
Impact of green stadium initiatives on donor intentions toward an intercollegiate athletic programme

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Abstract: The purpose of this study was to investigate the relationship among potential athletic donors' beliefs, attitudes, subjective norms, and perceived behavioural control on donor intentions toward green stadium initiatives (GSI). Research participants were university students (N = 186) who responded to a questionnaire designed to measure these related concepts. Hierarchical regression analyses revealed that attitude and subjective norm mediated the impacts of behavioural beliefs and normative beliefs on donor intentions toward GSI. These findings support the applicability of the theory of reasoned action (TRA) in nurturing donation behaviours in the collegiate athletic context. The discussion is focused on developing educational and promotional programmes to enhance beliefs, generate positive attitudes, and develop supportive norms. Implications for practitioners are further presented.

Keywords: environmental protection; corporate social responsibility; CSR; theory of reasoned action; TRA; donor intention; green stadium; intercollegiate athletics; sport management and marketing.

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1 Introduction

The world is facing immense environmental challenges in terms of climate change, pollution, and diminishing biodiversity (Greenpeace, 2010; International Olympic Committee, 2009). As such, protecting the natural environment has become an increasingly important global concern, not just for mainstream businesses, but also for organisations in the sport industry. Jagemann (2003) noted that sport can be a considerable cause of damage to the environment due to the use of non-renewable resources, emission of hazardous substances during construction and sport facility operation, and production and disposal of sport-related equipment. Therefore, developing and adopting strategies that help to mitigate these potential problems ought to be standard practise for organisations in the sport industry.

In recent years, sport organisations have begun to reduce their adverse environmental impact, which have resulted in the Leadership in Energy and Environment Design (LEED) certifications. For example, the Beijing Organizing Committee for the Olympic Games (BOCOG) constructed the first LEED certified Olympic village [United Nations Environmental Program (UNEP), 2009]; the Washington Nationals built the first LEED certified stadium for a professional team (Buranen, 2009). On the heels of this

professional movement towards 'greener' sport construction, some college athletic programmes have also invested in green stadium initiatives (GSI) by retrofitting or building new sustainable stadiums. For instance, Penn State University, the University of Minnesota, and the University of Florida have all achieved a LEED certification for one or more of their buildings (Privett, 2009; Reichard, 2009). Such initiatives may not only serve to reduce long-run operation and maintenance costs but also help foster enhanced image perceptions of the institution, and raise environmental awareness among the spectators, which can potentially stimulate environment-friendly behaviours (Yudelson, 2010).

However, considering the current economic downturn, a majority of intercollegiate athletic programmes are facing financial challenges, making it difficult to justify up-front GSI investments. According to Fulks (2003), National Collegiate Athletic Association (NCAA) Division I programme expenses have outpaced revenues due to reduced television revenue, rising inflation, growing costs, and increased demands for equal opportunity in women's programmes (Howard and Crompton, 2004; Lehnus and Miller, 1996). Consequently, athletic programmes have become more dependent on private donations to achieve their objectives and avoid programme termination (Hall and Mahony, 1997). According to the NCAA, private contributions represented 24% of the total revenue for Division I Football Bowl Subdivision (FBS) (Fulks, 2008). Since donations account for such a large portion of the total revenues, it is important to reevaluate the factors that motivate donors to support athletic programmes.

Research has examined athletic donor behaviour, uncovering a wide range of factors that influence private donations. For example, priority seating, parking privileges, special recognition, social events, contributing to student athletes academic success, psychological commitment, and business enhancement have all been discussed in the literature (Mahony et al., 2003). However, little attention has been paid to donor behaviour resulting from socially and environmentally responsible practises. The work that has been published on this topic indicates that donor supported organisations would have increased influence if they took up corporate social responsible (CSR) initiatives because opportunity costs are minimal and the advocacy potential is significant (Frame, 2005; Lichtenstein et al., 2004). However, inculcating sustainable development and crafting long-term scenarios for sustainability (Berkhout et al., 2002) need to be discussed in terms of trust-building, beliefs, and attitudes among organisational stakeholder. CSR is based on stakeholder engagement and ethical investments by the firm, which in turn makes it an effective practise for associated development activities. Given the focus of CSR engagement, socially and environmentally responsible activities by the intercollegiate athletic programme are applicable to the interaction between private sector donors and the athletic programme. Applying the theory of planned behaviour (TPB), the purpose of this study was to investigate the relationships between athletic donors' behavioural beliefs (BBs), normative beliefs (NBs), control beliefs (CBs), attitudes, subjective norms (SNs), and perceived behaviour control on donation intentions to GSI's.

This article is organised into several sections. In the following section, the extant literature on corporate social responsibility (CSR), green sport construction (e.g., LEED certification), fundraising, and donor motivation is reviewed. Next the theoretical framework, notably highlighting the theory of reasoned action (TRA) and one element of the theory of planned behaviour (TPB), is discussed, which is followed by the research

method, analysis, and results. Finally, discussion points are offered with implications for practise and we conclude with study limitations.

