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The Role of Narcissism in Moderating the Relationship between Youth Athletes' Perceived Motivational Climate and Acceptance towards Cheating

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Abstract

The present study aimed to investigate the role of narcissism, and its potential effects on the relationship between youth athletes' perceived motivational climate and their acceptance towards cheating. 198 youth athletes completed the MCSYS (Smith *et al.*, 2008), NPI-40 (Raskin & Hall, 1979; Raskin & Terry, 1988), and the 'Acceptance towards Cheating' subscale of the AMDYSQ (Lee *et al.*, 2007). Moderated hierarchical regression revealed that the role of narcissism in moderating the relationship between motivational climate and acceptance towards cheating was non-significant. However, narcissism did contribute significantly to the variance in acceptance towards cheating after accounting for motivational climate. Differences in motivational climate did not significantly influence acceptance towards cheating, which could possibly be due to the combined promotion of both task and ego climates, in addition to the strong ethical values of that are familiar amongst a youth athlete population.

Overall, the findings suggest that personality traits like narcissism do influence athletes' acceptance towards cheating, albeit independently. This may be because narcissists show a greater willingness to accept cheating in order to achieve their personal goals of self-aggrandizement. Additional explanations in motivational climate may also enhance the study of narcissism's possible interactive effects with motivational climate on acceptance towards cheating. Finally, the current findings strengthened the consideration of personality traits within anti-doping models, and may serve to inform future plans regarding both education strategies and research in the area.

Introduction

The 'Spirit of Sport'

The fundamental rationale of the World Anti-doping Code is to preserve the 'Spirit of Sport' (World Anti-doping Agency, 2009). The 'Spirit of Sport' is embodied by intrinsic values like ethics, fair play and honesty, excellence in performance, dedication and commitment, respect for rules and laws, and respect for self and other participants. Doping violates the aforementioned values and poses a threat to the 'Spirit of Sport'. The notion of doping as a threat to the 'Spirit of Sport' has been observed through research on various sport populations, where many have considered doping as a form of cheating (Backhouse, McKenna, Robinson & Atkin, 2007; Moran, Guerin, MacIntyre & McCaffrey, 2004). The negative attitudes towards doping were found to be particularly strong in a youth sport context, where Melia, Pipe and Greenberg (1996) reported that 74% of subjects (11 – 18 years) regarded that using drugs to improve performance was equivalent to cheating. This is substantiated by another study where 94% of high school athletes surveyed stated that doping is cheating (Laure, Lecerf, Friser & Binsinger, 2004). These findings suggest that in the domain of sport, doping violates the 'Spirit of Sport' because it qualifies as a form of cheating.

Doping as a form of Cheating

Moral research in sport have so far reaped equivocal findings, and this was speculated to be caused by the difficulty in defining moral terms, which have led to the

lack of clear definitions for moral outcomes (Lee *et al.*, 2007; Vallerand & Losier, 1994). Although previous research have supported doping to be a form of cheating (Moran, Guerin, Kirby & MacIntyre, 2008), a clear operational definition of cheating is necessary to effectively guide research in this area. One definition of cheating which was previously ultilised in sport morality research (Lee *et al.,* 2007) was considered. According to Reddiford (1998), the structure of a sport activity is determined by its rules, definitions and stated outcomes. In order for athletes to compete fairly and attain successful outcomes from their sport, it is imperative that they understand and respect the rules. The rules of modern sport have now also incorporated the World Anti-doping Code and its list of anti-doping rule violations. Therefore, any anti-doping violation will very likely be deemed as an act of cheating. Furthermore, anti-doping violations as described in the Code appears to correspond with Reddiford's (1998) definition of cheating, which further substantiates doping as a form of cheating in sport. Reddiford (1998) characterised cheating through three features: 1) To make illegitimate gains by breaching the rules of the sport; 2) To conceal true intentions to cheat and; 3) Cheating success is contingent on the victim and/or independent party's evaluation that no rules have been breached. The fact that using performance enhancing drugs gives athletes an unfair advantage over others, and is considered as athletes' clear lack of respect for the rules of their sport (Miller, Barnes, Sabo, Melnick & Farrell, 2002), satisfies Reddiford's (1998) first feature of cheating, whereby illegitimate gains are achieved and rules are breached. The use of masking agents and tampering with test samples in order to manipulate and falsifying samples are known attempts to deceive authorities of doping intentions, which satisfies Reddiford's (1998) second feature of cheating, that is to conceal one's true intentions to

cheat through deception. Although Reddiford's (1998) third feature of cheating seems to refer more to the successful administration of plans to cheat rather than as a feature of cheating *per se*, doping plans which correspond to Reddiford's (1998) first two features of cheating and are executed successfully without detection, satisfies the third feature of cheating. Reddiford's (1998) three features of cheating have helped to not only provide a clear definition of cheating, but also established parallels with WADA's definition of doping. This may serve to create a more parsimonious investigation of acceptance towards cheating.

The framing of doping as a form of cheating would undoubtedly widen the scope of related psychological research that is valid to doping (Moran *et al.,* 2008). One widely recognized aspect of moral research in sport would be the consideration of social norms as a result of the environment. Shields and Bredemeier (1985) postulated that a major factor affecting moral judgement and consequent moral behaviour in sport originates from the moral atmosphere of the team. This suggests that social and environmental norms that are characteristic of the team may influence an athlete's evaluation of a moral dilemma. Thus an athlete may perceive greater legitimacy of supposed non-moral acts, and are more motivated to act accordingly, as long as the sporting environment deems it normal to do so. Central to the study of this motivation to act and its relationship with sport morality is the theoretical framework of achievement goal theory (Lee, Whitehead, Ntoumanis & Hatzigeorgiadis, 2008).

Perceived Motivational Climate

Achievement goal theory posits that one's motivation in an achievement context is mainly determined by achievement goals and the motivational climate that is in place (Ames, 1992). A motivational climate refers to the prevailing situational goal structure and can be influenced by significant others, such as parents, coaches and teachers (Ames, 1992). However, in a youth sport context, the structure of a motivational climate is perhaps most heavily facilitated by coaches who impose task or ego-involving criteria for the athletes (Roberts, Ommundsen, Lemyre & Miller, 2004). Additionally, younger athletes are more likely to give a greater amount of attention to coach-set criteria.

