II, III and NAIA schools across the United States, but the majority were in the Southeast region of the country. Once email address were collected, emails were sent to coaches of NCAA and NAIA teams before any surveys were distributed to athletes. Coaches were told of the purpose and goals of the study, followed by a request to give their athletes authorization to participate in the study. If approval was given, then email correspondence occurred with the coaches to determine how the questionnaires would be completed. The questionnaires were administered to all participants either electronically through a Qualtrics link or as a hard copy in person. Additionally, all surveys were administered before the start of the following season of their respective sport, throughout the summer semester and beginning of fall semester. For those participants that received the survey in person, they either met with the researcher individually or in a group setting with their teammates. This procedure was dependent on what was more convenient in regards to timing for the participants to complete the questionnaires. Before participants
completed the Demographic questionnaire and TPB questionnaire, they were asked to read and sign (or agree if completed electronically) the informed consent before participating in the study. They were informed that the study concerned predicting the intention to trash talk with opponents. In addition, they were informed of the confidentiality of the study, and participants were assured that the results would not have an impact on sport participation and/or academic endeavors. Additionally, if participants completed the questionnaire online, they were given the contact information of the author if they had any questions or concerns. After signing the informed consent form, participants completed both, in order, the TPB and the Demographics questionnaires. To ensure anonymity, names were not included in the questionnaire. After completion of the questionnaires, participants were thanked for the participation in the study.
CHAPTER 4

RESULTS

Internal Consistency and Descriptive Statistics

Alpha Coefficients of internal consistency (Cronbach, 1951) for each scale are presented in Table 1. All scales except one (perceived behavioral control) were considered adequate exceeding the minimal criteria value of .70 (Nunnally, 1978). The implications involved with this scale were considered carefully due to the scale’s low reliability. The perceived behavioral control scale had a mean value of 3.44 (SD = 1.02), second lowest among all variables.

Table 1. Descriptive Statistics and Cronbach Alphas among TPB Constructs

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>4.13</td>
<td>0.86</td>
<td>.82</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>3.19</td>
<td>1.51</td>
<td>.85</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>3.44</td>
<td>1.02</td>
<td>.32</td>
</tr>
<tr>
<td>Past Behavior</td>
<td>3.83</td>
<td>1.70</td>
<td>.92</td>
</tr>
<tr>
<td>Intention</td>
<td>3.99</td>
<td>1.82</td>
<td>.89</td>
</tr>
</tbody>
</table>

All TPB variables, Past Behavior and Intention were on a scale ranging from 1 (not at all/strongly disagree) to 7 (definitely/strongly agree) (Table 1). Athletes rated subjective norms variables lower than mid-scale values (M = 3.19, SD = 1.51). Past behavior (M = 3.83, SD = 1.70) and intention (M = 3.99, SD = 1.82) were rated above mid-scale values, whereas attitude was rated the highest, M = 4.13 (SD = 0.86). Means and standard deviations are presented in Table 1.

Additionally, means and SDs for the TPB variables, past behavior, and intention were also analyzed by gender, race, sport and competition level. Table 2 shows the results for the TPB
variables in relation to gender and race of the participants. Males rated all the variables except subjective norm above the mid-range values, with past behavior being the highest rated, $M = 4.25 \ (SD = 1.78)$. However, females rated all the variables below the mid-range values except attitude which was rated the highest, $M = 4.05 \ (SD = 0.98)$. Caucasians and African-Americans rated similarly the variables attitude and perceived behavior control, but African-American athletes rated higher TT past behaviors as well as intention to use TT in the future than their Caucasian counterparts.