2 Review of literature

2.1 Consumers and CSR

Defined as “. . . a company’s commitment to minimizing or eliminating any harmful effects and maximizing its long-run beneficial impact on society” [Mohr et al., (2001), p.47], CSR behaviours typically refer to a broad array of corporate actions such as voluntary contributions, health and safety, internal management objectives (i.e., zero-carbon-emission for travel and energy consumption), participatory stakeholder relationships (i.e., community interaction and supply-chain management), supporting non-profits, environmental protection, and human right issues (Mohr and Webb, 2005). CSR has been steadily growing in importance in the corporate sector and there is a rapidly increasing body of CSR work by academic researchers, consultants, and policy makers organised through national and international bodies such as the World Business Council for Sustainable Development (WBCSD), trade organisations, and at the central and local levels of government (Frame, 2005).

More specifically, research on consumer reactions to CSR has indicated that consumers’ beliefs toward CSR are among the primary motives influencing corporations to engage in the practise (Aguilera et al., 2007). For example, Mohr et al. (2001) found that consumers preferred to purchase from companies with reputable CSR practises. Sen and Bhattacharya (2001) found that consumers CSR assessments were moderated by their individual preferences toward specific CSR activities. Ellen et al. (2006) concluded that consumers favoured CSR motives that were perceived as value-driven and strategic, yet disliked CSR motives that were regarded as stakeholder-driven or egoistic. In sport, CSR did not play a significant role in organisation governance and operations in about 15 years ago; today however, it has been embraced by almost every sport organisation (Walker and Kent, 2009). For instance, many teams now use social involvement to leverage new facility construction or stadium expansion to local residents and city officials (Horrow, 2008). While little work (on the consumer side) has been published in sport, Walker and Kent (2009) and Walker et al. (2010) indicated that fans believe in the social obligations of sport organisations and feel that most organisations should take active steps to genuinely help local communities. However, sport consumer research regarding environmental and ‘green’ management has not kept pace with the management and marketing literature (Babiak and Wolfe, 2009; Walker and Kent, 2009), thereby prompting our interest in this line of inquiry.

Numerous studies have addressed the characteristics of environmentally conscious consumers either as a primary point of investigation or as a secondary issue (e.g., Roberts, 1996; Roberts and Bacon, 1997; Samdahl and Robertson, 1989; Zimmer et al., 1994). The mainstream of these studies have investigated and revealed demographic variables related with behavioural measures of environmental commitment or psychometric scales measuring environmental consciousness (e.g., Samdahl and Robertson, 1989; Zimmer et al., 1994). Some have looked into other attitudinal or psychographic aspects linked to green attitudes and behaviour (e.g., Roberts, 1996; Roberts and Bacon, 1997). These studies indicated some indicators of an individual’s

propensity to participate in environmentally conscious behaviour. However, none have approached the idea from a donor perspective to support environmental initiatives – particularly construction and ‘green’ retrofitting issues.

2.2 Green sport construction

LEED is a rating system initiated by the United States Green Building Council (USGBC) and used to assess a building’s environmental performance. LEED buildings are graded based on five major environmental categories:

- a sustainable sites
- b water efficiency
- c energy and atmosphere
- d materials and resources
- e indoor environmental quality.

The allocation of points is based on the potential environmental impacts and human benefits due to the design, construction, operation, and maintenance of the building, such as air and water pollutants, fossil fuel use, greenhouse gas emissions, toxins and carcinogens, and indoor environmental conditions. Since its initiation in 1998, LEED has developed to encompass over 14,000 projects in the USA and 91 other countries (USGBC, 2009).

Sport facilities and events typically involve a significant amount of public interaction; thus, it is even more important for sport organisations to take action on LEED-certified buildings and become environmentally responsible. Lately, many professional and intercollegiate sport teams in North America have renovated or constructed new stadiums adhering to many LEED standards. For example, the Washington Nationals were the first professional team to achieve LEED certification for their stadium (Buranen, 2009). The Pittsburgh Penguins, Dallas Cowboys, New York Mets, Jets, and Yankees have implemented advanced technologies to their stadiums to increase water and energy efficiency as well as reduce pollution (Bruzz, 2009; ESPN, 2009; Esposito, 2009; Pays to Live Green, 2009). Intercollegiate sports have also invested in these greener areas. For example, Penn State’s Medlar Field was the first baseball stadium in the USA to receive the LEED certification (Penn State, 2007). TCF Bank Stadium (University of Minnesota) was the first football stadium in the country to be awarded the LEED Silver Certification (Reichard, 2009). The University of Florida’s Ben Hill Griffin Stadium was the first building in Florida and the first athletic facility in the nation to achieve LEED platinum certification (Privett, 2009). LEED certification may result in energy and cost saving, risk management benefits, public relationship improvement, and benefit the organisation with positive environmental image and reputation advantages (Yudelson, 2010).

Previous research has indicated that CSR activities are linked to consumer support and a positively perceived company image (e.g., Mohr et al., 2001; Sen and Bhattacharya, 2001; Walker and Kent, 2009; Walker et al., 2010). It is therefore reasonable to surmise that environmental efforts in intercollegiate sport would lead to similar outcomes such as fan support, improved image, improved reputation, and donor behaviour. CSR initiatives of sport organisations have unique advantages due to the extensive attention and media exposure of the events, teams, and athletes. These

advantages have the ability to contribute to a greater impact of sport in terms of providing inspiration in environmental concern, education, health and exercise, and social and cultural enrichment (Headlee, 2006).

