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Perfectionism and Perceptions of Social Loafing in Youth Soccer Players

by

Matthew Vaartstra

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Abstract

This study examined the relationships between multidimensional perfectionism and perceptions of social loafing in sport among a sample of 162 female and 54 male youth soccer players (*M* age = 15.25 years; *SD* = .63). Participants completed a measure of perfectionism in sport and two self-report measures of perceived social loafing in sport. Canonical correlation analysis revealed a profile of maladaptive perfectionism that was positively correlated (R_{C1} = .35) with athletes' tendencies to (a) believe that teammates socially loafed, and (b) be more accepting/approving of social-loafing behaviours in training. A second canonical function revealed a profile of adaptive perfectionism that was positively correlated (R_{C2} = .30) with athletes' tendencies to (a) believe that teammates socially loafed, and (b) be less accepting/approving of social-loafing behaviours in training. Results reinforce the need to consider personality as an important variable when examining factors that potentially influence social loafing in sport.

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Introduction

Social Loafing

Social loafing has been defined as the reduction in a person's motivation and effort that occurs when an individual works collectively on a task compared to when the same person works alone or coactively on the task (Karau & Williams, 1993). Stated differently, social loafing occurs when individuals put forth less effort when working with others on a task than when working alone on a task (Latané, Williams, & Harkins, 1979). This reduction in effort in team or group settings (when maximum individual effort is expected) can have debilitating effects upon group performance. Indeed, in the context of team sports where team members are trusting that all teammates are giving maximum effort towards the achievement of the team's goals, social loafing can be particularly problematic and can seriously undermine a team's chances of competitive success (Hardy, 1990). Understanding factors that can influence social loafing in sport is therefore an important research endeavor in applied sport psychology where a primary goal of researchers and practitioners is to find ways to maximize athletic performance whether at the individual or team level.

Social loafing research stems from the original (unpublished) experiments of the German researcher, Ringelmann (~1927), who observed that collective group performance was usually inferior to the sum of individual performances on a rope-pulling task (Ingham, Levinger, Graves, & Peckham, 1974). More specifically, the sum of individual performances (in terms of force exerted during

the individual rope pull) was greater than the sum of the group's performance (i.e., when individuals pulled collectively on the rope at the same time). Ringelmann observed that as group size increased, there was a decrease in the group's actual performance compared to its potential performance (i.e., as measured by the sum of individual performances). This drop in group performance was believed to represent a decrease in personal effort that occurred when group size increased and was subsequently labelled the Ringelmann Effect. Unfortunately, the degree to which Ringlemann's study shed light on social loafing was somewhat limited because the design of the study did not allow researchers to differentiate between drops in performance caused by reduced motivation to work hard (i.e., reduced effort) and drops in performance caused by coordination difficulties (i.e., decreased performance due to participants having problems coordinating their efforts with other participants who were simultaneously performing the task: Ingham et al., 1974). To examine decreases in performance (effort) during group tasks that were caused by motivation losses (i.e., social loafing), Latané et al. (1979) replicated the Ringelmann Effect but controlled for potential losses in performance that may have been caused by coordination difficulties.

Latané and colleagues (1979) used a shouting task and measured the work output of sound generation (in dynes) among a sample of college-age males. In order to control for decreased performance (i.e., a drop in sound production) due to coordination loss, Latané et al. blindfolded participants and used headphones that played the same recording of people shouting during every trial so that

participants could neither hear nor see one another during the shouting task. The researchers informed participants that they were either shouting alone or shouting as part of a group. However, participants were unaware that they were actually shouting alone when they had been informed that they were shouting as part of a group. Latané et al. were therefore able to measure sound production levels without interference from potential coordination difficulties that may have existed among participants. Consequently, any observed decreases in performance (i.e., sound production by an individual) that occurred when participants thought they were performing as part of a group were due entirely to reduced effort caused by a loss in the individual's motivation to shout as loudly as possible (i.e., social loafing). The results indicated that participants' individual performances (i.e., sound production when they thought they were shouting alone) were greater than when they thought they were shouting as part of a group. This decreased performance/effort in the "pseudo-group" setting reflects social loafing.

Research has shown that social loafing is a robust and pervasive phenomenon that negatively impacts performance (i.e., effort) in a host of social/performance settings (Hardy, 1990; Karau & Williams, 1993; Latané et al., 1979). Debilitated performance (i.e., decreases in effort) due to social loafing has been found in physical tasks such as running (Swain, 1996), rowing (Anshel, 1995; Hardy & Crace, 1991), swimming (Williams, Nida, Baca, & Latané, 1989), rope-pulling (Ingham et al., 1974), and shouting/clapping (Latané et al., 1979; Hardy & Latané, 1988), as well as cognitive tasks such as signal detection (Harkins & Petty, 1982), brainstorming (Harkins & Petty, 1982), and target

identification (Brickner & Wingard, 1988). Researchers agree that the reduction in effort due to social loafing hinders group performance (because giving maximal effort is usually a central aspect of successful group/team performance), which led Latané and colleagues (1979) to suggest that social loafing is a type of social disease that negatively impacts performance for individuals, social institutions, and society at large.

A number of reasons have been proposed to explain why individuals socially loaf. One explanation proposes that individuals socially loaf in an effort to avoid the possibility of taking personal blame for group failure (Karau & Williams, 1993). Commonly referred to as "hiding in the crowd," the process of blame avoidance involves a decrease in personal effort that is designed to help the individual avoid or reduce personal blame for group (or personal) failure. In other words, the individual attempts to decrease personal identifiability within the group when group or personal failure is anticipated thereby making it harder for onlookers or group members to single out the individual (who is hiding in the crowd) as being responsible for the group's failure on the task (Karau & Williams, 1993).

Theorists have also proposed that individuals decrease their personal effort in group settings/tasks in an attempt to save effort for a future task when the individual knows that he/she will be acting alone or acting in a high-identifiability situation where maximum social benefit (e.g., recognition or praise) can be attained (Hardy, 1990). This latter strategy is labelled as "effort management" and may be a strategy used by performers whose self-worth is contingent upon

receiving praise or recognition from the social environment. Other potential reasons that have been proposed in the literature to explain social loafing include "effort matching" (where individuals lower their effort level to match that of other less-hard-working members of the group), getting "lost in the crowd" (where individuals lower their effort level because they do not feel they can receive due credit for group success), and the "free-rider effect" (where individuals allow other members of the group to do the work because there is a belief that group success can be obtained without the individual's contribution/effort on the task: see Karau & Williams, 1993, for a full review).

The focus of many social loafing studies (e.g., Hardy & Crace, 1991; Høigaard, Tofteland, & Ommundsen, 2006; Williams et al., 1989) has been aimed at finding ways to reduce or eliminate the effects of social loafing in group settings (Karau & Williams, 1993). This research has led to the identification of a number of factors that can potentially reduce or eliminate social loafing in group settings (for detailed reviews see Hardy, 1990; Karau & Williams, 1993). The most common methods that have been proposed to decrease social loafing are (a) to make individual performance more identifiable in a group setting (which increases the potential for evaluation: Harkins, 1987; Williams, Harkins, & Latané, 1981; Williams et al., 1989), (b) convince performers that their individual input is indispensible (and therefore valued) for successful group outcome (Harkins & Petty, 1982; Kerr, 1983; Kerr & Bruun, 1983), and (c) increase individual perceptions of task importance and meaningfulness (Brickner, Harkins, & Ostrom, 1986; Harkins & Petty, 1982; Zaccaro, 1984).