Table 2.  
*TPB Constructs Means (SDs) for Gender and Race*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male</th>
<th>Female</th>
<th>Caucasian</th>
<th>African American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>4.16 (0.81)</td>
<td>4.05 (0.98)</td>
<td>4.05 (0.98)</td>
<td>4.16 (0.81)</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>3.31 (1.54)</td>
<td>2.87 (1.40)</td>
<td>2.87 (1.40)</td>
<td>3.31 (1.54)</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>3.57 (1.03)</td>
<td>3.09 (0.92)</td>
<td>3.09 (0.92)</td>
<td>3.58 (1.03)</td>
</tr>
<tr>
<td>Past Behavior</td>
<td>4.25 (1.78)</td>
<td>3.14 (1.57)</td>
<td>3.14 (1.57)</td>
<td>4.25 (1.78)</td>
</tr>
<tr>
<td>Intention</td>
<td>4.11 (1.68)</td>
<td>3.31 (1.75)</td>
<td>3.31 (1.75)</td>
<td>4.11 (1.68)</td>
</tr>
</tbody>
</table>

Table 3.  
*TPB Constructs Means (SDs) for Sport*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Football</th>
<th>Basketball</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>4.21 (0.82)</td>
<td>4.01 (0.92)</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>3.35 (1.56)</td>
<td>2.93 (1.41)</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>3.66 (1.04)</td>
<td>3.09 (0.89)</td>
</tr>
<tr>
<td>Past Behavior</td>
<td>4.49 (1.72)</td>
<td>3.20 (1.70)</td>
</tr>
<tr>
<td>Intention</td>
<td>4.30 (1.67)</td>
<td>3.11 (1.50)</td>
</tr>
</tbody>
</table>

The football (only males) and basketball means and SDs are presented in Table 3.  

Football players rated all the variables, except subjective norm, above mid-range values with past behavior being the highest rated, $M = 4.21 \ (SD = 0.82)$. Basketball players rated all the
variables below the mid-range values except attitude which was rated the highest, \( M = 4.01 \) (\( SD = 0.92 \)).

Finally, difference in competition level was examined (Table 4). The results showed that subjective norms and perceived behavioral control were the lowest two variables. However, for Division II participants, all the variables were rated below the mid-range values except for attitude, \( M = 3.93 \) (\( SD = 1.63 \)). Division I participants also rated attitudes the highest (\( M = 4.20, SD = .80 \)) while NAIA participants rated past TT behavior the highest (\( M = 4.10, SD = 1.92 \)).

Table 4.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Division I</th>
<th>Division II</th>
<th>NAIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>4.20 (0.80)</td>
<td>3.93(1.63)</td>
<td>4.06(0.63)</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>3.45(1.40)</td>
<td>2.70(1.28)</td>
<td>2.83(1.70)</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>3.66(1.00)</td>
<td>2.75(1.11)</td>
<td>3.23(0.92)</td>
</tr>
<tr>
<td>Past Behavior</td>
<td>4.08(1.77)</td>
<td>3.05(1.71)</td>
<td>4.10(1.92)</td>
</tr>
<tr>
<td>Intention</td>
<td>4.01(1.72)</td>
<td>3.10(1.77)</td>
<td>3.72(1.62)</td>
</tr>
</tbody>
</table>

Correlations

The first hypothesis stated that all three TPB components would have a positive relationship with an athletes’ intention to perform trash talk. Pearson correlation coefficients were calculated for all TPB constructs (attitude, subjective norm and perceived behavioral control) with intention (see Table 5). The results supported the first hypothesis. There was a small positive correlation between attitude and intention, \( r = .196, p < .05 \). Furthermore, both subjective norm (\( r = .357, p < .001 \)) and perceived behavioral control (\( r = .523, p < .001 \)) had moderate positive correlations with intention. Additionally, past behavior was strongly and positively correlated with intention to use TT, \( r = .80, p < .001 \). Furthermore, past behavior correlated moderately and positively with attitude (\( r = .288, p < .001 \)), subjective norm (\( r = .488, \)
p<.001), and perceived behavioral control \( (r = .543, p < .005) \). Amongst just the TPB variables, subjective norm had a moderate positive correlation with perceived behavioral control, \( r = .407, p < .001 \). Subjective norm \( (r = .137, p < .001) \) and perceived behavioral control \( (r = .139, p < .001) \) had no significant correlation with attitude.