3 Theoretical framework

3.1 Theory of reasoned action

Ajzen and Fishbein's (1980) TRA is an approach used to predict and understand individual behaviour. The theory assumes that beliefs influence an attitude toward a behaviour and subjective norms act as a determinant for a behavioural intention (BI). Generally speaking, beliefs about an object are formed by associating various characteristics, qualities, and attributes. Ajzen and Fishbein (1980) suggested that such beliefs may be acquired by direct observation, obtaining information from outside sources, or self-generated via inferential processes. Beliefs are also subject to change and may be strengthened, weakened, or replaced by new beliefs. Exposure to information however, leads to the genesis of new or renewed beliefs and by changing a person's beliefs related to a behaviour, the individual may perform the behaviour differently due (in part) to their change in attitude.

An attitude is "... the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" [Ajzen, (1991), p.188]. An individual's attitude toward a behaviour is determined by their beliefs about the consequences of performing the behaviour and the evaluation of the significance of the outcome. SNs are "... the perceived social pressures to perform or not to perform the behaviour" [Ajzen, (1991), p.188], which are influenced by individuals or groups (e.g., relatives, close friends, or co-workers/colleagues). Taken together, an individual's attitude toward a behaviour and subjective norms lead to a behaviour intention, which eventually determines the person's actual behaviour. Eagly and Chaiken (1993, p.168) defined an intention as a "... psychological construct distinct from attitude, [which] represents the person's motivation in the sense of his or her conscious plan to exert effort to carry out a behavior". In a TRA application, a BI is an estimate of performing a behaviour in the future (Koballa, 1988; Sheppard et al., 1988). A direct measure of intention can explain significant variance in actual behaviour (Ajzen et al., 2009) as intention-behaviour correlations have been found to be as high as .90 (King, 1975) and .96 (Smetana and Adler, 1980).

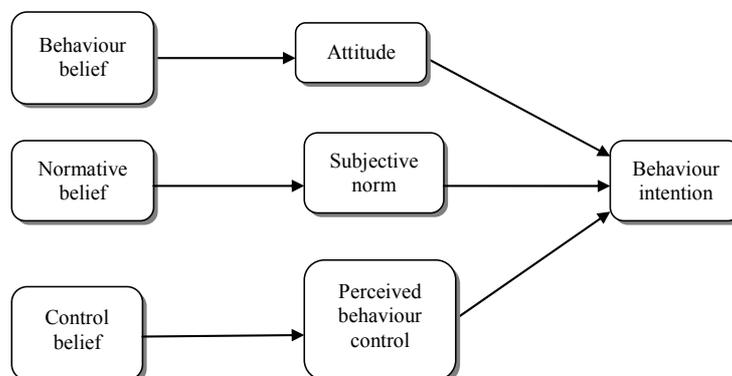
Ajzen's (1985) TPB extends the TRA by including an additional factor of perceived behavioural control (PBC) as a determinant of behaviour intention. PBC is an individual's perception of how difficult it is to perform a task (e.g., anticipated obstacles) which in turn leads the individual to either support or oppose the behaviour (i.e., CB strength) and also contributes to their perceived power over those factors (i.e., CB power). According to the TRA and TPB, a behaviour is more likely to be performed when an individual has strong beliefs that the behaviour will lead to favourable consequences, the behaviour is expected by the social environment, and the individual has the capability to perform the behaviour (Ajzen and Fishbein's, 1980; Ajzen, 1985). Based on a meta-analytic review of 185 studies that applied TPB, Armitage and Conner (2001) revealed that behaviour intention accounted for about 27% of the variance in actual behaviour (Sheeran, 2002). In the context of the current work, it is possible that

potential donors hold positive attitudes and perceived social pressure to support GSI. However, these potential donors may not possess the intention to donate due to limited financial resources; thus, TPB was adopted as the conceptual framework to explore the formation of donor's intention to donate to GSI.