A small number of studies have recently examined the role that personality might play in the social-loafing process. For example, conscientiousness—a Big 5 personality trait characterized by reliability, self-discipline, and perseverance (McCrae & Costa, 1987)—has been linked to social loafing in a number of studies. Tan and Tan (2008) reported a significant negative correlation (r = -.27) between conscientiousness and social loafing in an undergraduate management class where students were asked to rate their own social-loafing tendencies over a semester while working as part of a group on a class task. Similarly, Boneh and Koslowsky (2010) reported a significant negative correlation (r = -.36) between conscientiousness and social loafing in a sample of undergraduate students who were asked to rate their group members' social-loafing tendencies (all scores for each member were then averaged for an individual social-loafing score). A similar relationship was reported by Ferrari and Pychyl (2012) who obtained a significant negative correlation (r = -.31) between conscientiousness and social loafing in undergraduate psychology students who were asked to rate their study-partner's social-loafing tendencies. It appears that increased conscientiousness may play a role in decreasing one's tendency to engage in social-loafing behaviours.

Another personality characteristic that has been associated with social loafing is Protestant Work Ethic (PWE). Protestant work ethic is defined as "an orientation toward work which emphasizes dedication to hard work, deferment of immediate rewards, conservation of resources, the saving of surplus wealth, and the avoidance of idleness and waste in any form" (Smrt & Karau, 2011, p. 267).

Smrt and Karau examined the role that PWE played in the social-loafing tendencies of undergraduate university students who completed an idea-generation task in either coactive or collective work conditions. Individuals who completed the task coactively were told that their answer sheets would be evaluated individually, whereas individuals completing the task collectively were told that their performance was being evaluated in terms of the group's performance. Effort levels (as indicated by the number of ideas generated) were higher for individuals who worked coactively (M = 34.09) than those who worked collectively (M = 29.00). Smrt and Karau found that PWE scores were negatively associated with social loafing. In other words, as PWE increased, individuals were less likely to socially loaf. Given their findings, Smrt and Karau recommended that more research be conducted to examine the role that different personality characteristics play in the social-loafing process in group settings.

Despite being the focus of much research attention in a variety of performance settings (e.g., classrooms, work groups), social loafing has received relatively little attention in the competitive sport environment and only one study to date has examined personality as a factor related to social-loafing behaviours in sport. The majority of social-loafing research in sport has focused on tasks/settings where effort (and performance) can be measured objectively in terms of time/speed and power output (e.g., rowing, running, swimming: Høigaard, Fuglestad, Peters, Cuyper, Backer, & Boen, 2010). For example, Williams and colleagues (1989) examined swim times of collegiate swimmers to determine if social loafing was influenced by changing the identifiability of

individuals in team relay-race scenarios (where performance was measured by how quickly the athletes swam a set distance). When identifiability was low (i.e., personal split times were not announced), swimmers had an increased tendency to swim slower in the relay compared to high-identifiability situations (i.e., personal split times were announced) where swimmers produced faster times in the pool. Similarly, Hardy and Latané (1988) examined whether social loafing occurred in established teams of high-school cheerleaders performing a personally meaningful task (i.e., cheering/clapping) and found that even within established teams, social loafing occurred—as evidenced by the fact that cheerleaders cheered more loudly when performing alone than when cheering in pairs with their own teammates.

As noted previously, although personality has been identified as a potentially important variable to consider in the context of assessing social loafing, to date only one study has specifically examined the potential role that personality might have upon social-loafing behaviours in a sport task. Swain (1996) examined the extent to which achievement goal orientations (i.e., task and ego orientation: Nicholls, 1989) were related to social loafing on a running task among a sample of high school males. According to Achievement Goal Theory (Nicholls, 1989), task-oriented individuals focus on mastering the task and judge personal success/competence against their own previous performances, whereas ego-oriented individuals primarily judge personal success/competence by normatively comparing their own performance against the performance of others who also complete the task (Nicholls, 1989). In Swain's study, participants were divided into relay teams based on individual 30-meter running (sprint) times.

Swain put half the teams in a high-identifiability trial (i.e., individual sprint times were made public) and the other half in a low-identifiability trial (i.e., only group times were made public). Results showed that individuals who had high ego-orientation combined with low task-orientation socially loafed (i.e., ran slower) in a low-identifiability situation, whereas individuals who had high task-orientation combined with low ego-orientation did not socially loaf (i.e., did not run slower) in the same low-identifiability situation.

Research on social loafing in interactive team-sport settings (such as soccer, hockey, and basketball) is particularly scarce. This scarcity of research is likely caused by the inherent difficulties of reliably (and objectively) measuring the effort levels of team-sport athletes during their events. In an attempt to (partially) address this problem, Høigaard and his colleagues developed the *Perceived Social Loafing Questionnaire* (PSLQ: see Høigaard et al., 2010; Høigaard & Ommundsen, 2007; Høigaard, Säfvenbom, & Tønnessen, 2006). The PSLQ is a self-report instrument that was designed to measure the prevalence of social loafing in team sport settings by asking athletes to rate the effort (or lack thereof) of their teammates (see Mulvey & Klein, 1998). As such, the PSLQ is not a direct measure of social loafing, but is instead a measure of how athletes' perceive the prevalence of social loafing among teammates. Despite the limitation of not directly measuring the athlete's social-loafing tendencies, the PSLQ offers unique opportunities to indirectly assess social loafing in team-sport settings (i.e., without directly asking participants about their own social-loafing tendencies) by examining social-loafing perceptions among team-sport participants.

To date the PSLQ has been used to measure perceived social loafing among samples of male junior soccer players (Høigaard & Ommundsen, 2007; Høigaard, Säfvenbom et al., 2006) and elite female handball players (Høigaard et al., 2010). Results have shown that athletes' perceptions of the prevalence of the social-loafing behaviours of teammates increase as task-cohesion within teams decrease (Høigaard, Säfvenbom et al., 2006) and as ego-orientation increases (Høigaard & Ommundsen, 2007). The PSLQ appears to offer a useful means by which social loafing can be studied (indirectly) in interactive team-sport settings and may be useful in helping to gather information that will shed light upon links between personality and social loafing in interactive team sports. To this end, Høigaard and colleagues (2010) recently speculated that perfectionism may be a personality characteristic that influences social loafing in sport. To understand why an individual's perfectionist orientations may influence the tendency to socially loaf, an overview of perfectionism, its constituent dimensions, and its relationships with various cognitive, affective, and behavioural correlates is necessary.

Perfectionism

Contemporary perfectionism theorists and researchers generally agree that perfectionism is a multidimensional achievement-oriented personality disposition that is characterized by an individual's tendency to set and strive for the flawless attainment of high performance standards (Stoeber, 2011). Stoeber and Otto (2006) proposed that perfectionist orientations can be classified along two major dimensions: *perfectionist strivings* and *perfectionist concerns*. Perfectionist

strivings reflect an individual's tendency to strive for extremely high levels of performance, whereas perfectionist concerns reflect an individual's tendency to react negatively and/or to be concerned over failing to reach those high achievement standards. Stoeber and Otto further proposed that the combined levels of perfectionist strivings and perfectionist concerns dictate whether an individual can be classified as a healthy/adaptive or unhealthy/maladaptive perfectionist (also see Blatt, 1995; Hamachek, 1978; Rice & Ashby, 2007; Sapieja, Dunn, & Holt, 2011).

Adaptive perfectionists are people who have high perfectionist strivings (i.e., pursue the attainment of extremely high performance standards) combined with low perfectionist concerns (i.e., low concerns about failing to reach these high performance standards). In contrast, maladaptive perfectionists are those who have high perfectionist strivings combined with high perfectionist concerns (see Stoeber & Otto, 2006). In the extant literature, adaptive perfectionism has been associated with a number of positive/healthy characteristics including heightened conscientiousness (Cox, Enns, & Clara, 2002), increased self-esteem (Rice, Ashby, & Slaney, 1998), and decreased depression (Rice & Mirzadeh, 2000). In contrast, maladaptive perfectionism has been associated with a number of negative/unhealthy characteristics including heightened neuroticism (Stumpf & Parker, 2000), decreased self-esteem (Rice et al., 1998), and increased depression (Rice & Mirzadeh, 2000).