Table 5.

Correlations among TPB Constructs

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.137</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>.139</td>
<td>.407*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past Behavior</td>
<td>.288***</td>
<td>.488***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention</td>
<td>.196*</td>
<td>.357***</td>
<td>.523***</td>
<td>.800***</td>
</tr>
</tbody>
</table>

Note. *p < .05, ***p < .001

Regression Analysis

The second hypothesis stated that all three TPB components would predict the athlete’s trash talk intention, with attitude being the strongest determinant. A linear regression analysis was conducted in two steps. These steps were applied in line with previous TPB research (Connor, Norman, & Bell, 2002; Fekadu & Kraft, 2001; Kwan, Bray & Martin Ginis, 2009, Theodorakis, 1992). The first step was conducted to determine if the TPB variables (attitudes, subjective norm, and perceived behavioral control) predict intention to use trash talk. The results from the first analysis partly supported the second hypothesis. The regression revealed that the TPB variables accounted for 42% of the variance, \( R^2 = .417, F (2,101) = 23.325, p < .001 \). Furthermore, perceived behavioral control was the strongest predictor, \( \beta = .393, t (97) = 4.636, p < .001 \), followed by subjective norm, \( \beta = .302, t (97) = 3.559, p < .001 \). However, attitude,
hypothesized to be the strongest determinant, was in fact the weakest of the three TPB constructs, $\beta = .192$, $t (97) = 2.460$, $p < .05$ (see Table 6).

The second step was added to determine if past behavior predicted intention to use trash talk, the third hypothesis. The results supported this hypothesis. Specifically, the regression revealed that with the addition of past behavior, the model accounted for 71% of the variance, $R^2 = .709$, $F (4, 97) = 58.972$, $p < .001$. With past behavior added to the model, it became the strongest predictor, $\beta = .651$, $t (97) = 9.86$, $p < .001$. Furthermore, subjective norm ($\beta = .197$, $t (97) = 3.21$, $p < .01$) and attitude ($\beta = .119$, $t (97) = 2.13$, $p < .05$) continued to contribute to the variance. However, perceived behavioral control ($\beta = .106$, $t (97) = 1.59$, $p = .115$) no longer accounted for any variance in the model when past behavior was added (Table 6).

Table 6.
Regression Analysis Predicting Intention to use Trash Talk (TBP and Past Behavior)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$B$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Predicting intention</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.42</td>
<td>23.325**</td>
<td>.192*</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td></td>
<td></td>
<td>.302**</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td></td>
<td></td>
<td>.393***</td>
</tr>
<tr>
<td>Step 2: Predicting intention</td>
<td>.71</td>
<td>58.942**</td>
<td>.119*</td>
</tr>
<tr>
<td>Attitude</td>
<td></td>
<td></td>
<td>.197**</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td></td>
<td></td>
<td>.106</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td></td>
<td></td>
<td>.651***</td>
</tr>
<tr>
<td>Past Behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05, ** p < .01, ***p < .001

An additional regression analysis was conducted with past behavior entering in the first step and the TPB variables entering as a cluster in the second step. The regression revealed past behavior, $\beta = .800$, $t (100) = 13.32$, $p < .01$, accounted for 64% of the variance, $R^2 = .64$, $F (1, 100) = 177.449$, $p < .001$. On the second step, the regression showed that the addition TPB variables added 7%, and together accounted for 71% of the variance, $R^2 = .71$, $F (4, 97) =$
58.972, \( p < .001 \) (see Table 7). Additionally, all variables shared similar regression coefficients and significance as the first regression analysis seen in Table 7.