3.2 Fundraising and donor motivation in intercollegiate athletics

Since nearly three-fourths of NCAA Division I athletic departments lose money (Hall and Mahony, 1997; Howard and Crompton, 2004; Verner et al., 1998) and for the most part expenses outweigh revenues (Fulks, 2003), many intercollegiate athletic departments generally agree that one of the most important issues facing athletic programmes in the future is financial security (Lehnus and Miller, 1996). Consequently, many college athletic programmes are seeking alternative sources of revenue and have become heavily reliant on developing innovative and effective strategies to raise funds to avoid expulsion of athletic programmes (Hall and Mahony, 1997; Shapiro et al., 2010). Revenues generated from athletic donor giving among Division-I athletic programmes has exponentially increased from 5% of the total athletic revenue in 1965 to 20% in 2004 (Howard and Crompton, 2004). Recent data from the NCAA indicate that donations from alumni and others represented 24% of total athletic revenue for Division I FBS institutions, exceeding ticket sales (23%) (Fulks, 2008). Some athletic programmes have even reported up to 50% of their total revenue generated is from donations (Raiborn, 1990). Stinson and Howard (2004) documented that both alumni and non-alumni donors increasingly supported the intercollegiate athletics programme, often at the expense of support to academic programmes, which was more obvious at schools with major football programmes. In some institutions, even when the total amount of donation for academic programmes declined, the number of donors and total dollars donated remain increasing for athletic department (Stinson and Howard, 2007). Private donations account for a substantial proportion of intercollegiate athletic budgets and continue to be one of the fastest rising sources of revenue (Verner et al., 1998). Gladden et al. (2005) conducted a study on athletic donors at three Division I institutions with different characteristics in terms of campus location (i.e., urban vs. rural), conference membership, and major sports that generate revenue. Among the respondents in this study, more than one half of the donors for each of the three institutions were alumni, where one of the institutions just had a highly successful football season and over 88% of the donors were alumni.

Figure 1 Theoretical model



Previous research on intercollegiate athletic fundraising has revealed that donor behaviour is influenced by a number of factors, such as to support and improve the athletic programme, tickets, helping student-athletes, entertainment/enjoyment, supporting and promoting the university, membership benefits, commitment, affiliation, and family needs (Gladden et al., 2005; Stinson and Howard, 2007; Tucker, 2004; Verner et al., 1998). Performance of football programme and location of the institution were important factors in athletic fundraising (Covell, 2005; Hall and Mahony, 1997; Humphreys and Mondello, 2007). Theoretically, Mann (2007) used three theories to explain why people make donations:

- 1 Charitable Giving Theory – altruism, reciprocity, and direct benefits are the three major motivations for private donations
- 2 Organisational Identification Theory – people, who identify with an organisation have a strong connection to a particular
- 3 Social Identification Theory – people are influenced by how they order themselves into social groups.

While all three theories offer support to understanding donor motives, the main focus of this study was to understand how GSI's influence potential donors' intention to donate. As stated by Ajzen et al. (2009), a direct measure of intention can explain significant variance in actual behaviour. The aforementioned theories fail to provide sufficient support for intentions because none take into account environmental friendly attitudes and concerns that have been suggested to significantly impact consumers' eco-friendly behaviours (Laroche et al., 2001; Roberts, 1996). Thus, the TRA and TPB, which has been widely applied by researchers to study various behaviour intentions (e.g., Brinberg and Durand, 1983; Gamba, 2000; Mummery et al., 2000; Park et al., 1998), serve as primary theoretical foundations. These theories allowed us to incorporate beliefs, attitudes, and subjective norms into our model of donor intentions. Such elements were deemed necessary as GSI's are just now beginning to surface on college campuses and understanding how this phenomenon might influence donor behaviour is important both scientifically and practically. Based on our theoretically supported linkages, the following hypotheses were developed and tested (see Figure 1):

- H1 Beliefs of the consequences of donating to GSI's will be positively related to potential donors' attitude toward the behaviour.
- H2 NBs of donating to GSI's would be positively related to potential donors' SN.
- H3 Beliefs of the presence and significance of required resources to donate to GSI's would be positively related to potential donors' perceived behaviour control.
- H4 Attitude toward donating to GSI's would be positively related to potential donors' intention to donate.
- H5 SN toward donating to GSI's will be positively related to potential donors' intention to donate.
- H6 Perceived behaviour control of donating to GSI will be positively related to potential donors' intention to donate.

- H7 Attitude, subjective norm, and perceived behaviour control will mediate (at least partially) the relationship between BBs, NBs, CBs, and potential donors' to intentions to donate.

4 Method

4.1 Participants

Research participants were students ($N = 186$) attending a major public university located in the Southeastern region of the USA, who voluntarily participated in this study. Of the respondents, 53.9% were female and 46.1% were male. Approximately 90% of the participants were single, and aged between 18 and 30 ($M = 23.8$, $SD = 5.03$). About 27.6% were in their senior year and 22.1% were in graduate/professional school. In terms of annual household income, 54% were below \$20,000 and 25% had income higher than \$60,000. Ethnic composition of the participants included 44.8% Caucasian, 20.2% Hispanic, 20.2% Asian, 12.6% African-American, and 1.6% mixed or other ethnicity.

Respondents were from diverse academic backgrounds, representing over 40 academic programmes in the university. This particular university has approximately 52,000 students, including over 36,000 undergraduate students in more than 100 majors and near 16,000 graduate/professional students in about 260 programmes (University of Florida, 2011). This university placed an all-time high of second in 2009-2010 national all-sports competition, and nine of their athletic teams finished among the nation's top 5 and five in the top 10 during the 2009-2010 season (Gator Boosters, 2010). Among all the support and revenue generated by the booster club of the athletic programme in the fiscal year of 2008-2009, over 81% was from football-related contributions (Gator Boosters, 2010).