A task motivational climate is one where skill development, improvement and allowing all athletes to feel important take precedence. Conversely, the salient characteristic of an ego motivational climate is the emphasis on normative success, where recognition is given to the most competent athletes at the expense of others who are less skilled. This inevitably promotes comparison and an increased pressure to demonstrate ability. As a result, athletes may be forced to infringe upon rules and cheat (Nicholls, 1989; Roberts *et al.*, 2004). Therefore, an ego motivational climate is linked with negative moral attitudes and behaviour outcomes. For example, Ommundsen, Roberts, Lemyre and Treasure (2003) found that a perceived ego motivational climate was more likely to correspond with amoral behaviour such as cheating among male youth footballers. In addition, a perceived ego motivational climate was linked with greater acceptance towards cheating behaviours (Boixados, Cruz, Torregrosa & Valiente, 2004),

associated with lower sportspersonship orientations (Miller, Roberts & Ommundsen, 2004), and stronger attitudes towards doping (Sas-Nowosielski & Swiatkowska, 2008). On the contrary, a task motivational climate is found to be linked with positive moral attitudes and behaviour outcomes. For example, a high perceived task motivational climate reported higher sportspersonship and more mature moral reasoning than those who perceived a low task motivational climate (Ommundsen *et al.*, 2003). Similarly, indications of more mature moral functioning and perceptions of a coaching atmosphere which did not endorse aggressive, cheating behaviour were associated with a task motivational climate (Miller, Roberts & Ommundsen, 2005). A cluster analysis on elite athletes also revealed that those in the mastery oriented group were less likely to have doped in the past and had lower intentions to dope in future (Barkoukis, Lazuras, Tsorbatzoudis & Rodafinos, in press). Therefore, from a competence and moral values perspective, advocating the creation of task-involving conditions and minimising ego-involving conditions should be encouraged (Lee *et al.*, 2008).

Although the motivational climate - moral attitude relationship seems well-established in the sport psychology literature, some studies have found that motivational climate impacted outcome variables differently at an individual level as compared to a team level (Cumming, Smoll, Smith & Grossbard, 2007; Gano-Overway, Guivernau, Magyar, Waldron & Ewing 2005; Magyar, Feltz & Simpson, 2004). This suggests that motivational climate scores derived from self-report measures are more likely to be a product of individuals' experiences rather than a team's uniform responses (Smith, Smoll & Cumming, 2009). Perhaps coaches do indeed interact differently with individual

athletes, which could be contingent on their personality differences. These results have led Horn (2008) to suggest that considerable interindividual variability of the team's motivational climate may exist within the same team, and studying individual differences among team members could offer a potential explanation for the observed differences in outcome variables at individual and team levels (Duda, 2001). In a similar vein, doping attitude and behaviour models have recognized personality traits to be one of the most salient determinants of an athlete's decision to dope (e.g., Donovan *et al.*, 2002; Petroczi & Aidman, 2008). Therefore, the study of participant personality traits could potentially provide a source of variance and should be further explored.

One personality trait which is particularly relevant in today's highly competitive sporting scene is narcissism. Numerous narcissistic traits such as arrogance, selfishness and conceit can be observed in modern day sport, where extrinsic rewards such as fame, glory and money form the main motivation for sport participation. The impact of narcissism on the relationship between motivational climate and acceptance towards cheating may also be more apparent within the youth sport environment where it has been conventional wisdom for people to assume that 'sport builds character' (Fejgin, 1994). This involves helping youth athletes in the development of moral virtues like respect, honesty and fair play. Despite this longstanding assumption of sport being beneficial to character building, there has been an increasing amount of research which showed that sport promotes the need to achieve status and to achieve this at all costs (Kleiber & Roberts, 1981; Ommundsen, *et al.*, 2003). The need for status achievement also becomes more evident as an athlete progresses through the athletic system. This is indicated by an

increasing emphasis on competitive outcomes and normative ability from elementary school and on to high school (Chaumeton & Duda, 1988). Furthermore, Shields and Bredemeier (1995) also suggested that youth athletes were more likely to take on a more egocentric and a narrower emphasis on winning especially during a game situation. These findings seem to suggest that youth athletes can be influenced by the expectations of their coach or the competitive sporting environment as a whole to adopt a more normative, egocentric view of self. This can potentially form a "breeding ground" for narcissism and thus research on this unique population of athletes who train and compete regularly at a young age would be particularly interesting.

Narcissism

According to Morf and Rhodewalt (2001) narcissism is defined as a dynamic, socially defined construct with 2 key elements: 1) a positive, inflated and agentic view of self, and 2) a self-regulatory strategy to maintain and enhance this positive self- view. The characteristics of the narcissistic self found in the literature are in line with the definition. For example, narcissists think that they are superior to others (Campbell, Rudich & Sedikides, 2002) and that they are special and unique individuals (Emmons, 1984). They have inflated self-beliefs which are reflected in the related objective measures such as intelligence, various physical tasks (Gabriel, Critelli & Ee, 1994; Wallace & Baumeister, 2002), or in the ratings of trained observers (John & Robins, 1994). Additionally, narcissists are often seen as selfish individuals since they display high levels of entitlement (Campbell, Bonacci, Shelton, Exline & Bushman, 2004), which

is especially evident when faced with resource dilemmas (Campbell, Bush, Brunell & Shelton, 2005). The narcissistic self also tends to have more agentic traits (e.g., striving for status, power, dominance and success) than communal ones (e.g., care, morality and warmth; Campbell *et al.,* 2002).

The formation of a positive self-view requires effort in a number of areas and according to the dynamic self-regulatory processing model (Morf & Rhodewalt, 2001); it is maintained and strengthened through either intrapersonal or interpersonal processes. Intrapersonal processes involve cognitive and self-evaluatory adjustments to reconcile with the positive self-view that is not being achieved. Narcissists do this mainly by providing biased interpretations of social feedback and performance outcomes (Morf & Rhodewalt, 2001), where they block out any information that undermines the preservation of their positive self-views. For example, narcissists blame the situation rather than themselves when failure is experienced (Rhodewalt & Morf, 1995).