Hamachek (1978) described adaptive (normal/healthy) perfectionists as people who are driven by a powerful need to succeed and who derive a real sense

of pleasure from hard work on tasks—even when the goal of perfect performance is not attained. In contrast, Hamachek argued that maladaptive (neurotic/unhealthy) perfectionists allow no room for mistakes (i.e., view mistakes as being completely unacceptable), are driven by the need to avoid failure, and maintain feelings of dissatisfaction no matter how well they perform. Maladaptive perfectionists are also believed to have a strong sense of contingent self-worth (DiBartolo, Frost, Chang, LaSota, & Grills, 2004; Sturman, Flett, Hewitt, & Rudolph, 2009) such that their self-worth (or self-esteem) is largely tied to (a) the successful accomplishment of high performance standards, (b) the public demonstration of competence (and the corresponding positive feedback that is received from the social environment: Hamachek, 1978; Stoeber & Otto, 2006), and (c) the need to avoid failure (and the corresponding public criticism that may follow such failure: Blatt, 1995). As such, avoiding public displays of imperfection or incompetence are particularly important to the protection of maladaptive perfectionists' self-worth.

Evidence supporting the distinction between adaptive and maladaptive perfectionist orientations has been well documented in both the sport psychology literature (e.g., Dunn, Causgrove Dunn, & Syrotuik, 2002; Gotwals, Dunn, Causgrove Dunn, & Gamache, 2010; Gucciardi, Mahoney, Jalleh, Donovan, & Parkes, 2012; Sapieja et al., 2010; Stoeber, 2011) and general psychology literature (e.g., Cox et al., 2002; Parker, 1997; Rice et al., 1998; Stoeber & Otto, 2006; Stumpf & Parker, 2000). In studies with athletes, for example, maladaptive perfectionist tendencies have been linked to debilitative achievement goal

orientations (Dunn et al., 2002), negative attitudinal body image (Dunn, Craft, Causgrove Dunn, & Gotwals, 2011), reduced self-esteem (Gotwals, Dunn, & Wayment, 2003), increased levels of burnout (Gould, Udry, Tuffey, & Loehr, 1996), increased pre-competitive anxiety (Hall, Kerr, & Matthews, 1998), and lowered self-confidence (Stoeber, Otto, Pescheck, Becker, & Stoll, 2007). In contrast, adaptive perfectionist tendencies among athletes have been linked to healthy achievement goal orientations (Dunn et al., 2002), positive attitudinal body image (Dunn et al., 2011), performance excellence (Gould, Dieffenbach, & Moffett, 2002; Stoeber, Uphill, & Hotham, 2009) and increased self-confidence (Stoeber et al., 2007).

A number of instruments have been used to measure the various facets/dimensions of perfectionism. The two most commonly used instruments share the same name—the *Multidimensional Perfectionism Scale* (MPS)—and were independently developed by Frost, Marten, Lahart, and Rosenblate (1990: Frost-MPS) and Hewitt and Flett (1991: HF-MPS). Although these instruments contain different subscales and have somewhat different conceptualizations of perfectionism, patterns of scores across their respective subscales can be used to assist in the identification of characteristics that reflect perfectionist strivings and perfectionist concerns. For example, a profile of maladaptive perfectionism would contain some combination of high scores on the *personal standards* and *organization* subscales of the Frost-MPS along with high scores on the *self-oriented perfectionism* subscale of the HF-MPS. This pattern of scores reflects high perfectionist strivings (Stoeber & Otto, 2006) and would be combined with

some combination of high scores on the *concern over mistakes*, *parental criticism*, and *doubts about actions* subscales of the Frost-MPS, and high scores on the *socially prescribed perfectionism* subscale of the HF-MPS. This latter pattern of scores reflects high perfectionist concerns (Stoeber & Otto, 2006). In contrast, adaptive perfectionism would be evident in a combination of high perfectionist strivings (i.e., high personal standards, organization, and self-oriented perfectionism) with low perfectionist concerns (i.e., low concern over mistakes, doubts about actions, and socially prescribed perfectionism: Stoeber & Otto, 2006).

Although perfectionism was historically measured and conceptualized as a global or generic personality disposition, a number of studies have recently provided evidence that perfectionism may best be measured and conceptualized as a domain-specific construct. For example, studies by Mitchelson and Burns (1998), Dunn, Gotwals, and Caugrove Dunn (2005), Dunn, Causgrove Dunn, and McDonald (in press), McArdle (2010), and Stoeber and Stoeber (2009) have shown that people often have different levels of perfectionism in different achievement domains. For example, Dunn and colleagues (2005; in press) reported that intercollegiate student-athletes tend to have higher perfectionist tendencies in sport compared to academic/school settings. Findings such as these have led researchers in sport to develop sport/domain-specific measures of perfectionism for athletes (see Anshel & Eom, 2003; Dunn et al., 2002; Stoeber et al., 2007).

According to Stoeber et al. (2009) the most frequently used domain-specific measure of perfectionism in sport is the Sport-MPS which was developed by Dunn et al. (2002) using the multidimensional framework of perfectionism provided by the Frost-MPS (Frost et al., 1990). The Sport-MPS contains subscales labelled *personal standards*, *concern over mistakes*, *perceived parental pressure*, and *perceived coach pressure* (Dunn, Causgrove Dunn, Gotwals, Vallance, Craft, & Syrotuik, 2006), and a recent revision to the instrument (now known as the Sport-MPS-2: Gotwals & Dunn, 2009) also contains sport-specific versions of Frost et al.'s (1990) *doubts about actions* and *organization* subscales. The Sport-MPS and Sport-MPS-2 have been used successfully to identify profiles of maladaptive and adaptive perfectionism in sport (see Dunn et al., 2002; Gucciardi et al., 2012; Gotwals, 2011; Sapieja et al., 2011). The Sport-MPS has also demonstrated greater predictive power of sport-specific constructs in comparison to a global measure of perfectionism (see Dunn et al., 2011). Given the domain-specific nature of perfectionism in sport, why might one expect perfectionism to be linked to social loafing in sport?

Perfectionism and Social Loafing

As noted previously, maladaptive perfectionists are defined by their high perfectionist concerns, and are therefore consumed by concerns about the possibility of failure, the demonstration of incompetence, and the negative social evaluation (i.e., criticism) that public failure on a task might bring (Stoeber & Otto, 2006). These concerns could potentially lead maladaptive perfectionists to "hide in the crowd" during group tasks in order to reduce or avoid the possibility

of taking any personal blame for performance failure that might ensue in the performance environment. Stated differently, given that the self-worth of maladaptive perfectionists is often highly contingent upon the accomplishment of successful performance and/or the avoidance of negative social evaluation (DiBartolo et al., 2004; McArdle, 2010; Stoeber & Otto, 2006; Sturman et al., 2009), it seems reasonable to speculate that maladaptive perfectionists (in comparison to adaptive perfectionists) may be more inclined to engage in social-loafing behaviors (i.e., hide in the crowd) in group settings where group failure appears likely. As such, hiding in the crowd to avoid blame in a group setting may become a defense mechanism that maladaptive perfectionists use to protect their self-worth and to avoid negative social evaluation. In contrast, adaptive perfectionists—who have low perfectionist concerns—are more accepting of mistakes and failure (Hamachek, 1978), are less inclined to worry about negative social evaluation (Stoeber & Otto, 2006), and are driven to improve their own performance accomplishments/efforts (Dunn et al., 2002). Consequently, adaptive perfectionists would likely be less inclined to engage in or endorse social-loafing behaviours because such behaviours go against their motivation to improve, succeed, and achieve the highest possible standards of personal performance.