Recruiting a student sample was based on the considerations that students tend to be more informed of campus construction and renovations as the news are usually publicised first through the student newspaper, and they would likely become donors after graduation. As Stinson and Howard (2004) explained, both alumni and non-alumni donors increasingly supported the intercollegiate athletics programme, particularly for athletic programmes with successful football programmes. In Gladden et al.'s (2005) study, more than one half of the donors were alumni. With regard of theory application research, Calder et al. (1981, p.199) contended that the purpose of a theory application research is to apply a more general theoretical understanding that will be more rigorous by using a "... maximally homogenous sample". Therefore, the student sample in this study was deemed appropriate because it served the primary research purpose well, i.e., a theoretical investigation of the interrelationships among beliefs, attitudes, SNs, PBC, and BIs.

4.2 Measurement

At the outset of the survey, the following question was asked to assess respondent's relative familiarity with GSI's as a concept "Have you ever heard of Green Stadium Initiatives?" To avoid overly verbose survey questions that contained all the specific elements of GSI's, the following statement was provided in the questionnaire to inform the respondents: "Green Stadium Initiatives mainly refer to the improvement of

sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality”.

The questionnaire included the following major sections:

- a behaviour beliefs
- b normative beliefs
- c control beliefs
- d attitude
- e subjective norm
- f perceived behaviour control
- g behaviour intentions (see Table 1).

Behaviour and NBs were assessed using items adopted from Han et al. (2010). CBs were measured using two items adapted from Davis et al. (2002), which were related to donating to GSI's, environmental friendly activities, and intention to donate. Accessibility to financial resources could affect an individual's capability of donating to the university's GSI. Thus, respondents were asked to rate how important this problem was for them and how easy or difficult it is for them to overcome this problem. Attitudes toward donating to the university's GSI were assessed using items phrased in semantic differential scales with bipolar adjectives. These unidimensional items, adapted from Davis et al. (2002), and: unfavourable-favourable, useful-useless, bad-good, harmful-beneficial, foolish-wise, unpleasant-pleasant, and desirable-undesirable. High scores were assigned to the positive end of each scale. Social norms were assessed using three items adapted from Han et al. (2010). PBC was measured using three items modified from Chang (1998). Intention to donate was measured using three items adapted from Chang (1998). Finally, for sample decryption purposes, demographic information consisting of items for age, gender, ethnicity, marital status, education level, household income, and academic major were included.

4.3 Procedure and analyses

Following questionnaire construction, content validity was assessed by a panel of five sport management academicians. Each panel member was asked to examine the relevance, representativeness, and clarity of the items in each conceptual area of the questionnaire. With minor wording improvements, all items were retained based on 80% agreement among panel members. Following scale refinement, data collection took place on the campus of a major university located in the Southeast region of the USA. University students were approached in several common locations on campus and were asked to voluntarily participate in return for a university logoed pen. After completing an informed consent, the questionnaire took approximately 14 minutes to complete.

Descriptive statistics were calculated for all variables. Internal consistency was examined by calculating the Cronbach's alpha coefficient, and the zero-order correlations were used to examine interrelationships among BBs, NBs, CBs, attitude toward donation behaviour, SN, PBC, and BIs factors. Hierarchical regression analyses were used to test the posited research hypotheses.

5 Results

Near 90% of the respondents were not familiar with GSI as a concept; however they expressed acknowledgement of the term after reading the explanation of the terminology. Descriptive statistics, along with Cronbach's alpha coefficients, are presented in Table 1. Cronbach's alpha coefficients indicated acceptable internal consistency based on suggested cut-off values of .70 (Nunnally et al., 1994). Three items under the attitude toward the behaviour factor (i.e., rewarding, useful, and desirable) were identified as negatively contributing to internal reliability of the construct; thus, they were excluded from further analyses. Skewness and kurtosis of all times were found to be within -1.0 and $+1.0$, suggesting that the data were normally distributed (Hair et al., 2009).

Composite scores were calculated for the factors and used for further analyses. Mean composite scores for BBs ($M = 35.30$, $SD = 8.23$) and attitude toward the behaviour ($M = 29.10$, $SD = 6.65$) were significantly higher than the neutral mean point of 28 ($t_{(df = 185)} = 12.10$, $p < .001$) and 24 ($t_{(df = 185)} = 10.46$, $p < .001$), indicating that the respondents possessed positive BBs and attitude toward the university's GSI programme. Mean composite scores for NBs ($M = 9.42$, $SD = 4.01$; $t_{(df = 185)} = -8.77$, $p < .001$), subjective norm ($M = 10.05$, $SD = 4.06$; $t_{(df = 185)} = -6.55$, $p < .001$), and PBC ($M = 11.06$, $SD = 4.06$; $t_{(df = 185)} = -3.16$, $p < .05$) were significantly lower than the neutral mean point of 12 for these three factors, indicating that the respondents did not hold NBs, SN, and PBC of donating to the university's GSI programme. Mean composite score for the CBs factor ($M = 9.91$, $SD = 2.83$; $t_{(df = 185)} = 9.20$, $p < .001$) was significantly higher than its neutral mean point of 8, indicating that the respondents believed having a personal control over giving to the university's GSI programme. Additionally, mean composite score for intention to donating to GSI programme ($M = 11.80$, $SD = 4.47$, $t_{(df = 185)} = 9.20$, $p > .05$) was not significantly different from the factor's neutral mean point of 12, suggesting that on average respondents did not lean toward making a donation or not making a donation to the university's GSI programme.