Table 7. 
*Regression Analysis Predicting Intention to use Trash Talk (Past Behavior and TBP)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>( R^2 )</th>
<th>( F )</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Predicting intention</td>
<td>.64</td>
<td>177.449**</td>
<td>.800***</td>
</tr>
<tr>
<td>Past Behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2: Predicting intention</td>
<td>.71</td>
<td>58.942**</td>
<td></td>
</tr>
<tr>
<td>Past Behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>.651***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.119*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>.197**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.106</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( *p < .05, ** p < .01, ***p < .001 \)
Trash talk, the verbal belittling of one player by another, is used across sports regardless of experience levels (Conmy et al. 2014; Eveslage & Delaney, 1998; Granito & Rainey, 2010; LoConto & Roth, 2005; Rainey, 2012). This behavior has been seen for years, but research on this topic has been scarce. Therefore, the primary aim of the present study was to add to the trash talk literature. Furthermore, the existing research has examined various facets of trash talk (e.g. types, frequency, usage), but has yet to look at what factors may determine the use of trash talk. Therefore, the purpose of the present study was to investigate athletes’ intention to use trash talk against opponents using the theory of planned behavior. Athletes’ attitudes, subjective norms and perceived behavioral control were all expected to predict their intention to use trash talk towards opponents. Additionally, athletes’ past behavior was expected to predict trash talk intention. In general, the results from the current study indicated that the TPB constructs and past behavior predict an athlete’s intention to use trash talk.

**The Relationship between Trash Talk and TPB**

The current study postulated three hypotheses that were tested. The first hypothesis tested correlations between the TPB constructs (i.e., attitude, subjective norm and perceived behavior control) and an athletes’ intention to use trash talk. The first hypothesis stated: All three of the TPB components (attitudes, subjective norms and perceived behavioral control) will have a positive relationship with an athletes’ intention to perform trash talk. The results supported the hypothesis as it was revealed that all three TPB constructs had a positive correlation with an athletes’ intention supporting the TPB literature (Lu, Lin, & Chang, 2011; Martin, Oliver, & McCaughtry, 2007). However, attitude had the weakest positive correlation with intention out of
all three TPB constructs. Armitage and Conner (2001) found opposite results showing that attitude had the strongest correlation with intention to use TT out of all the three TPB variables. Bebetos and Konstantoulas (2006) reported similar results where attitude and moral functioning had a strong correlation among Greek athletes, in some contrast with my current study findings. These results may affirm that though an athlete violates a rule (i.e. trash talking with an opponent), their attitude toward performing the action is relatively indifferent. In addition, the mean score was slightly below the mid-point on the Attitude scale, suggesting that athletes felt neither favorable nor unfavorable towards using trash talk. Their attitudes may fluctuate more on a situational basis (e.g. play by play, game by game, games against rivals, high profile games, and specific opponents). Thus, future research should examine attitudes toward trash talk in specific situations.

Furthermore, the current study explored the intention to use trash talk with a TPB framework through regression analysis. The second hypothesis stated: All three of the TPB components will predict athlete’s trash talk intention, with attitude being the strongest determinant. The results indicated that if an athlete has a positive attitude towards using trash talk, thinks that others approve their use of trash talk, and feels in control of trash talk use, that athlete will develop a strong intention to use trash talk. Perceived behavioral control was the strongest predictor between the three TPB constructs. Bebetos and Konstantoulas (2006) used this construct when researching athlete’s views on moral functioning. They found that perceived behavioral control had a significant positive correlation with “violating a rule,” one of the four unsportsmanlike behaviors examined. Additionally, the authors noted, “it seems that the perception of behavioral control here is a more powerful predictor than intention and attitude, so that the individual with high perception is more likely to achieve the positive or negative
behaviour he has chosen” (Bebetsos & Konstantoulas, 2006, p. 139). Furthermore, Hagger, Chatzisarantis and Biddle (2002) conducted a meta-analysis of TPB in physical activity and found that perceived behavioral control was a significant predictor of intentions. Rainey and Granito (2010) found that athletes reported that they performed trash talk towards opponents in 29.7% of games they participated in. However, they reported their teammates performed the same behavior towards opponents in 50.9% of games. This data reveals that though participants and teammates used trash talk in games, it was not being performed all the time. To only perform this behavior in around one-third to one-half of games demonstrates that athletes control when they want to use trash talk.