According to theory, another reason why people engage in social-loafing behaviours in group settings is to manage their effort for times when they believe that the potential for positive social evaluation and praise is highest (Hardy, 1990). In other words, people may conserve their effort (i.e., socially loaf) until they feel that there is a time when giving maximal effort will increase the

likelihood of receiving praise in the social environment. A maladaptive perfectionist, whose self-worth is partly contingent upon receiving positive social evaluation from others (Stoeber & Otto, 2006) may be more inclined (than an adaptive perfectionist) to socially loaf in order to save effort for when positive social evaluation is most readily available. In other words, maladaptive perfectionists might use effort management as a means to improve their chances of receiving positive social evaluation (and thereby enhance their self-worth). To date, no studies have examined relationships between perfectionist orientations and social loafing in either sport or non-sport settings.

Purpose and Hypotheses

The purpose of this study was to determine if youth soccer players' perfectionist orientations were related to their perceptions of social loafing in soccer. Due to the aforementioned measurement difficulties associated with measuring social loafing in interactive team sports (such as soccer, hockey, or basketball), this study examined athletes' perceptions and attitudes towards social loafing in soccer as opposed to taking direct measures of social-loafing behaviours (cf., Høigaard & Ommundsen, 2007; Høigaard, Säfvenbom et al., 2006). Although this is an exploratory study, theory suggests that maladaptive perfectionist orientations would be positively correlated with the endorsement of social-loafing behaviours that are intended to avoid personal blame, and/or designed to save effort during group tasks for times when the potential for recognition and praise in sport are at their highest. In contrast, adaptive perfectionist orientations are expected to be negatively correlated with the

endorsement of blame-avoidance and effort-management social-loafing strategies in soccer.

Chapter 2

Method

Participants

Participants were 162 female and 54 male youth soccer players (from 16 teams) who competed in the top (Tier I/II) competitive levels of under-16 age-group soccer throughout a western Canadian province. Athletes ranged in age from 13.08 to 16.67 years (M = 15.25, SD = 0.63) and had an average of 6.31 years (SD = 2.54) playing involvement in competitive soccer. The sample (N = 216) contained 45 forwards, 80 midfielders, 72 defenders, and 17 goalkeepers (two participants did not report their playing position). The ethnic/racial background of the participants consisted of 170 White, 9 Black, 4 Middle-Eastern, 4 Hispanic, 4 Asian, 4 First Nations, and 21 "other". The team sport of soccer was chosen because the training and competitive environments of the sport (e.g., team size, number of players involved in drills) appear to offer opportunities for social loafing among athletes (see Høigaard, Säfvenbom, et al., 2006; Høigaard, Tofteland, et al., 2006).

Instruments

Participants completed four self-report inventories: (1) a demographic questionnaire, (2) the Sport Multidimensional Perfectionism Scale-2 (Sport-MPS-2; Gotwals & Dunn, 2009), (3) the Perceived Social Loafing Questionnaire (PSLQ; Høigaard, 2006), and (4) a newly developed instrument that was named, the Social Loafing Acceptability Questionnaire (SLAQ).

Demographic questionnaire. The demographic questionnaire (see Appendix A) asked participants to provide basic demographic information about

their age, gender, ethnic background, and soccer experience (e.g., playing position and years of playing experience). The instrument also contained a general set of anti social-desirability instructions.

Sport-Multidimensional Perfectionism Scale-2 (Sport-MPS-2). The Sport-MPS-2 (Gotwals & Dunn, 2009) is a 42-item measure of perfectionism in sport (see Appendix B). The Sport-MPS-2 is an updated version of the original Sport-MPS that was developed by Dunn and his colleagues (see Dunn, Causgrove Dunn et al., 2006; Dunn et al., 2002). The Sport-MPS-2 measures six different facets of perfectionism in sport that were largely modelled around six facets of perfectionism originally proposed by Frost and colleagues (1990): *Personal Standards* (PS: 7 items, e.g., "If I do not set the highest standards for myself in my sport, I am likely to end up a second-rate player"), *Concern Over Mistakes* (COM: 8 items, e.g., "If I play well but only make one obvious mistake in the entire game, I still feel disappointed with my performance"), *Perceived Parental Pressure* (PPP: 9 items, e.g., "My parents set very high standards for me in my sport"), *Perceived Coach Pressure* (PCP: 6 items, e.g., "I feel like my coach never tries to fully understand the mistakes I sometimes make"), *Doubts About Actions* (DAA: 6 items, e.g., "I usually feel uncertain as to whether or not my training effectively prepares me for competition") and *Organization* (ORG: 6 items, e.g., "On the day of competition I have a routine that I try to follow"). Respondents rate the extent to which they agree with each of the items using a 5-point rating scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores

on items are summed for each subscale, with higher composite subscale scores reflecting higher levels of perfectionism in sport.

Acceptable levels of internal consistency (Cronbach's $\alpha \geq .70$) for the subscales comprising the Sport-MPS-2 have consistently been reported in the literature (see Dunn, Causgrove Dunn et al., 2006; Dunn et al., 2002; Gotwals & Dunn, 2009; Gotwals et al., 2010; Sapieja et al., 2011). Gotwals and Dunn (2009) and Gotwals et al. (2010) provided structural validity evidence for all six subscales of the Sport-MPS-2 and also reported convergent and divergent validity evidence in the form of theoretically-interpretable correlations with measures of global perfectionism (see Gotwals et al., 2010) and self-esteem (see Gotwals & Dunn, 2009). Detailed overviews of the psychometric properties of the Sport-MPS-2 are found in Gotwals and Dunn (2009) and Gotwals et al. (2010).

Perceived Social Loafing Questionnaire (PSLQ). The PSLQ (see Appendix C) is a 5-item unidimensional instrument that measures athletes' perceptions of the social-loafing behaviours of team members (see Høigaard, 2006; Høigaard et al., 2010; Høigaard & Ommundsen, 2007; Høigaard, Säfvenbom, et al., 2006). Respondents rate the extent to which they feel that teammates engage in social-loafing behaviours (e.g., "Members of my team try to 'hide behind others' so that they don't need to try as hard as they could") on a 5-point rating scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicate higher perceptions of social loafing among team members. Principal components analysis conducted upon PSLQ responses provided by 118 junior league (*M* age = 17.7 years; *SD* = .98) soccer players resulted in a single

factor solution (Høigaard, Säfvenbom, et al., 2006). Internal consistency levels for the instrument have been consistently ≥ .68 (see Høigaard et al., 2010; Høigaard & Ommundsen, 2007; Høigaard, Säfvenbom, et al., 2006).

Social Loafing Acceptability Questionnaire (SLAQ). It was felt that any direct questions to participants about their own social-loafing tendencies in sport would be adversely impacted by social desirability response bias (see Ones, Viswesvaran, & Reiss, 1996). In other words, it was considered unlikely that athletes would willingly admit to engaging in social-loafing behaviours in sport. Consequently, the SLAQ was created for this study with the intention of measuring the extent to which participants viewed the social-loafing behaviours of other athletes as being acceptable (see Appendix D). Although it is likely that this measure will also be susceptible to social desirability response bias, it was considered less likely that rating the acceptability of social-loafing behaviours of fictitious athletes would be as susceptible to social desirability response bias in comparison to rating one's own social-loafing behaviours in sport.

The SLAQ was designed with the intention of measuring two underlying reasons why athletes might socially loaf in sport: *Blame Avoidance* and *Effort Management* (see Hardy, 1990; Karau & Williams, 1993). Blame avoidance was operationally defined as *a decrease in effort made in order to avoid or reduce blame for group or personal failure*. As noted previously, blame avoidance is sometimes termed "hiding in the crowd" (Karau & Williams, 1993) whereby an individual attempts to decrease personal identifiability within the group when group or personal failure is likely. Effort management was operationally defined

as *a decrease in effort in a group setting/task stemming from the desire to save effort for a future task when the individual knows that he/she will be acting alone or in a high identifiability situation where maximum social benefit (e.g., recognition or praise) is likely to occur* (see Hardy, 1990).