While intrapersonal processes are cognitive, interpersonal processes take place in a social context in which narcissists are able to manipulate in order to construct or reinforce their positive self-views. However, these interpersonal self-regulations are dependent on some of the characteristics typical of narcissists in terms of how they interact with other individuals. For example, it would be relatively easy for narcissists to start a new relationship or to be relaxed in an unfamiliar social setting since they are usually extraverted individuals (Bradlee & Emmons, 1992). But due to narcissists' disinterest in emotionally warm or intimate relationships (Caroll, 1987), these newly

established relationships serve the sole purpose of enhancing their positive, inflated, and agentic self view.

Some of the tactics used by narcissists include efforts to seek attention, look good, surpass others, and defending against perceived threats (Campbell & Foster, 2006). Narcissists thrive on attention and they seek this typically by showing off, bragging about themselves, or talking in a loud exaggerated manner (Buss & Chiodo, 1991; Vangelisti, Knapp & Daly, 1990). Narcissists also try to associate themselves with other high status individuals in order to appear successful and dominant (Campbell, 1999). Another important tactic employed by narcissists would be to surpass others, which is shown to be evident from their self-reported competitiveness within a non-sport environment (Bradlee & Emmons, 1992; Emmons, 1984). This need to perform better than others is also further substantiated by narcissists' grandiose reports even after poor performance (Campbell, Goodie & Foster, 2004) and the desire to win was even greater when their performances were visible to the public (Wallace & Baumeister, 2002). Narcissists will also not hesitate to reaffirm their status and dominance among other team members and thus will be willing to exploit others in order to gain an advantage and they do this by taking credit from others when there is a good result or by blaming others when there is failure (Campbell, Reeder, Sedikides & Elliot, 2000; John & Robins, 1994). Lastly, narcissists also rigorously defend against any threats to their positive self-views and one of the ways is to become aggressive towards people who threaten, criticize or reject them (Bushman & Baumeister, 1998). This acts as a protective mechanism against any perceived efforts to harm narcissists' positive self-views.

Although the aforementioned narcissistic characteristics are found in studies conducted in non-sport domains, several of these characteristics can perhaps be observed among youth athletes. For example, narcissists in a sports setting may be constantly thinking of ways of how to project and protect their positive image and make an impression on team members and coaches. This would typically permit narcissistic athletes to get on well with other team members early on but these relationships do not last as they are likely to exploit team members in order to achieve the self-regulation of their positive self-view. One other way narcissistic athletes can regulate their positive self-views will be to attempt to impress others that they are either acquainted to or trained with a well-known sport personality. However, the regulation of a positive self-view will most probably be satisfied by the need to surpass others. This narcissistic characteristic of surpassing or performing better than others is synonymous with the competitive nature of sport and narcissistic athletes' desire to win may be even more apparent when in the presence of an audience or the coach. In essence, narcissists are unique individuals who are focused on constructing and maintaining inflated, positive, and agentic self-views. The strategies employed by narcissists to maintain these self-views might have an influence on the perceived motivational climate created by their coaches, and this might in turn alter their responses towards acceptance towards cheating.

Hypotheses

Creating a task motivational climate have allowed athletes to define achievement success through selecting challenging tasks, investing maximum effort, persisting in the face of setbacks, and taking pride in personal improvement (Ames, 1992). Like previous research linking task motivational climate to positive moral outcomes (e.g., Barkoukis *et al.*, in press; Lee, *et al.*, 2008; Miller *et al.*, 2005; Ommundsen *et al.*, 2003), low narcissists are likely to focus on achieving self-referenced performance success and as a result, are less likely to harbour attitudes towards cheating.

On the contrary, high narcissists are individuals who strive to achieve positive, agentic self-views, and are constantly searching for opportunities that can either maintain or enhance this positive self-view (Morf & Rhodewalt, 2001). Focusing on self-referenced performance may prove to be difficult for high narcissists since it provides them with a limited platform to exhibit their success. Additionally, high narcissists' inflated self-beliefs may also lead them to think that they are already too good for certain tasks, and therefore may put in less effort. High narcissists have also showed a great need to outperform others (Bradlee & Emmons, 1992; Emmons, 1984) and continue to display grandiose reports even after performing poorly (Campbell *et al.*, 2004b). Therefore, high narcissists' potential lack of effort in achieving self-referenced performance success will probably lead to underperformance under a task motivational climate.

Pressured by their unrelenting need to feel superior, dominant and successful (Campbell *et al.*, 2002), high narcissists may be more open to accepting cheating as an effort to surpass others. Thus, it is proposed that narcissism will moderate the effect of a task motivational climate such that low narcissists will show a greater decrease in acceptance towards cheating than high narcissists.

An ego motivational climate creates an environment that tends to give attention and positive reinforcement to the most competent athletes whose performances are pivotal to winning. Skill development is important but they are more geared towards winning than personal learning and improvement (McArdle and Duda, 2002). Additionally, punishments or negative reinforcement may be employed as a response to mistakes and underperformance (Smith *et al.*, 2009). High narcissists are likely to thrive under an ego motivational climate, simply because it presents more opportunities for self-aggrandizement than a task motivational climate. The significant focus on the final outcome (e.g., winning) in an ego motivational climate will lead high narcissists to perceive it as an opportunity to present themselves as a superior, special and unique (Campbell *et al.*, 2002; Emmons, 1984). Moreover, high narcissists' present a greater desire to win when their performance is visible to the public (Wallace & Baumeister, 2002). Besides performing in public, an ego motivational climate also permits high narcissists with the opportunity to seek attention and project a positive image on high status individuals (e.g., the coach; Campbell & Foster, 2006). From a high narcissist's point of view, the rewards from performing under an ego motivational climate are undoubtedly aplenty, which gives them even greater incentive to perform well. As a

result, high narcissists may indulge in a greater amount of risk-taking (Campbell *et al.*, 2004b), or resort to stealing credit or blaming others (Campbell *et al.*, 2000; John & Robins, 1994) in order to reaffirm their status and dominance within the team. Thus, it is proposed that narcissism will moderate the effect of an ego motivational climate such that high narcissists will show a greater increase in acceptance towards cheating than low narcissists.