Subjective norm was the second strongest predictor of the TPB constructs. Bebetsos and Konstantoulas (2006) used the Moral Function Scale to survey the athletes in their research. This scale measured the athlete’s judgements, intentions, and behavior in relation to four dilemmas of unsportsmanlike conduct. There were a handful of questions that examined the athletes’ views on how they felt their teammates and coaches would act towards the same unsportsmanlike behaviors. This shows the awareness that researchers had in the development of this scale as they recognized that an athlete’s unsportsmanlike behavior is not solely the responsibility of the individual, but can come from other sources (e.g., coach, fans). Additionally, the findings support Rainey and Granito’s (2010) findings, which indicated that parents, siblings, and coaches played a minor role in teaching athletes about trash talk. However, 62% of participants said their teammates played a major role as to who taught them how to trash talk. Additionally, participants’ indicated that their teammates used trash talk in over 51% of their games. These findings show that athletes are in an environment of trash talk as their teammates play a major factor in an athlete’s use of trash talk.
Trash Talk and Past Behavior

Finally, this study examined the athlete’s past behavior in regards to intention of using trash talk. The third hypothesis stated: Past behavior will be a significant predictor of athletes’ trash talk intention. Similar to the TPB constructs, results indicated that an athlete that used trash talk previously will form a strong intention to use trash talk in the future. The results from the current study reflected what was found in a meta-analysis conducted by Hagger et al. (2002). The authors found that past behavior had a moderately strong relationship with intention and was a significant predictor of intention. The meta-analysis was recently substantiated as Wang (2011) found a strong relationship between past behavior and intention to regularly physical activity, as well as past behavior being a significant predictor of physical activity intention. Similar to the current study, Theodorakis (1992) found that the addition of past behavior to the intentions regression analysis improved the predictability of the model. These findings, along with those of the current study, conform to the results found by Rainey and Granito (2010) as they examined collegiate athlete’s first exposure to trash talk. They found that both men and women college athletes were targeted by trash talk under the age of 12, and were using trash talk by the age of 13. Additionally, they found that Division 1 athletes were targeted by and used trash talk before the age of 11, whereas Division 3 athletes were targeted by and used trash talk by the ages of 12 and 13, respectively. The data suggests that collegiate athletes are exposed to trash talk at a young age, consequently creating a factor towards the use of it as they continue on in their athletic careers.

Limitations

The main limitation of the current study is the relatively low reliability of the perceived behavioral control scale. After an internal consistency reliability analysis was conducted, the
results revealed a low Cronbach alpha for this scale. Although other studies using the TPB framework have had a scale below the suggested threshold of .70, an alpha value of .32 is extremely low. The questionnaire for this study was newly formed, based on the suggestions of Azjen (1988), and in conjunction with other questionnaires using similar questions, but with changes in the wording of the actual behavior. Therefore, to better increase the reliability of this scale, changes to the perceived behavioral control questions must be made to reduce measurement error.

An additional limitation of the current study is that it focused merely on the athlete’s intention to perform trash talk, whereas, much of the TPB literature examines both the intention to perform the behavior and the actual behavior. Therefore, a direct comparison between the TPB literature and the findings of this study is unattainable as this study strictly focused on the intention to use trash talk. Due to the unavailability of survey participants during season this survey was distributed after the football and basketball seasons were completed, which led to the questionnaire being retrospective in nature. Participants’ recall of their past behavior is helpful for understanding the intent of using trash talk. Yet without observing the participants’ current behavior, there is a lack of ecological validity to the current findings. Therefore, this study should be replicated with a TT observation scheme to explore both the intent and the performance of trash talk during the season.