Five items/scenarios were developed to measure each of the two social-loafing dimensions described above. Using a 7-point rating scale (ranging from 1 [*never*] to 7 [*always*]), respondents are asked to rate the extent to which they view fictitious athletes' behaviours as being acceptable (e.g., "During scrimmage situations, Joe saves giving maximal effort for when he knows the coach is specifically watching his performance"). Item scores are summed within each subscale, with higher composite subscale scores reflecting higher levels of acceptance of the reasons why athletes might engage in social-loafing behaviours in sport. Female participants responded to scenarios depicting other (fictitious) female athletes, whereas male participants responded to scenarios depicting other (fictitious) male athletes.

Procedure

Phase 1: SLAQ scenario development. When creating a new instrument, an important step in the early stages of the scale-construction process is to examine the degree to which newly constructed items represent the constructs of interest that they are intended to measure (Messick, 1989). To this end, it is recommended that researchers examine the content relevance of each new item that is to be included in any new inventory (see Dunn, Bouffard, & Rogers, 1999).

A panel of 13 expert judges was asked to assess the content relevance of each item/scenario prior to its inclusion in the inventory. Each judge had a PhD in the social sciences and held a full-time academic appointment in a physical education, kinesiology, or health sciences faculty at a North American or European university. In total, the panel was comprised of two assistant-, five associate-, and six full-professors (or equivalent). All judges had published research in peer-reviewed sport- or exercise-psychology journals.

Judges were sent a content-relevance questionnaire package (see Appendix E) by e-mail. The package contained three sections. Part A contained a short demographic questionnaire. Part B contained operational definitions for social loafing, blame avoidance, and effort management, as well as a list containing the 10 scenarios. Part C asked judges to rate the degree of fit (i.e., match) between each of the 10 scenarios and the two theoretical social-loafing constructs the inventory was designed to measure (i.e., blame avoidance and effort management). Ratings were made on a 5-point scale ranging from 1 (*poor fit*) to 5 (*excellent fit*). A space was provided following each scenario for judges to make any comments about the content or structure of each scenario (see Figure 1). The intended construct that each scenario was designed to measure was not revealed to the judges, thereby ensuring that judges' ratings were not biased by the anticipated matches that the test developer was hoping to find (Dunn et al., 1999).

Scenario 9

During scrimmage situations, Joe saves giving maximal effort for when he knows the coach is specifically watching his performance.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

Figure 1. Example of the content-relevance rating scale format provided to judges.

Phase 2: Athlete data collection. Permission to conduct the study with athletes was attained through the University of Alberta Research Ethics Board. Upon receiving ethics approval, competitive youth soccer leagues in Alberta were contacted by letter (see Appendix F) to seek approval for the study. Upon their approval, team coaches were contacted via email (see Appendix G) and a follow-up phone call to seek their permission to allow the researcher to collect data from their respective teams. Once agreement had been obtained from the head coaches, a letter describing the general nature of the study was sent to each athlete and his/her parents (see Appendix H) along with parental consent forms (see Appendix I). Written assent was also obtained from each participant at the time of data collection.

The researcher (Matt Vaartstra) administered all questionnaires (see Appendix J for more details). Data collection sessions were independently scheduled with the respective teams and were held at a time and place most convenient for each team. Prior to completing the inventories, athletes were

reminded verbally that (a) their participation was voluntary and that their participation in the study in no way related to playing time, (b) their information would remain completely confidential, and (c) their parents and coaches would be asked to leave the room during the completion of the inventories.

The presentation order of the Sport-MPS-2, PSLQ, and SLAQ inventories was counterbalanced across participants (using six different presentation orders) in order to minimize any potential presentation order effects. The demographic questionnaire was always presented first. Athletes took approximately 25 minutes to fill out the questionnaire packet.

Chapter 3

Results

Data Analysis for Phase 1

The item-content relevance of each social-loafing item/scenario that was to be included in the SLAQ was assessed using protocols described by Dunn et al. (1999). Aiken's (1985) item-content validity coefficient (*V*) was initially calculated to assess the overall level of content-relevance provided by the set of judges for each item on the domain/construct that the scenario was intended to measure. Aiken's *V* is used to assess whether an item (scenario) is considered by the expert judges to be a relevant (valid) measure of the construct it is intended to measure. Aiken's *V* is bounded by values ranging from 0 to 1. A *V*-coefficient with a value of 0 indicates that all judges gave the item the lowest possible rating on the intended construct. A *V*-coefficient of 1 indicates that all judges gave the item the highest possible rating on the intended construct. A statistically significant *V* indicates that the judges (as a group) rated the item as being an appropriate (relevant) measure of the domain/construct it was intended to measure (and that the mean ratings provided by the group of judges were not an artifact of chance).

The Aiken's *V*-coefficients for each item on the keyed/intended domain are reported in Table 1 along with corresponding levels of statistical significance. Each item had a statistically significant *V*-coefficient ($ps < .05$) with the exception of Item 6 (i.e., "The coach has been upset with Tom's recent performances. Tom decides to hold back from aggressively seeking out the ball during practice

scrimmages to decrease the likelihood of drawing the coach's attention to his play") which was non-significant. Nonetheless, it should be noted that the mean judges' rating on the keyed domain (M = 3.46) for Item 6 indicated that the judges believed that the scenario provided a "good fit" with blame avoidance. Item 6 was therefore marked as a potential candidate for exclusion if subsequent psychometric evaluations in Phase 2 of the study (i.e., factor analysis and internal consistency assessment of the SLAQ data) suggested further problems.

Data Analysis for Phase 2

Of the 216 questionnaire packets that were completed by participants, there were only 18 missing data points (from 13 participants) out of a possible 12,312 responses (i.e., 0.15% missing data). These missing data points were replaced using a mean item score computed from the remaining items in the matching subscale (to which the missing item belonged) for each individual (see Graham, Cumsille, & Elek-Fisk, 2003).

Pre-screening for gender differences. It was considered desirable to combine male and female data into a single data set to maximize the statistical power of the data analyses. To ensure the appropriateness of collapsing the data into a single combined-gender data set, three separate MANOVAs were conducted for the Sport-MPS-2, PSLQ, and SLAQ responses. In each analysis, gender was entered as the independent variable and the item-sets for the three instruments—Sport-MPS-2 (n = 42 items), PSLQ (n = 5 items), and SLAQ (n = 10 items)—were entered as the dependent variables. Any significant multivariate test was followed up by univariate F-tests (with Bonferroni corrections) on the

Table 1

Aiken's V, Means, and Standard Deviations for Judges' Content-Relevance Ratings of Blame Avoidance and Effort Management Scenarios