Also important to the study of the moderating role of narcissism on motivational climate are the main effects of narcissism on acceptance towards cheating. High narcissists have been found to set aside ethical norms to maintain their positive, inflated self-views (Brunell, Staats, Barden & Hupp, 2011). One of the most telling examples of this is the susceptibility for narcissists to cheat (Brown, Budzek & Tamborski, 2009; Brunell *et al.*, 2011). This is because high narcissists are less likely to experience guilt (Campbell, Foster & Brunell, 2004), which may correspond to an increased level of acceptance towards cheating. Therefore, it is also hypothesized that there will be significant main effects for both motivational climate conditions and narcissism on acceptance towards cheating.

Method

Participants

198 student-athletes from a Singapore sports academy (128 male and 70 female) aged between 12-17 years (mean = 13.23 ± 1.21) were randomly recruited from a range

of sports. The selected athletes were participating in either team (e.g., football and netball) or individual sports (e.g., golf and athletics). The ethnic composition of the sample comprised of Chinese (42.4%), Malay (19.9%), Indian (4.3%), Mixed (2.9%) and Others (2.2%). Only athletes who had previously competed in at least national level were considered for this study (International = 13.1%; regional = 29.3%; and national = 57.6%).

Procedure

Institutional approval was obtained for this study. The details of the study were explained to the relevant managers and coaches for their approval. This included information on the confidentiality of the results. The athletes were then approached to complete a questionnaire pack during the off season in September. Informed consent was provided either by parents, or academy managers acting *in loco parentis*, where appropriate.

Prior to the administration of the questionnaire pack, a verbal description of the study was provided by the primary researcher. Information sheets were then handed out to the athletes, which informed them of the right to withdraw from the study at any point and that all the information provided by the athletes would be kept strictly confidential. The athletes were encouraged to respond to the items as honestly as possible and that there were no right or wrong answers. The primary researcher was on-site during the

administering of the questionnaire pack in order to clarify any queries the athletes might have had.

The questionnaire pack administered consisted of three measures: Motivational Climate Scale for Youth Sports (MCSYS; Smith, Cumming & Smoll, 2008), Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979; Raskin & Terry, 1988), and the 'Acceptance Towards Cheating' subscale of the Attitudes to Moral Decision-making in Youth Sport Questionnaire (AMDYSQ; Lee, Whitehead & Ntoumanis, 2007). The measures were arranged in a counterbalanced sequence in order to minimise the occurrence of common method variance.

Measures

Perceived Motivational Climate

Perceived motivational climate was measured using the MCSYS (Smith *et al.*, 2008). Both mastery climate and ego climates are determined by six items responding to each of the subscales. An example of an item responding to mastery climate will be 'My coach told us that trying our best is the most important thing', while an example of an item responding to ego climate will be 'Winning games was the most important thing for coach'. The responses are indicated on a 5-point Likert scale which range from 1 (not at all true) to 5 (very true). Although measures like the Perceived Motivational Climate in Sport Questionnaire 2 (PMCSQ-2; Newton, Duda & Yin, 2000) are more widely used in sport motivational climate research, the relatively young age of the current sample of

athletes required a measure that is more focused on measuring responses derived from a youth sport population. Specially designed for youth sport samples, the items in the MCSYS averaged 3.30 on the Flesch-Kincaid reading grade level, which corresponds to the reading level of an eight year old. It has been used in previous research with youth sport populations ranging from 9-17 years (e.g., McDonald, Cote & Deakin, 2010; Smith *et al.*, 2008). More notably, the MCSYS was deemed to have an adequate model fit for the sample consisting of athletes aged 12-14 years old, $\chi^2/df = 1.64$, RMSEA = 0.06, CFI = 0.94 and GFI = 0.93 (Fan, Thompson & Wang, 1999), with reported factor loadings ranging from 0.58 to 0.86 for the mastery climate subscale and from 0.51 to 0.76 for the ego climate subscale (Smith *et al.*, 2008). In the current study, both subscales seem to show acceptable internal consistency, since alpha coefficients for mastery and ego climates are above the set criterion of 0.70 (mastery = 0.85; ego = 0.74; Nunally, 1978).

Narcissism

The 40-item version of the NPI (Raskin & Hall, 1979; Raskin & Terry, 1988) was used to measure narcissism. The NPI is a forced choice measure where each of the items consisted of one narcissistic and one non-narcissistic statement. The required responses to the items are to be made by selecting either one of the two statements. An example of the two statements in an item is: 'I prefer to blend in with the crowd' and 'I like to be the centre of attention'. Although the NPI (Raskin & Terry, 1988) was categorised into seven subscales: authority, self-sufficiency, superiority, exhibitionism, exploitativeness, vanity and entitlement, a global score of the NPI was used in order to distinguish between high narcissists and low narcissists in this study. The full scale of the NPI was shown to be

internally consistent (α = 0.83), with negligible age and gender effects (Raskin & Terry, 1988). Similarly, the NPI used in this study was also found to be internally consistent (α = 0.77), which was above the set criterion of 0.70. Additionally, the NPI has been used widely in research examining sub-clinical narcissistic populations (e.g., Wallace & Baumeister, 2002) and participants of a similar age group were also administered with the same measure in previous studies (e.g., Washburn, McMahon, King, Reinecke & Silver, 2004).

Acceptance of Cheating

Acceptance of cheating was measured using the 3-item Acceptance of Cheating subscale in the AMDYSQ. Responses were made on a five point Likert scale ranging from 1 (Strongly agree) to 5 (Strongly disagree). Although the subscale has only three items, they represent different characteristics of cheating as defined by Reddiford (1998). For example, the item 'I would cheat if I thought it would help me win' measures responses based upon Reddiford's (1998) first characteristic of cheating, that of making illegitimate gains. The subscale is considered to be internally consistent, with an alpha coefficient of 0.73 (Lee *et al.*, 2007). The alpha coefficient is 0.94 in the current study.