Lastly, the generalizability in regards to sports is a limitation. Previous research in the trash talk literature incorporated football (Conmy et al., 2014; Granito & Rainey, 2010; Rainey, 2012) and/or basketball (Eveslage & Delaney, 1998; Granito & Rainey, 2010; Rainey, 2012). For this reason, the current study focused on these two sports specifically. However, this limits the results generalizability to other sports such as baseball, tennis, and hockey (Granito & Rainey,
Using TPB as a framework, future research should explore more sports in regards to the intention of athlete to use trash talk. As studies have shown that trash talk does not occur in other sports as frequently as football and basketball (Rainey & Granito, 2010; Rainey 2012), the TPB concepts may apply differently to athletes in other sports.

**Future Research**

Future research on the subject of trash talk is needed to further the understanding of trash talk use, causes, and consequences. The literature is still limited, therefore there are many specific issues within trash talk researchers can examine. For example, future research should focus on conducting experimental studies in natural sport environments. Conmy et al. (2014) studied trash talk and self-efficacy through an experiment with participants playing the football video game *Madden*. However, a research study has yet to explore this topic using participants in an experiment in an actual sports setting. Conducting an experiment to examine the effects of trash talk on athletes in their natural environment is vital for understanding how the findings of trash talk literature (i.e. frequency, type, usage) are applicable to an actual athlete’s performance. Furthermore, with a true experimental design, researchers can examine trash talk and its effects as it occurs, instead of having athletes recall information from previous performances. Unfortunately, the majority of literature has examined trash talk from participants’ recollection of their behavior, (Eveslage & Delaney, 1998; Granito & Rainey, 2010; Rainey, 2012). As mentioned previously, recall has its limitations as it could be distorted, inaccurate, or biased. Only one study observed trash talk during performance (Conmy et al., 2014). More research needs to investigate trash talk while the behavior is happening in the moment, allowing researchers to get a better insight of the effects of trash talk in real-world scenarios.
Additionally, the majority of the trash talk literature either examined high school (Eveslage & Delaney, 1998; Rainey, 2012) or collegiate athletics (Granito & Rainey, 2010; LoConto & Roth, 2005). Yet, the primary examples that have been given in the literature are from professional sports, such as Babe Ruth of the New York Yankees (LoConto & Roth, 2005) and French soccer player Zinedine Zidane (Conmy et al., 2014; Granito & Rainey, 2010). Furthermore, when trash talk is covered in the media, these outlets (e.g. ESPN, FoxSports) showcase this behavior of professional athletes from various sports. Seeing as the public’s exposure to trash talk comes from these outlets, future research should take a look at this subject in the professional arena.

Trash talk is most commonly viewed during an athletic competitions (LoConto & Roth, 2005; Rainey & Granito, 2010; Rainey, 2012). The examples in the literature reflect this behavior being performed in sport settings, such as a baseball field and soccer pitch (Granito & Rainey, 2010; LoConto & Roth, 2005). Conmy et al. (2014) stated, “…players in professional sports have previously been audio-recorded for entertainment purposes (i.e., ESPN)” (p.1013). These purposes, shown as highlights during specific sports programs (i.e. SportsCenter), include trash talk being used on the field and in pregame and postgame interviews. However, media outlets recognize more than what is being said in the sports environment. The most common and accessible exposure outside of an athlete’s environment is through social media (e.g. Twitter), as it has been a widely recognized instrument for athletes to express their trash talk capabilities. Exploring how social media is used for trash talk and its effects is crucial because this communication happens either before an athlete performs or after a competition has completed.

Lastly, the behavior of trash talk has been primarily described in the literature as a type of communication between two parties. A plausible explanation for this is that the wording of this
behavior has the word ‘talk’ in it, therefore it is convenient to solely categorize it as such. LoConto and Roth (2005) looked at trash talk in the sense of the communication aspect. However, they also discovered that athletes felt that non-verbal communication was considered a form of trash talk, often termed as “taunting.” Taunting is described as the use of non-verbal communication and/or body language towards opponents. So why has this type of trash talk, recognized by athletes, not been explored further in the literature? Separating trash talk from taunting is problematic because athletes feel this non-verbal behavior is a version of trash talk. Future research needs to examine taunting more in-depth through determining how it can be integrated with trash talk as LoConto and Roth (2005) discovered.