Tests of zero-order correlation coefficients among BBs, NBs, CBs, and BI (see Table 2) revealed that BBs and NBs were significantly related to attitude, SN, and BIs; NBs were also significantly related to behavioural control (BC). CBs were significantly related to BC. Attitude, subjective norm, and behavioural control were significantly related to BIs.

Hierarchical regression analyses were conducted following the principles of ordinary least square (OLS). According to Baron and Kenny (1986), to establish mediation four elements are required:

- 1 the predicting variable is correlated with the criterion variable
- 2 the predicting variable is correlated with the mediating variable
- 3 the mediating variable is correlated with the criterion variables after controlling for the effect of the predicting variable
- 4 correlation between the predicting and the criterion variables is equal to zero after controlling for the effect of the mediating.

Based on the TPB, three factors (i.e., AB, SN, and PBC) were tested as potential mediators. As such, these factors were first entered in the regression analyses (see Table 3).

Table 1 Descriptive statistics for the BBs, NBs, CBs, and BI variables

<i>Variables</i>	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>
<i>Behavioural beliefs</i> ($\alpha = .93$) ^a	35.30	8.23		
Donating to the GSI would enable me to...				
1 Protect our environment.	5.10	1.42	-0.61	-0.01
2 Be more socially responsible.	4.98	1.40	-0.37	-0.44
3 Experience a healthy and environmental friendly	5.28	1.35	-0.63	0.03
4 Perform an environmental friendly practise.	5.23	1.36	-0.66	-0.06
5 Enjoy environmental friendly amenities.	5.24	1.30	-0.58	-0.12
6 Be more attached to the stadium.	4.34	1.60	0.05	-0.77
7 Be a greener gator fan.	5.12	1.50	-0.70	0.13
<i>Normative beliefs</i> ($\alpha = .93$) ^a	9.42	4.01		
1 My family or relatives think I should donate to the GSI.	3.01	1.41	0.06	-0.75
2 My friends think I should donate to the GSI.	3.21	1.44	0.02	-0.47
3 My colleagues think I should donate to the GSI.	3.21	1.45	0.05	-0.36
<i>Control beliefs</i> ($\alpha = .70$) ^b	9.91	2.83		
1 How important the financial problem that prevents you from donating to GSI.	5.14	1.68	-0.79	-0.01
2 How easy to overcome the financial problem preventing you from donating to GSI.	4.77	1.54	-0.41	-0.26
<i>Attitude toward the behaviour</i> ($\alpha = .88$) ^a	29.10	6.65		
1 Favourable	4.88	1.40	-0.66	0.27
2 Good	5.15	1.45	-0.94	0.84
3 Beneficial	5.22	1.41	-0.82	0.73
4 Wise	4.77	1.41	-0.29	0.03
5 Pleasant	4.82	1.41	-0.45	0.27
6 Exciting	4.27	1.34	0.05	0.22
<i>Subjective norm</i> ($\alpha = .94$) ^a	10.05	4.06		
1 Most people who are important to me think I should donate to the GSI.	3.17	1.42	-0.02	-0.49
2 Most people who are important to me would want me to donate to the GSI.	3.42	1.45	-0.04	-0.44
3 People whose opinions I value would prefer that I donate to the GSI.	3.46	1.44	-0.14	-0.39
<i>Perceived behavioural control</i> ($\alpha = .73$) ^a	11.06	4.06		
1 I have complete control of making donation to the GSI.	4.30	1.86	-0.17	-0.90
2 For me, donating to the GSI is easy.	3.30	1.51	0.14	-0.41
3 If I wanted to, I could easily make donation to the GSI.	3.45	1.65	0.17	-0.64
<i>Behavioural intentions</i> ($\alpha = .92$) ^c	11.80	4.47		
1 I intend to donate to GSI in the future.	3.47	1.52	0.09	-0.31
2 I will try to donate to GSI in the future.	4.11	1.63	-0.29	-0.45
3 I will make an effort to donate to GSI in the future.	4.21	1.68	-0.25	-0.43

Notes: ^a1 = strongly disagree to 7 =strongly agree;

^b1 = extremely unimportant to 7 = extremely important; 1 = extremely easy to

7 = extremely difficult;

^c1 = very unlikely to 7 = very likely

Table 2 Zero-order correlations among BBs, NBs, CBs, and BI factors

Factor	1	2	3	4	5	6	7
1 Behavioural intentions (BIs)	1.00						
2 Behavioural beliefs (BBs)	.263**	1.00					
3 Normative beliefs (NBs)	.432**	.125	1.00				
4 Control beliefs (CBs)	.028	.019	-.233**	1.00			
5 Attitude toward behaviour (AB)	.418**	.380**	.347**	-.060	1.00		
6 Subjective norm (SN)	.455**	.225**	.873**	-.119	.310**	1.00	
7 Behavioural control (BC)	.300**	-.006	.873**	-.287**	.296**	.525**	1.00