Statistical Analysis

Moderated hierarchical regression analysis is used to test the effects of Perceived motivational climate and narcissism on athletes' acceptance towards cheating. The independent variables are entered hierarchically in a three-step process, in order to test

for the hypothesized effects of narcissism on the motivational climate – athlete acceptance towards cheating relationship. Steps 1 and 2 of the regression are to enter motivational climate and narcissism respectively as main effects. The motivational climate X narcissism interaction is then entered into step 3 of the regression. In accordance to the recommendations of West and Aiken (1991), both motivational climate and narcissism scores were centred prior to the regression analyses. Although the narcissism scores measured by the NPI have been found to be negligibly correlated with gender (Raskin & Terry, 1988), there is also evidence suggesting that males score higher in narcissism scales than females (Tschanz, Morf & Turner, 1998). In order to address the potential gender differences on the narcissism scores, the z-scores for narcissism were derived by standardizing the narcissism scores according to gender.

Results

Descriptive Statistics

Descriptive statistics were computed for all the variables in this study and are presented in Table 1. In general, the results showed that this sample of athletes scored moderately high in their perceptions of task-involving motivational climate, while scores for their perceptions of ego-involving motivational climate were moderate. On average, the athletes expressed a moderately low level of narcissism, while their acceptance towards cheating was low.

Internal Consistency

Internal consistencies of the various measures were assessed to determine scale reliability. Alpha coefficients (Cronbach, 1951) for the variables are presented in Table 1. Both the task and ego subscales of the MCSYS were deemed to be internally reliable, since the coefficients exceeded the criterion of 0.70 set for the psychological domain (Nunally, 1978). Previous studies using the MCSYS also yielded similar alpha coefficient values (Cumming *et al.*, 2008). Similarly, both the NPI and acceptance towards cheating scale employed in this study reported alpha coefficients which were greater than 0.70, and were thus deemed as internally reliable.

Zero Order Correlations

As shown in Table 1, there were non-significant relationships between task and ego motivational climate. In addition, both task and ego motivational climate were not significantly correlated to acceptance towards cheating. However, narcissism scores were found to have a positive relationship, albeit weak ones, with ego motivational climate ($r = 0.20$, $p < 0.01$) and acceptance towards cheating ($r = 0.20$, $p < 0.01$).

Table 1. Descriptive Statistics, Cronbach's Alphas and Zero Order Correlations for Motivational Climate, Narcissism and Athletes' Acceptance towards Cheating

					Zero Order Correlations		
	Variable	Sum	SD	α	Task	Ego	Narcissism
Motivational Climate							
1	Task	23.78	4.35	.85	-		
2	Ego	16.77	4.92	.74	.05	-	
Narcissism		12.88	5.97	.80	.10	.20**	-
Acceptance towards cheating		4.35	2.25	.94	-.03	.10	.20**

** $p < .01$

Note: Task-involving motivational climate (range: 6 – 30); Ego-involving motivational climate (6 – 30); Narcissism (0 – 40); Athletes' acceptance towards cheating (3 – 15).

In summary, the data revealed that on average, athletes perceived their coaches to create a moderately high task-involving and moderate ego-involving motivational climate. This corresponded with low levels of athlete satisfaction, while the athlete population measured was moderately low in narcissism.

Additionally, the measures employed in this study seem to be reliable for measuring responses in a youth sport environment. However, the non-significant correlation between task and ego motivational climates is incongruent with previous research where a significant but negative correlation is exhibited (Newton *et al.*, 2000; Smith *et al.*, 2008).

The hypotheses of this study predicted that narcissism would moderate the relationship between motivational climate and acceptance towards cheating; and to significantly and independently account for variance of acceptance towards cheating once motivational climate was accounted for. The results revealed that narcissism did not moderate the relationship between motivational climate (task and ego) and athletes' acceptance towards cheating. Additionally, non-significant main effects were observed for task and ego motivational climates. However, narcissism accounted significant variance in acceptance towards cheating in both task and ego conditions of motivational climate.

Task Motivational Climate and Narcissism

Task motivational climate was entered in step 1 of the moderated hierarchical regression to obtain the main effects for that variable. Narcissism was added subsequently in step 2 to find out if it contributed independently to acceptance towards cheating when task motivational climate had already been accounted for. Step 3 then tested the interaction effects of both task motivational climate and narcissism. This was to

find out if narcissism significantly moderated the relationship between task motivational climate and acceptance towards cheating. Thus, from Table 2, a non-significant main effect was observed in step 1 for task motivational climate and a significant main effect was observed in step 2 for narcissism. Narcissism added significantly (4%) towards the amount of variance explained Step 3 of the analysis revealed a non-significant interaction between task motivational climate and narcissism upon acceptance towards cheating.

Table 2. Results of Moderated Hierarchical Regression: Effects of Task Motivational Climate, Narcissism, and Interaction upon Acceptance towards Cheating (n = 198)

Variable entered	R^2	ΔR^2	ΔF	df	β	t
Step 1						
Task Motivational Climate	.00	.00	.50	1, 196	-.15	-.92
Step 2						
Narcissism	.04	.04**	7.78	1, 195	.44	2.73**
Step 3						
Task Motivational Climate X Narcissism	.04	.00	.16	1. 194	.07	.39

** $p < .01$

Note: All variables standardized except for product term. Product term was formed from the two preceding (standardized) variables.

Ego Motivational Climate and Narcissism

Moderated hierarchical regression was employed to test the hypothesis that narcissism will moderate the relationship between ego motivational climate and acceptance towards cheating. Ego motivational climate was entered in the first step of the

regression, followed by narcissism in the second step. The interaction variable of narcissism and ego motivational climate was entered in the third and final step of the regression. Table 3 presented non-significant main effect for ego motivational climate and a significant main effect for narcissism. Narcissism contributed significantly (3%) to the amount of variance explained. The interaction between ego motivational climate and narcissism did not significantly add towards explaining the variance of acceptance towards cheating.

Table 3. Results of Moderated Hierarchical Regression: Effects of Ego Motivational Climate, Narcissism, and Interaction upon Acceptance towards Cheating (n = 198)

Variable entered	R^2	ΔR^2	ΔF	df	β	t
Step 1						
Ego Motivational Climate	.01	.01	1.27	1, 196	.13	.78
Step 2						
Narcissism	.04	.03*	6.69	1, 195	.40	2.50*
Step 3						
Ego Motivational Climate X Narcissism	.04	.00	.54	1. 194	.11	.73

* $p < .05$

Note: All variables standardized except for product term. Product term was formed from the two preceding (standardized) variables.