Item	Abbreviated description	*V*	*p*	Judges' ratings: Blame Avoidance *M*	Blame Avoidance *SD*	Effort Management *M*	Effort Management *SD*
1.	Ben saves giving maximal effort for when he sprints against one player believing that the winners of the one-on-one sprints receive the most recognition from the coach following each race.	.808	< .01	1.23	0.44	**4.23**	1.17
2.	Whenever Rob is on the captain's team at practice and it appears that his team will lose the scrimmage, Rob makes less of an effort to get actively involved in the play believing that this will decrease the likelihood of drawing the captain's attention.	.692	< .05	**3.77**	1.24	1.31	0.63
3.	Dan tends to save giving maximal effort during practice for offensive situations rather than defensive situations.	.981	< .01	1.00	0.00	**4.92**	0.28
4.	Tim saves giving maximal effort until this time in the practice when he knows his parents will be watching him.	.885	< .01	1.08	0.28	**4.54**	0.52
5.	When the players are lining up to start the drill Bob allows his teammates to go first because he does not want to risk being the player who messes up the drill.	.788	< .01	**4.15**	1.14	1.38	0.51
6.	Tom decides to hold back from aggressively seeking out the ball during practice scrimmages to decrease the likelihood of drawing the coach's attention to his play.	.615	*ns*	**3.46**	1.39	1.85	0.99
7.	Therefore, during practice, Jon saves a little effort during offensive situations so that he can give maximal effort during defensive situations.	.942	< .01	1.00	0.00	**4.77**	0.44
8.	Although Sam and one of his teammates have an equal opportunity to score, to avoid the risk of missing the shot that may cause the team to run the wind-sprints, Sam backs off to allow his teammate to take the final shot.	.827	< .01	**4.31**	1.03	1.15	0.38
9.	During scrimmage situations, Joe saves giving maximal effort for when he knows the coach is specifically watching his performance.	.942	< .01	1.15	0.38	**4.77**	0.44
10.	Max attempts to avoid taking this role in the drill because he does not want to be responsible for causing the drill to fail.	.769	< .01	**4.08**	1.12	1.15	0.38

Note. The mean rating on the intended domain for each item has been highlighted in bold.

dependent variables. Each MANOVA was preceded by a Box's *M* test to examine the homogeneity of the covariance matrices for each instrument across gender. In accordance with the recommendations of Tabachnick and Fidell (1996), a significant *M* statistic was indicated when $p < .001$.

All three Box's *M* tests were non-significant, indicating that the covariance matrices for each instrument across gender were homogeneous: Sport-MPS-2, Box's $M = 1375.241$, F (903, 31653.868) = 1.039, $p = .20$; PSLQ, Box's $M = 12.145$, F (15, 40152.292) = .780, $p = .70$; SLAQ, Box's $M = 88.587$, F (55, 33603.945) = 1.494, $p = .01$. The multivariate test statistics accompanying the MANOVAs for the PSLQ (Wilks' $\Lambda = .970$, F [5, 210] = 1.309, $p = .26$) and SLAQ (Wilks' $\Lambda = .918$, F [10, 205] = 1.821, $p = .06$) were not significant. In contrast, the multivariate test statistic for the MANOVA conducted upon the Sport-MPS-2 was statistically significant: Wilks' $\Lambda = 0.691$, F (42, 173) = 1.841, $p = .003$. However, follow-up univariate *F*-tests for each Sport-MPS-2 item failed to reveal any significant gender differences when a Bonferroni correction ($p < .0012$) was applied to the analyses. Moreover, all effect sizes were small (partial $\eta^2 < .04$) for each univariate comparison (see Stevens, 1992) across the 42 Sport-MPS-2 items. Consequently, it was deemed appropriate to combine male and female responses into a single data set ($N = 216$) for all remaining analyses.

Psychometric evaluation of the SLAQ. Given that the SLAQ is a newly constructed instrument, it was considered necessary to examine its latent structure prior to creating composite subscale scores (that would be used in subsequent analyses). Therefore, the SLAQ data were subjected to an exploratory Principal

Axes factor analysis. Several groups of psychometricians (i.e., Fabrigar, Wegener, MacCallum, & Strahan, 1999; Preacher & MacCallum, 2003; Velicer, Eaton, & Fava, 2000) have recommended that both Cattell's (1978) scree-test criteria and Lautenschlager's (1989) parallel analysis be used to determine the number of factors when exploratory factor analytic procedures are used. Both the scree plot (see Figure 2) and the results of the parallel analysis (see Table 2) indicated the retention of one factor. As seen in Table 2, the value of the observed eigenvalue associated with the second factor extracted by the EFA ($\lambda_2 = 1.18$) was less than the corresponding eigenvalue that was generated with random data in the parallel analysis (see Lautenschlager, 1989, for a related discussion). Given the convergence of the results for both the scree plot and parallel analysis, a single-factor solution was retained to represent the latent dimensionality of the 10-item SLAQ. As seen in Table 3, all items had factor loadings > .30 on the retained factor and were therefore deemed suitable for inclusion in the instrument (Thurstone, 1947). Higher composite scores (based upon the summation of all 10 SLAQ items) were therefore considered indicative of higher levels of perceived acceptability for the social-loafing behaviours of others in soccer.

Given the non-significant *V*-coefficient that had resulted from the judges' content-relevance ratings for Item 6 (see Table 1), closer analysis of the psychometric properties of Item 6 was warranted prior to including it in the computation of composite SLAQ scores. As seen in Table 3, Item 6 had the third highest factor loading on the social-loafing factor among the 10 items.

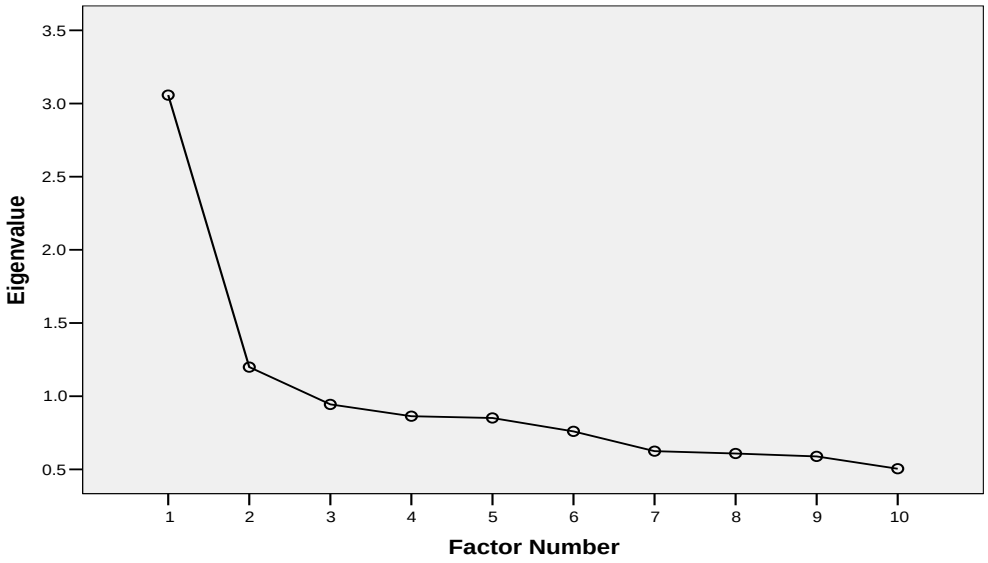

Figure 2. Scree plot of eigenvalues corresponding to factors following the Principal Axes analysis of SLAQ data.

Table 2

Eigenvalues from Exploratory Factor Analysis (EFA) of SLAQ Data and Corresponding Parallel Analysis

Factor	Eigenvalue from EFA	Eigenvalue from Parallel Analysis
1.	3.16	1.35
2.	1.18	1.24
3.	0.93	1.16
4.	0.86	1.09
5.	0.84	1.02
6.	0.74	0.96
7.	0.61	0.90
8.	0.60	0.83
9.	0.58	0.77
10.	0.50	0.69

Moreover, Item 6 had the third highest item-total correlation (r = .46) of the 10 SLAQ items (see Table 4). Lastly, as indicated in Table 4, if Item 6 was to be removed from the SLAQ it would cause the second-largest reduction in the internal consistency value of the instrument. In light of these results, and given that the mean content-relevance rating provided by the judges for Item 6 (M = 3.46) reflected a "good match" on the intended social-loafing construct, Item 6 was retained and its scores were used in the computation of composite SLAQ scores for participants in the remaining analyses.[1]