**Conclusion**

Trash talk may be limited in the literature, but what has been revealed in the research has extended the exploration into this topic. The current study explored what factors affected an athletes’ intention to use trash talk. Findings showed that the attitudes, social norms, perceived behavioral control, and past behavior may have an effect on athletes’ trash talk intentions. Though the perceived behavioral scale was a major limitation, the study still provided noteworthy results regarding reasoning as to why athletes intend to trash talk. Future research of this topic is endless, with researchers shifting focus to experimental designs as the next step to further understand trash talk.
APPENDIX A

INFORMED CONSENT FORM

You have been invited to participate in a research study regarding athletes’ intentions of trash talking opponents during competition. You were selected as a potential participant because of your interest and/or current participation in sports. This study is being conducted by William Kitchings (Master’s student), as a requirement by the Department of Educational Psychology and Learning Systems Sport Psychology program at Florida State University. Please read the following form. If anything is unclear or you have any questions, please ask for clarification before you agree to participate.

Study Information

The purpose of this study is to examine the intention of college athletes to trash talk with opponents during competition. If you agree to participate in this survey by moving on to the next page, you will be asked to complete a brief demographic information questionnaire and then complete four to five short questionnaires regarding the topics of this study. The entire questionnaire should take less than 10 minutes to complete.

Benefits of Participating:

There are no tangible benefits from participating in this study. Yet, it is figured out why athletes intend to trash talk opponents during competition, there will be a better understanding determining what factors guide this intention. Additionally, participating in this study will help add more information to a topic (trash talk) that has very little research.

Risk of Participating:

There is minimal risk involved in this study. If at any time during the study emotional or physical discomfort occurs you may choose to discontinue participation in the study.
Participation in this study is voluntary and if you choose to participate you are permitted to decline answering any question and withdraw at any time. There is no penalty for withdrawing or choosing not to participate in the study.

Confidentiality:

In order to ensure anonymity, no information will be requested that will make it possible to identify a participant. In addition to this all responses will be kept private and confidential to the extent permitted by law. Coaches and trainers will not know who does or does not participate in the study. Coaches and trainers will not have any access to the survey responses.

Contacts and Questions

The researcher conducting this study is William Kitchings. If you have any questions regarding this study, contact William by phone or by e-mail. You may also contact Dr. Gershon Tenenbaum by e-mail. If you have any questions or concerns regarding this study and would rather talk to someone other than the researcher, you can contact the FSU IRB at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or 850-644-8633, or by email at humansubjects@magnet.fsu.edu.

Statement of Consent

I have read all of the above information. I have clarified any questions about the study that I may have. I consent to participate in this study.
APPENDIX B

TRASH TALK QUESTIONNAIRE

Please answer each of the following questions by circling the number that best describes your opinion. Some of the questions may appear to be similar, but they do address somewhat different issues. Please read each question carefully.

Trash talk is defined as “disparaging, taunting, or boastful comments especially between opponents to intimidate each other”.