Overall, only significant main effects were observed for narcissism in both task and ego conditions of motivational climate. Task and ego motivational climate and their respective interactions with narcissism derived non-significant effects.

Discussion

The current study investigated whether motivational climate and narcissism predicted acceptance towards cheating and whether narcissism moderated the relationship between motivational climate and acceptance towards cheating. The results showed that motivational climate was not associated to acceptance towards cheating. However, narcissism did demonstrate significant relationships with acceptance towards cheating in both motivational climate conditions. The primary hypothesis that narcissism will moderate the relationship between motivational climate and acceptance towards cheating was however, not supported. Overall, it is clear that examining personality traits such as narcissism does help to advance the knowledge on the psychological mechanisms responsible for youth athletes' acceptance towards cheating. The results also demonstrated a lack of support for the effects of motivational climate on acceptance towards cheating, which adds further weight to the current paradoxical outcomes that are visible in the literature between achievement motivation and moral outcomes.

Narcissism

The current research partially succeeded in answering calls for the inclusion of personality traits in the study of both achievement motivation and anti-doping research (Donovan *et al.*, 2002; Duda, 2001; Petroczi & Aidman, 2008). Besides highlighting the importance of personality traits, the significant main effect of narcissism also further substantiated the currently well-established relationship between cheating and narcissism

(Brown *et al.*, 2009; Brunell *et al.*, 2011), for the first time in a sport domain. Although narcissism significantly predicted acceptance towards cheating, there have also been other studies, albeit in the academic domain, which demonstrated findings that showed otherwise (Cizek, 1999). One of the most probable reasons could be that individuals make judgements, decisions and behaviours through not only their beliefs and attitudes, but also by how they interpret and respond to relevant information (von Hippel, Lakin & Shakarchi, 2005). For example, Brown *et al.* (2009) found narcissism to be associated with rationalised cheating, which does not qualify as explicit cheating but of a cheating that is reasoned and interpreted as something other than cheating (von Hippel *et al.*, 2005). Thus, if an environmental setting considers cheating as a social norm, the intention for an athlete to cheat may be rationalised as something that is commonly practiced and hence should be considered as a legitimate 'training aid' instead of cheating. This provides a potential explanation for Shields and Bredemeier's (1985) observation that a major factor affecting one's moral judgement and consequent moral behaviour in sport originates from the moral atmosphere of the team.

In the Acceptance towards Cheating subscale of the AMDYSQ used in the current study, one of the items "If other people are cheating, I think I can too" was included because it conjured responses that were deemed by Lee *et al.* (2007) as 'central to research on moral atmosphere'. This is despite the item going beyond the boundaries set by Reddiford's (1998) definition of cheating. Including this particular item together with the other two which were based on Reddiford's (1998) categorisation, provided a more complete measure of acceptance towards cheating. This may have led to the significant

prediction of narcissism on acceptance towards cheating in the current study and merits consideration for inclusion in future studies.

Perceived Motivational Climate

The current study attempted to address the need to consider interindividual variability (Duda, 2001; Smith *et al.*, 2009) by hypothesizing that narcissism will moderate the effects of motivational climate. While it is clear from the current results that narcissism possessed potential in influencing the motivational climate – acceptance towards cheating relationship, there remain factors related to motivational climate that could have influenced the results of the current study.

Conceptualised as a situational construct of achievement goal theory, motivational climate provides a heavy influence on athletes' perception of achievement success (Ames, 1992). Motivational climates were assumed to be orthogonal in nature (Horn, 2008), and influenced athletes through either task or ego involving environments, with each climate focused on different aspects of achievement. This assumption on motivational climate was applied in the current experimental design, but did not demonstrate the hypothesized outcome. Contrary to Horn's (2008) assumption on the nature of task and ego motivational climate, Boixados *et al.* (2004) demonstrated that both task and ego motivational climates could be created within a team. Since task and ego initiating behaviours displayed by the coach are posited to be incompatible with each other, and are reflected by negative correlations (Duda, 2001), the non-significant correlations between

task and ego motivational climate conditions observed in the current study further supports Boixados *et al.*'s (2004) finding that both motivational climates can be promoted together.

Further substantiation for the promotion of both motivational climates can be derived from the premise that attitudes express certain values (Katz, 1960) and these attitudes can reflect values that oppose each other (Lee *et al.*, 2008). More specifically, Lee *et al.* (2008) demonstrated that both prosocial and antisocial attitudes can reflect more than one value, and they can be either moral or non-moral. In the current context, one's attitude towards cheating may be influenced by the values resulting from both task and ego motivational climate characteristics, thus lending further support to the promotion of both motivational climates in sport.

From an anti-doping research perspective, it has been shown that most youth athletes viewed doping as cheating and that the incidence of doping increases with age (Laure *et al.*, 2004; Melia *et al.*, 1996). Backhouse *et al.* (2007) reviewed that youth athletes disapproved of doping in sport and their self-reported attitude was negative. In addition, youth athletes displayed generally favourable ethical attitudes in a study conducted by Lee *et al.* (2008). These findings reflecting youth athletes' attitudes towards moral outcomes suggest that moral values are high amongst young athletes. In addition, the low sum and standard deviation of acceptance towards cheating scores (4.35 ±2.25) in the current study implies that most youth athletes in this sample highly disapproved of cheating, which is further indication of youth athletes' high moral values. Drawing

reference from Katz's (1960) theorised value-expressive function of attitudes, strong moral values of the youth athletes may have reflected an attitude that is disapproving of cheating, even though an ego motivational climate, which promotes high status values, may have reflected an attitude that is not in acceptance towards cheating. Therefore, the absence of the hypothesised main effect for motivational climate on acceptance towards cheating may be due to the high moral values that are synonymous with youth athletes.