Table 3

Factor Loadings from Principal Axes Factor Analysis of SLAQ Data

Item (Abbreviated Description)		F1
1.	Ben saves giving maximal effort for when he sprints against one player believing that the winners of the one-on-one sprints receive the most recognition from the coach following each race.	.35
2.	Whenever Rob is on the captain's team at practice and it appears that his team will lose the scrimmage, Rob makes less of an effort to get actively involved in the play believing that this will decrease the likelihood of drawing the captain's attention.	.45
3.	Dan tends to save giving maximal effort during practice for offensive situations rather than defensive situations.	.48
4.	Tim saves giving maximal effort until this time in the practice when he knows his parents will be watching him.	.53
5.	When the players are lining up to start the drill Bob allows his teammates to go first because he does not want to risk being the player who messes up the drill.	.36
6.	Tom decides to hold back from aggressively seeking out the ball during practice scrimmages to decrease the likelihood of drawing the coach's attention to his play.	.55
7.	Therefore, during practice, Jon saves a little effort during offensive situations so that he can give maximal effort during defensive situations.	.60
8.	Although Sam and one of his teammates have an equal opportunity to score, to avoid the risk of missing the shot that may cause the team to run the wind-sprints, Sam backs off to allow his teammate to take the final shot.	.46
9.	During scrimmage situations, Joe saves giving maximal effort for when he knows the coach is specifically watching his performance.	.50
10.	Max attempts to avoid taking this role in the drill because he does not want to be responsible for causing the drill to fail.	.58

[1] Interested readers are directed to Appendix K for the psychometric evaluations of the PSLQ and Sport-MPS-2.

Table 4

Internal Consistency Characteristics of SLAQ Scenarios

Item (Abbreviated Description)		Item-Total Correlation	Cronbach's α if Deleted
1.	Ben saves giving maximal effort for when he sprints against one player believing that the winners of the one-on-one sprints receive the most recognition from the coach following each race.	.31	.74
2.	Whenever Rob is on the captain's team at practice and it appears that his team will lose the scrimmage, Rob makes less of an effort to get actively involved in the play believing that this will decrease the likelihood of drawing the captain's attention.	.37	.73
3.	Dan tends to save giving maximal effort during practice for offensive situations rather than defensive situations.	.41	.72
4.	Tim saves giving maximal effort until this time in the practice when he knows his parents will be watching him.	.45	.72
5.	When the players are lining up to start the drill Bob allows his teammates to go first because he does not want to risk being the player who messes up the drill.	.32	.74
6.	Tom decides to hold back from aggressively seeking out the ball during practice scrimmages to decrease the likelihood of drawing the coach's attention to his play.	.46	.72
7.	Therefore, during practice, Jon saves a little effort during offensive situations so that he can give maximal effort during defensive situations.	.50	.71
8.	Although Sam and one of his teammates have an equal opportunity to score, to avoid the risk of missing the shot that may cause the team to run the wind-sprints, Sam backs off to allow his teammate to take the final shot.	.39	.73
9.	During scrimmage situations, Joe saves giving maximal effort for when he knows the coach is specifically watching his performance.	.44	.72
10.	Max attempts to avoid taking this role in the drill because he does not want to be responsible for causing the drill to fail.	.48	.72

Subscale internal consistency. The internal consistency of all instruments/subscales was acceptable. Specifically, as seen in Table 5, all Cronbach's alpha values were > .70 (i.e., the generally-accepted minimum criterion value that represents adequate internal consistency; Nunnally, 1978). Means, standard deviations, and the distributional characteristics of all subscales are also included in Table 5.

Table 5

Descriptive Statistics and Internal Consistencies (α) for the Sport-MPS-2 subscales, PSLQ, and SLAQ

Scale/subscale	*M*	*SD*	Skewness	Kurtosis	α
Personal standards	3.76	.647	-.159	-.285	.79
Concern over mistakes	3.17	.797	-.019	-.321	.83
Perceived parental pressure	2.92	.895	.468	-.111	.90
Perceived coach pressure	3.24	.748	.156	-.470	.78
Doubts about actions	2.62	.681	.171	-.083	.73
Organization	3.48	.821	-.313	-.561	.87
Perceived Social Loafing Questionnaire	2.34	.756	.549	.070	.80
Social Loafing Acceptability Questionnaire	2.59	.759	.464	.448	.75

Relationships between perfectionism, perceived social loafing, and social loafing acceptability. The purpose of this study was to determine if youth soccer players' perfectionist orientations were related to their perceptions of social loafing in soccer. To this end, bivariate correlations (*r*) were calculated between the six perfectionism subscales and the two social-loafing measures (i.e., PSLQ and SLAQ; see Table 6). Significant positive correlations were found between two perfectionism subscales (i.e., personal standards and doubts about actions) and PSLQ scores. In other words, as personal standards and doubts about actions increased, so too did the athletes' tendency to perceive that teammates engaged in social-loafing behaviours. In contrast, significant negative correlations were found between two perfectionism subscales (i.e., personal standards and

organization) and social loafing acceptability (SLAQ). As personal standards and organization increased, the tendency of athletes to approve of others' social-loafing behaviours in soccer training decreased. A significant positive correlation was found between doubts about actions and social loafing acceptability (SLAQ), indicating that increases in athletes' doubts about actions were associated with an increased acceptance of others' social-loafing behaviours in soccer. As seen in Table 6, three of the Sport-MPS-2 subscales (i.e., concern over mistakes, perceived parental pressure, and perceived coach pressure) were not significantly related with either of the two social-loafing variables.

Table 6

Bivariate Correlations (r) Among all Perfectionism Subscales, PSLQ, and SLAQ

Subscale	PS	COM	PPP	PCP	DAA	ORG	PSLQ
COM	.35***						
PPP	.15*	.47***					
PCP	.15*	.42***	.30***				
DAA	.08	.30***	.26***	.29***			
ORG	.40***	.12	.11	.11	-.04		
PSLQ	.23***	.06	.07	.04	.25***	.08	
SLAQ	-.15*	.03	.11	.04	.21**	-.19**	.11

* $p < .05$. ** $p < .01$. *** $p < .001$.

Note. PS = personal standards; COM = concern over mistakes; PPP = perceived parental pressure; PCP = perceived coach pressure; DAA = doubts about actions; ORG = organization; PSLQ = perceived social loafing questionnaire; SLAQ = social loafing acceptability questionnaire.

Multivariate relationships between perfectionism and social loafing.

Although the previous correlations provide insight into the bivariate relationships between the different facets of perfectionism and perceptions of social loafing, a more complete understanding of how perfectionism is related to perceptions of social loafing may be achieved by considering the scores across all perfectionism subscales simultaneously (see Blatt, 1995; Dunn et al., 2002; Dunn, Gotwals, Causgrove Dunn, & Syrotuik, 2006; Parker, 1997). Given that perfectionism is a multidimensional construct, and that different patterns or combinations of scores across the various facets of perfectionism can have different relationships with athletes' cognitive, affective, and behavioural experiences in sport, canonical correlation analysis was used to investigate the multivariate relationships between perfectionism and perceptions of social loafing in sport. Canonical correlation analysis allows the researcher to consider scores across all perfectionism subscales simultaneously, thereby enabling researchers to examine potentially adaptive versus maladaptive patterns/profiles of perfectionism in sport (see Dunn et al., 2002; Sapieja et al., 2011; Stoeber & Otto, 2006). Canonical correlation is viewed primarily as a descriptive analytic technique (Tabachnick & Fidell, 1996), and was considered appropriate for this study. The social-loafing scales (i.e., PSLQ and SLAQ) were entered as the criterion set, and the six subscales of the Sport-MPS-2 were entered as the predictor set in the analysis.

Tabachnick and Fidell (1996) note that "although there is no requirement that the variables be normally distributed when canonical correlation analysis is used descriptively, the analysis is enhanced if they are" (p. 198). To this end, the

distributional characteristics of the six perfectionism variables and two social-loafing variables (i.e., PSLQ and SLAQ) were examined. This was accomplished by computing standardized *z*-scores for each of the skewness and kurtosis values reported in Table 5 (see Tabachnick & Fidell, 1996, pp. 71-73); none of the corresponding *z*-scores indicated statistically significant departures from univariate normality (all *z*s < 3.30, all *p*s > .001: Tabachnick & Fidell, 1996).