1. For me to use trash talk towards opponents is
   extremely difficult :___1__:___2__:___3__:___4__:___5__:___6__:___7__: extremely easy
2. Most people who are important to me think that I should use trash talk towards opponents
   Strongly disagree :___1__:___2__:___3__:___4__:___5__:___6__:___7__: strongly agree
3. For me to use trash talk towards opponents is
   good :___1__:___2__:___3__:___4__:___5__:___6__:___7__: bad
4. How often do you intend to use trash talk towards opponents in the upcoming season?
   never :___1__:___2__:___3__:___4__:___5__:___6__:___7__: frequently
5. If I wanted to, I could easily stop using trash talk towards opponents
   strongly disagree :___1__:___2__:___3__:___4__:___5__:___6__:___7__: strongly agree
6. How often have you used trash talk towards opponents in the past season?
   never :___1__:___2__:___3__:___4__:___5__:___6__:___7__: frequently
7. For me to use trash talk towards opponents is
   foolish :___1__:___2__:___3__:___4__:___5__:___6__:___7__: wise
8. Most people who are important to me would approve of me using trash talking towards opponents
   Strongly disagree :___1__:___2__:___3__:___4__:___5__:___6__:___7__: strongly agree
9. For me to use trash talk towards opponents is
   unenjoyable :___1__:___2__:___3__:___4__:___5__:___6__:___7__: enjoyable
10. How much control do you have over using trash talking towards opponents?
11. For me to use trash talk towards opponents is
   pleasant: ___1__: ___2__: ___3__: ___4__: ___5__: ___6__: ___7__: unpleasant
12. I am determined to use trash talk towards opponents in the upcoming season
   definitely not: ___1__: ___2__: ___3__: ___4__: ___5__: ___6__: ___7__: definitely
13. For me to use trash talk towards opponents is
   harmful: ___1__: ___2__: ___3__: ___4__: ___5__: ___6__: ___7__: beneficial
14. In the past season, I used trash talked towards opponents
   Not at all: ___1__: ___2__: ___3__: ___4__: ___5__: ___6__: ___7__: very many times
15. Most people who are important to me encourage me to use trash talk towards opponents
   strongly disagree: ___1__: ___2__: ___3__: ___4__: ___5__: ___6__: ___7__: strongly agree
16. For me to use trash talk towards opponents is
   interesting: ___1__: ___2__: ___3__: ___4__: ___5__: ___6__: ___7__: boring
17. I intend to use trash talk towards opponents in the upcoming season
   strongly disagree: ___1__: ___2__: ___3__: ___4__: ___5__: ___6__: ___7__: strongly agree
18. For me to use trash talk towards opponents is
   useful: ___1__: ___2__: ___3__: ___4__: ___5__: ___6__: ___7__: useless
19. I would be happy to give up using trash talk towards opponents if that meant opponents could
   not use trash talk towards me
   strongly disagree: ___1__: ___2__: ___3__: ___4__: ___5__: ___6__: ___7__: strongly agree
APPENDIX C

DEMOGRAPHICS QUESTIONNAIRE

Please circle or fill in each response that best describes you.

What is your gender?
   (1) Female
   (2) Male

How do you describe yourself? (Mark all that apply)
   (1) White/Caucasian
   (2) Black/African American
   (3) Hispanic/Latino
   (4) Asian/Pacific Islander
   (5) American Indian or Alaskan Native
   (6) Other

What is your age? ________ years

Year in school
   (1) Freshman
   (2) Sophomore
   (3) Junior
   (4) Senior
   (5) Graduate student

What sport do you play collegiately? _____________

How many years of experience do you have in the sport? _______________

Are you an international student?
   (1) yes
   (0) no
APPENDIX D

HUMAN SUBJECTS COMMITTEE APPROVAL MEMORANDUM

Office of the Vice President For Research
Human Subjects Committee
P O Box 3062742
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM (for change in research protocol)

Date: 09/04/2014
To: William Kitchings Jr < >

Address:

Dept: EDUCATIONAL PSYCHOLOGY AND LEARNING SYSTEMS

From: Thomas L. Jacobson, Chair

Re: Use of Human subjects in Research
Project entitled: Trash Talk Behavior amongst Collegiate Athletes: An Application of the Theory of Planned Behavior

The application that you submitted to this office in regard to the requested change/amendment to your research protocol for the above-referenced project has been reviewed and approved.

Please be reminded that if the project has not been completed by 04/29/2015, you must request renewed approval for continuation of the project.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Gershon Tenenbaum < >, Advisor
HSC NO. 2014.12847
REFERENCES


BIOGRAPHICAL SKETCH

William graduated with a Bachelor of Arts in English (Creative Writing) from Florida State University in Tallahassee, FL. After graduation, William pursued playing professional golf. Through various experiences, both good and bad, that pursuit led him to a new career path: sports psychology. After ending his golf career journey, he enrolled and graduated from the University of North Florida with a Bachelor of Science in Psychology. His current research interests center around expanding the literature of trash talk.