In an operational sense, the support structure of youth sport development in a sport academy setting creates a unique youth sport system that is made up of a team of sport professionals working together to drive athlete development. While the coach remains an important figure in influencing the definition of achievement success, other supporting members like teachers, parents, sport scientists, and fellow athletes may contribute significantly to the overall motivational climate under which athletic ability is developed. For example, besides the coach, one of the most influential groups that can affect changes in a youth athlete's definition of achievement motivation will be their peers. Research on the effects of peers on youth athletes' motivation in sport have found peer influenced motivational climate to significantly influence youth athletes' overall motivational climate (Ntoumanis & Vazou, 2005; Vazou, Ntoumanis & Duda, 2006) . However, how peers and significant others within the athlete's developmental environment contribute towards (or cancel out) coach influenced motivational climate remains speculative and warrants future research.

Limitations

Despite finding partial support for the proposed hypotheses, there remain a few limitations which may go towards explaining why the results did not reflect the hypotheses defined in the current study, namely the non-significant moderating effect of narcissism on motivational climate.

According to social desirability theory (Crowne & Marlow, 1960), collecting responses that are deemed as socially undesirable may lead to an eventual misrepresentation of the final outcome. Since a potentially contentious scale (acceptance towards cheating) was ultilised in the current study, there remains a possibility that the participants may have interpreted cheating as socially undesirable and in turn underreported responses to the according items. Other studies ultilising self-report methods to obtain potential socially undesirable responses have acknowledged that social desirability and biases in self-presentation can influence the accuracy of the data collected (Backhouse *et al.*, 2007; Gucciardi, Jalleh & Donovan, 2010).

Although previous studies employing the AMDYSQ have yielded non-significant effects of social desirability (Lee *et al.*, 2007; 2008), and thus offer support to the accuracy of the results in the current study, potential self-presentation biases that are unique to the current context of the study may suggest otherwise. These speculated self-presentation biases originate from the study of narcissism in the current study. Although narcissists may be more susceptible to cheating (Brunell *et al.*, 2011) and show less guilt

while doing so (Campbell, Foster & Brunell, 2004), narcissists are known to be more concerned about self-enhancement (Campbell *et al.*, 2000; John & Robins, 1994), and will take advantage of opportunities that permits self-enhancement (Wallace & Baumeister, 2002). Narcissists also like to consider themselves as superior to others (Campbell *et al.*, 2002) and will not hesitate to exhibit their superiority to others (Rose & Campbell, 2004). The aforementioned narcissistic traits may lead high narcissists to underreport responses to acceptance towards cheating, in order to protect their image of superiority. Even though narcissists have vindicated their motive to cheat in order to self-enhance, reporting high scores for cheating will expose to others that their achievements have all been a result of cheating. This poses a threat to narcissists' agentic self-views and are not willing to risk it by responding truthfully to the acceptance towards cheating scale.

To minimise the potential effects of social desirability or self-presentation biases, future studies can explore collecting data via the employment of online questionnaires. Online surveys were found to reveal significantly more positive attitudes towards doping than compared to responses recorded in hardcopy (Moran *et al.,* 2008). This could have been due to the perception that an online survey offered greater anonymity than the traditional responses on hardcopy, which may have led participants to be more forthcoming in their responses.

In summary, the current study supports the recommendations to examine the role of athlete personality traits and its effects in both achievement motivation and morality in

sport research, in particular narcissism. Although narcissism did not moderate the relationship between motivational climate and acceptance towards cheating, several considerations associated with the current study have been identified and discussed. This helped to clarify to some degree the role of narcissism and motivational climate behind the mechanisms effecting acceptance towards cheating.

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Appendix Contents

Inventories and questionnaires

Data, results and analyses

Appendix A

Personal Information

Name:_____

Date of Birth: _____/_____/_____ (dd/mm/yyyy)

Gender: Male Female (Please circle)

Ethnicity: (please circle) Chinese, Malay, Indian, Eurasian, White,
Other (please state): _____

How many years have you engaged in your sport: _____ Years

How long have you been a member of your current team: ____ Years _____ Month

What is the highest competitive level that you have competed:_____

PART A

Here are some statements about what your current team is like. Please read each one and **circle the number that is most correct.** If there was more than one coach on your team, the questions are about the coach that you spend most of your time with.

		Not at all true		**Somewhat true**		**Very true**
1	Winning games was the most important thing for coach	1	2	3	4	5
2	Coach made players feel good when they improved a skill	1	2	3	4	5
3	Coach spent less time with the athletes who weren't as good	1	2	3	4	5
4	Coach encouraged us to learn new skills	1	2	3	4	5
5	Coach told us which athletes on the team were the best	1	2	3	4	5
6	Coach told us to help each other get better	1	2	3	4	5
7	Coach told us that trying our best was the most important thing	1	2	3	4	5
8	Coach paid most attention to the best players	1	2	3	4	5
9	Coach said that teammates should help each other improve their skills	1	2	3	4	5
10	Athletes were taken out of games if they made a mistake	1	2	3	4	5

11	The coach said that all of us are important to the team's success	1	2	3	4	5
12	Coach told us to try to be better than our teammates	1	2	3	4	5

Appendix B

PART B

Please read each pair of statements and then choose the one that is closer to your own feelings and beliefs. Indicate your answer by circling either the letter "A" or "B" to the left of each item. Please do not skip any items. Please note that there are no right or wrong answers and your responses will be treated in the strictest confidentiality.

1	A	I have a natural talent for influencing people
	B	I am not good at influencing people

2	**A**	**Modesty doesn't become me**
	B	**I am essentially a modest person**

3	A	I would do almost anything on a dare
	B	I tend to be a fairly cautious person

4	**A**	**When people compliment me I sometimes get embarrassed**
	B	**I know that I am good because everybody keeps telling me so**

5	A	The thought of ruling the world frightens the hell out of me
	B	If I ruled the world it would be a much better place
6	**A**	**I can usually talk my way out of anything**
	B	**I try to accept the consequences of my behaviour**

7	A	I prefer to blend in with the crowd
	B	I like to be the centre of attraction

8	**A**	**I will be a success**
	B	**I am not too concerned about success**

9	A	I am no better or no worse than most people
	B	I think I am a special person

10	**A**	**I am not sure if I would make a good leader**
	B	**I see myself as a good leader**

11	A	I am assertive
	B	I wish I were more assertive

12	**A**	**I like having authority over people**
	B	**I don't mind following orders**