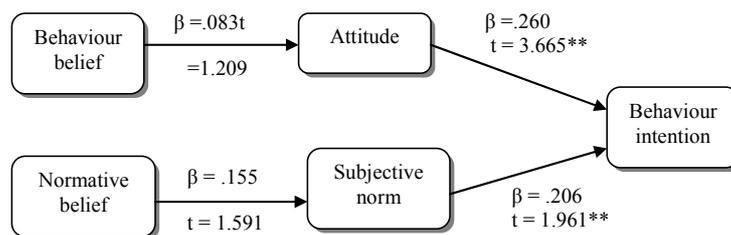
Notes: *Significant at .05 level; **significant at .01 level

Table 3 Hierarchical regression analysis

Factor	R	R ² _{adj}	ΔR ²	SEE	F	df	β	t
Model 1	.541	.293	.293	3.786	25.093**	3		
Attitude toward behaviour							.280	4.32**
Subjective norm							.377	5.02**
Behavioural control							.048	0.64
Model 2	.564	.318	.026	3.747	13.931**	6		
Behavioural beliefs							.083	1.209
Normative beliefs							.155	1.591
Control beliefs							.089	1.371
Attitude toward behaviour							.260	3.665**
Subjective norm							.206	1.961*
Behavioural control							.079	1.011

Notes: *Significant at .05 level; **significant at .01 level

Figure 2 Theoretical model tests



Notes: *Significant at .05 level; **significant at .01 level

Approximately, 29.3% of the variance in BIs was explained by these three factors in Model 1 ($F = 25.093, p < .01$). After partialling out the effects in Model 1 (i.e., AB, SN, and PBC), BBs, NBs, and CBs were entered in the analyses. The total variance explained slightly increased to 31.8%, which was not statistically significant ($\Delta F = 2.251, p > .05$), resulting in no statistically significant relationships. Baron and Kenny (1986) noted that

after controlling for the mediators, the impact of the predictors on the dependent variables should no longer be significant (for full mediation) or reduced in strength (for partial mediation). Failing to reach statistical significance in Model 2 suggests that AB and SN fully mediated the relationships of BBs and NBs to BIs (see Table 4). Sobel's (1982) test confirmed this result by revealing significant *t*-values across the outcomes. The resultant relationships are depicted in Figure 2 and the summary of each hypothesis is contained in Table 4.

Table 4 Summary of hypothesis testing results

<i>Hypothesis</i>	<i>Key finding</i>	<i>Conclusions</i>
H ₁	Beliefs of the consequences of donating to GSI would be positively related to donors' attitude toward the behaviour.	Hypothesis supported
H ₂	Normative beliefs of donating to GSI would be positively related to their subjective norm.	Hypothesis supported
H ₃	Beliefs that the presence and significance of resources for donating to GSI would be positively related to their perceived behaviour control.	Hypothesis not supported
H ₄	Attitude toward donating to GSI would be positively related to intention to donate.	Hypothesis supported
H ₅	Subjective norm toward donating to GSI would be positively related to intention to donate.	Hypothesis supported
H ₆	Perceived behaviour control of donating to GSI would positively relate to intention to donate.	Hypothesis supported
H ₇	Attitude, subjective norm, and perceived behaviour control would mediate the relationships of behavioural beliefs, normative beliefs, and control beliefs to intentions to donate.	Hypothesis Partially supported

6 Discussion

Environmental protection has become an important concern for sport organisations at all competition levels, including the intercollegiate sport organisations in the USA. To reduce the negative environmental impacts from operating intercollegiate sport facilities, some programmes have started looking into the LEED system, which serves to evaluate a building's environmental performance in sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. However, renovating or rebuilding stadiums require significant financial investments. Notwithstanding the lofty price tag, such environmental initiatives may greatly influence the athletic departments' capability to carry out the environmental programmes planned for stadiums. Private donations have long been a fast growing source of income for intercollegiate athletic departments (Verner et al., 1998) and may play an increasing role in raising funds to execute the environmental initiatives in the future. Available research has revealed that donor behaviour is influenced by various factors (see Mahony et al., 2003); however, no research efforts have been found that examine the impact of environmental conservation on donor behaviour. This study attempted to fill the void by applying the TPB (an extension of the reasoned action theory) to examine environmental issues as potential influencing factors on donor intentions toward GSI.

6.1 Theoretical interpretations

Findings indicated that beliefs about the consequences of donating to GSI had a positive impact on attitude toward the behaviour, and normative beliefs were positively related with SN. These findings were consistent with several studies using either the TRA or TPB as a theoretical framework in a variety of settings such as a burn policies of the National Park System (Bright et al., 1993), water conservation (Trumbo and O'Keefe, 2001, 2004), nuclear power (Showers and Shrigley, 1995), agricultural conservation (Luzar and Diagne, 1999; Heong and Escalada, 1999), and consumer purchases (Brinberg and Durand, 1983).