13	A	I find it easy to manipulate people

	B	I don't like it when I find myself manipulating people

14	**A**	**I insist upon getting the respect that is due to me**
	B	**I usually get the respect that I deserve**

15	A	I don't particularly like to show off my body
	B	I like to show off my body

16	**A**	**I can read people like a book**
	B	**People are sometimes hard to understand**

17	A	If I feel competent I am willing to take responsibility for making decisions
	B	I like to take responsibility for making decisions

18	**A**	**I just want to be reasonably happy**
	B	**I want to amount to something in the eyes of the world**

19	A	My body is nothing special
	B	I like to look at my body

20	**A**	**I try not to be a show off**
	B	**I will usually show off if I get the chance**

21	A	I always know what I am doing
	B	Sometimes I am not sure of what I am doing

22	**A**	**I sometimes depend on people to get things done**
	B	**I rarely depend on anyone else to get things done**

23	A	Sometimes I tell good stories
	B	Everybody likes to hear my stories

24	**A**	**I expect a great deal from other people**
	B	**I like to do things for other people**

25	A	I will never be satisfied until I get all that I deserve
	B	I take my satisfactions as they come

26	**A**	**Compliments embarrass me**
	B	**I like to be complimented**

27	A	I have a strong will to power
	B	Power for its own sake doesn't interest me

28	**A**	**I don't care very much about new fads and fashions**
	B	**I like to start new fads and fashions**

29	A	I like to look at myself in the mirror
	B	I am not particularly interested in looking at myself in the mirror

30	**A**	**I really like to be the centre of attention**
	B	**It makes me uncomfortable to be the centre of attention**

31	A	I can live my life in any way I want to
	B	People can't always live their lives in terms of what they want

32	**A**	**Being an authority doesn't mean that much to me**
	B	**People always seem to recognise my authority**

33	A	I would prefer to be a leader
	B	It makes little difference to me whether I am a leader or not

34	**A**	**I am going to be a great person**
	B	**I hope I am going to be successful**

35	A	People sometimes believe what I tell them
	B	I can make anyone believe anything I want them to

36	**A**	**I am a born leader**
	B	**Leadership is a quality that takes a long time to develop**

37	A	I wish somebody would someday write my biography
	B	I don't like people to pry into my life for any reason

38	**A**	**I get upset when people don't notice how I look when I go out in public**
	B	**I don't mind blending into the crowd when I go out in public**

39	A	I am more capable than other people
	B	There is a lot that I can learn from other people

40	**A**	**I am much like everybody else**
	B	**I am an extraordinary person**

Appendix C

PART C

Directions: Please read each of the statements listed below and indicate how much you personally agree with each statement by circling the appropriate response.

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I would cheat if I thought it would help me win.	1	2	3	4	5
2	It is OK to cheat if nobody knows.	1	2	3	4	5
3	If other people are cheating, I think I can too.	1	2	3	4	5

Thank you for completing this questionnaire.

Appendix D

MCSYS Reliability Analysis

Task Motvational Climate

Reliability Statistics

Cronbach's Alpha	N of Items
.849	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Coach made players feel good when they improved a skill	19.8788	15.214	.490	.848
Coach encouraged us to learn new skills	19.7475	13.814	.630	.824
Coach told us to help each other get better	19.9798	12.690	.730	.804
Coach told us that trying our best was the most important thing	19.4747	14.108	.603	.829
Coach said that teammates should help each other improve their skills	20.0404	12.739	.705	.809
The coach said that all of us are important to the team's success	19.7929	12.703	.641	.824

Appendix D

Ego Motivation Climate

Reliability Statistics

Cronbach's Alpha	N of Items
.740	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Winning games was the most important thing for the coach	13.7525	17.923	.500	.697
Coach spent less time with the athletes who weren't as good	14.2525	16.738	.594	.669
Coach told us which athletes on the team were the best	13.6818	17.061	.518	.691
Coach paid most attention to the best players	14.1515	17.226	.568	.678
Athletes were taken out of games if they made a mistake	14.1869	17.412	.446	.713
Coach told us to try to be better than our teammates	13.8384	19.933	.255	.762

Appendix E

Acceptance towards cheating reliability analysis

Reliability Statistics

Cronbach's Alpha	N of Items
.941	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I would cheat if I thought it would help me win.	2.9091	2.418	.853	.934
It is OK to cheat if nobody knows.	2.9242	2.314	.918	.884
If other people are cheating, I think I can too.	2.8737	2.243	.867	.925

Appendix F
Participant Frequencies Data

Statistics

		Age	Time with team
N	Valid	198	198
Mean		13.2323	1.5556
Median		13.0000	1.0000
Minimum		12.00	.42
Maximum		17.00	7.00

Gender

		Frequency	Percent
Valid	male	128	64.6
	female	70	35.4
Total		198	100.0

Race

		Frequency	Percent
Valid	chinese	117	59.1
	malay	55	27.8
	indian	12	6.1
	mixed	8	4.0
	others	6	3.0
Total		198	100.0

Level

		Frequency	Percent
Valid	nationals	114	57.6
	regional	58	29.3
	international	26	13.1
Total		198	100.0

Age

		Frequency	Percent
Valid	12.00	71	25.7
	13.00	48	17.4
	14.00	57	20.7
	15.00	8	2.9
	16.00	12	4.3
	17.00	2	.7
Total		198	100.0

Time with Team

		Frequency	Percent
Valid	0.42	1	.5
	0.83	62	31.3
	0.97	2	1.0
	1	11	5.6
	1.25	1	.5
	1.42	1	.5
	1.75	2	1.0
	1.83	36	18.2
	2	4	2.0
	2.25	1	.5
	2.75	2	1.0
	2.83	37	18.7
	2.92	2	1.0
	3	10	5.1
	3.42	1	.5
	3.5	1	.5
	3.83	13	6.6
	3.92	1	.5
	4	5	2.5
	4.67	1	.5
	5	1	.5
	5.33	1	.5
	7	2	1.0
Total		198	100.0

Sport

		Frequency	Percent
Valid	badminton	16	8.1
	bowling	38	19.2
	swimming	14	7.1
	track	60	30.3
	triathlon	2	1.0
	golf	18	9.1
	netball	11	5.6
	football	39	19.7
Total		198	100.0