This study showed that SN and AB were significant predictors of BIs; thereby supporting the underlying predictions of the TPB that positive evaluations of a behaviour and perceived pressure from important others to perform the behaviour increases the likelihood that an individual will be willing to engage in that behaviour. Similar findings have also been found in studies related to dieting and exercise (e.g., Mummery et al., 2000), consumer purchases (Bonfield, 1974; Brinberg and Durand, 1983), energy conservation (Stutzman and Green, 1982), recycling, and waste disposal behaviours (Gamba, 2000). In addition, we show that a SN toward a behaviour had a greater level of influence on donor intentions than attitude. During the data collection process, it was estimated that approximately, 90% of the respondents expressed somewhat unfamiliarity with the concept GSI; thus, a norm would not exist if a majority of people are not informed. This is consistent with the statement by Sen et al. (2006) that the public awareness of CSR initiatives is low and the CSR effects must be communicated effectively.

However, PBC was not found to be predictive of BI with the presence of attitude and subjective norm. Ajzen (1991) suggested that the relative importance of attitude, SN, and PBC in the prediction of intention is expected to vary across behaviours and situations. In some cases, attitudes may be the only important explanatory variable while in other situations, attitudes and PBC may be the explaining variables. Therefore, it is also possible that only social norm and the attitude may predict intentions, which means that TRA would be more applicable. According to Ajzen (1991), PBC was added to TRA to overcome its limitations to deal with behaviours under incomplete volitional control. When a behaviour is completely under control, PBC becomes largely irrelevant for prediction of behaviour (Ajzen, 1991; Ajzen and Madden, 1986). The behaviour examined in this study (i.e., donating to GSI) could be considered a volitional behaviour – especially because there was no minimal amount of money required when choosing whether or not to donate to GSI. Thus, respondents could volitionally choose to donate little money without any undue consequences. In sum, this finding indicates that when compared to TPB, TRA could better explain the impact of beliefs and attitude on the intentions to donate to GSI.

6.2 Research implications

The findings also give rise to some notable implications for both theory and practise. Overall, this work contributes to our understanding of the determinants of intentions to donate to GSI in intercollegiate athletic programmes. The results suggest that in order to increase donor intentions, intercollegiate athletic administrators should focus their resources on the formation of favourable attitude toward GSI and enhance the social

support toward donator behaviour from their significant others. This can be accomplished through educational and promotional messages of athletic departments' environmental efforts tailored to this specific group. According to Ajzen and Fishbein (1980), beliefs may be acquired by direct observations, accepting information from outside sources, and/or be strengthened, weakened, or replaced by exposing to a variety of information related to a behaviour. To generate positive and strong behavioural and normative beliefs of donating to GSI, athletic administrators should promote the GSI programme with detailed and systematic information, explaining such as why this programme is needed, how it will be executed, what environmental friendly practises will be applied, what the costs will be, and what environmental, economic, and social benefits it will bring in the long term. Doing so, current and potential donors, as well as their social network, would gain better understanding of the GSI, which would in turn form a supportive attitude and foster a healthy SN toward GSI.

Previous research has suggested that donors contributed to the intercollegiate athletic programmes to improve the quality and image of the athletic programme, promote the image of the university, create collaborative partnerships, and business enhancement (e.g., Mahony et al., 2003; Verner et al., 1998). By learning about an athletic programme's environmental efforts, some donors may become more committed to support GSI as an opportunity to improve the quality and image of the athletic programme while bettering the environment. This suggestion is also supported by Walker and Kent's (2009) finding that a sport team's CSR activities had a strong and positive impact on the organisation's perceived reputation. Taken together, the findings implicate that promoting GSI is an effective strategy to raise donor contributions and inculcate support among a future donor base.

6.3 Limitations and suggestions for future studies

While the findings were relatively robust, the study is not without its limitations. First, this study merely involved a sample of students on the campus of one university. Thus, the findings of this study may be only generalisable to this population or those with similar characteristics. Similar studies need to be conducted with other population groups, particularly those who are current or potential donors to intercollegiate athletic programmes, such as mid-age and senior age groups of people who are more likely of accumulated financial resources through life-savings. Calder et al. (1981) distinguished two types of generalisability (i.e., effects application and theory application) to underpin research goals and procedures (e.g., sampling, operationalisation, research setting, and research design). The primary goal of effects application is to apply specific observed effects to a real-world situation which requires a representative and relevant sample. While it is rational to estimate that alumni accounts for a significant proportion in the athletic donation for the school under investigation, it is reasonable to have student sample in this study since the current students will be future alumni; nevertheless, students were not alumni yet and it would take many years before they become major donors to an athletic programme. Lynch (1982) argued that while a more representative sample may be statistically unbiased, it does not guarantee external validity and may be 'biased' if it fails to describe any subpopulation.

In the current study, the belief, attitude, and behaviour intention factors were all measured as unidimensional concepts. Although adopting the unidimensional approach has been a common practise in studies adopting the TPB or TRA, further exploring the

dimensionality of these concepts can be constructive, which would likely increase research specificity and also reduce inferential errors. Future studies may examine the impact of environmental concerns, along with other factors motivating donor behaviours identified in previous studies. With a much larger sample, future studies may examine the structure relationships among BBs, NBs, CBs, attitude, SN, perceived behaviour control, and behaviour intentions for donating to GSI. A structural equation modeling would help reduce inferential inaccuracy caused by measurement errors.

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