Tabachnick and Fidell (1996) also warn that the presence of univariate and multivariate outliers in the data set can "have undue impact upon canonical analysis" (p. 199). Employing data screening techniques described by Tabachnick and Fidell (pp. 66-68), univariate outliers were identified as any person having a standardized *z*-score that was ≥ 3.30 ($p < .001$, 2-tailed) on any variable. Only one such case was found; a *z*-score of 3.30 was reported for one male athlete (age = 15.67 years, playing experience = 12 years) on the SLAQ. This individual was subsequently removed from the data set prior to conducting the canonical analysis. Following the removal of the univariate outlier, Mahalanobis distances were computed for each athlete ($N = 215$) to determine if any cases could be classified as multivariate outliers (see Tabachnick & Fidell, 1996, p. 94). Each Mahalanobis distance was evaluated as a χ^2 statistic with eight degrees of freedom (i.e., the number of variables upon which the Mahalanobis distance score was computed). No multivariate outliers were detected: all Mahalanobis distances < 19.47 (all *p*s > .01). The resulting canonical analysis was therefore conducted upon a data set comprising 215 athletes and eight variables. The subject-to-

variable ratio (27:1) exceeded the minimum ratio (10:1) that is required for canonical analysis (see Tabachnick & Fidell, 1996, p. 198).

Two significant canonical functions were extracted (R_{C1} = .35; R_{C2} = .30, p < .005). Both canonical correlations exceeded the minimum criterion value (.30) that is deemed suitable for interpretation purposes (see Hair, Anderson, Tatham, & Black, 1998; Tabachnick & Fidell, 1996). Table 7 contains the canonical loadings for both functions. Only variables (i.e., subscales) with canonical loadings ≥ .30 on their respective canonical variates were interpreted (see Hair et al., 1998, Tabachnick & Fidell, 1996).

Table 7

Canonical Loadings of Perfectionism and Social Loafing Dimensions

Variable	Canonical Loadings	
	Function 1	Function 2
Social Loafing		
Perceived Social Loafing Questionnaire	.95	.32
Social Loafing Acceptability Questionnaire	.42	-.91
Perfectionism		
Personal standards	.48	.76
Concern over mistakes	.21	-.08
Perceived parental pressure	.31	-.31
Perceived coach pressure	.16	-.11
Doubts about actions	.87	-.37
Organization	.07	.62

In the first canonical function, both perceived social loafing of others (PSLQ) and social loafing acceptability (SLAQ) had moderate to strong positive loadings on the social-loafing variate. Personal standards, perceived parental pressure, and doubts about actions had moderate to strong positive loadings on the perfectionism variate. This combination of positive loadings on the perfectionism variate reflects certain key features of maladaptive perfectionism (see Dunn, Causgrove Dunn et al., 2006; Gotwals, 2011; Gotwals & Dunn, 2009). Given that heightened PPP and DAA reflect maladaptive aspects of perfectionism in sport (Gotwals, 2011; Gotwals & Dunn, 2009) and that heightened PS is a core feature of any profile of scores that is considered to reflect strong perfectionist tendencies (Gucciardi et al., 2012; Stoeber, 2011), the direction of the canonical correlation between the two variates in the first canonical function (R_{C1} = .35) indicates that increases in athletes' maladaptive perfectionist tendencies in sport correspond with an increased tendency to (a) believe that teammates engage in social loafing, and (b) be more accepting towards the social-loafing behaviours of other athletes in the training environment.

In the second canonical function, perceived social loafing (PSLQ) had a moderate positive loading, whereas social loafing acceptability (SLAQ) had a strong negative loading on the social-loafing variate. Personal standards and organization had moderate to strong positive loadings on the perfectionism variate whereas perceived parental pressure and doubts about actions had moderate negative loadings on the perfectionism variate. This combination of high personal standards, high organization, low perceived parental pressure, and low doubts

about actions has been associated with profiles of adaptive perfectionism in previous research in both sport (e.g., Sapieja et al., 2011) and non-sport settings (e.g., Parker, 1997), and reflects the combination of high *perfectionist strivings* (i.e., high personal standards and organization) with low *perfectionist concerns* (i.e., low perceived parental pressure and doubts about actions: see Stoeber, 2011; Stoeber & Otto, 2006). The direction of the canonical correlation (R_{C2} = .30) indicates that increases to athletes' adaptive perfectionist orientations in sport correspond with an increased tendency to perceive that teammates engage in social-loafing behaviours but a decreased tendency to approve of the social-loafing behaviours of other athletes in the training environment.

Chapter 4

Discussion

Although relatively little research has examined the role that personality plays in the social-loafing process, a number of researchers have advocated for more research to identify personality characteristics that may be associated with social loafing (Høigaard et al., 2010; Smrt & Karau, 2011). In response to this suggestion, the current study was conducted with the primary goal of investigating whether athletes' perfectionist orientations are associated with perceptions of social loafing in youth soccer. Previous research has shown significant relationships between a small number of achievement-oriented personality characteristics (e.g., achievement goal orientations, conscientiousness, and protestant work ethic) and social loafing in both sport- (Høigaard & Ommundsen, 2007; Swain, 1996) and non-sport settings (Boneh & Koslowsky, 2010; Charbonnier, Huguet, Brauer, & Montel, 1998; Ferrari & Pychyl, 2012; Smrt & Karau, 2011; Tan & Tan, 2008). However, no study to date has examined the relationships between the personality trait of perfectionism and social loafing. Results of the current study indicated that several facets of perfectionism in sport (i.e., personal standards, doubts about actions, and organization) were significantly related to perceptions of social loafing among youth soccer players. Moreover, when scores across the various facets of perfectionism were considered simultaneously, canonical correlation results indicated that adaptive and maladaptive perfectionist tendencies had different relationships with perceptions

of social loafing in soccer. As such, the current study indicates that perfectionism may play an important role in the social-loafing process in sport.

The bivariate correlations (see Table 6) between the different facets of perfectionism and the two measures of social loafing (i.e., PSLQ and SLAQ) provide initial evidence of relationships between perfectionism and social loafing in sport. The personal standards subscale of the Sport-MPS-2 was significantly correlated (r = .23) with the PSLQ, indicating that as athletes' personal standards increased, their perceptions that teammates engaged in social-loafing behaviours also increased. In contrast, personal standards was negatively correlated (r = -.15) to SLAQ scores indicating that as personal standards increased, athletes became less accepting of others' social-loafing behaviours in the training environment. Taken together, these correlations indicate that, as athletes increased the degree to which they set and strive for high personal performance standards in sport, they had an increased tendency to believe that teammates engaged in social-loafing behaviours, but a decreased tendency to approve or accept these behaviours in the training environment.

These contrasting directional relationships between personal standards and PSLQ/SLAQ scores appear to make theoretical sense. Individuals with high personal standards strive to achieve the highest possible levels of performance (i.e., perfectionist strivings, see Stoeber & Otto, 2006) and may therefore be inclined to notice (or believe) that others around them are not striving for those same high performance standards. It seems reasonable to speculate that athletes with higher personal standards would be less approving of other athletes' social-

loafing behaviours because such behaviours may lead to a decrease in personal performance for the perfectionist who may be forced to carry the extra workload that has resulted from his/her teammate's decreased effort. Carrying the extra workload may ultimately lead to a decrease in personal performance for the athlete with high personal standards because he/she may become fatigued in the training environment which can negatively impact performance. Alternatively, athletes with high personal standards may simply believe that social-loafing behaviours are incongruent with their own personal motivation to strive for the achievement of high personal standards in sport. If this is the case, then heightened personal standards may predispose athletes to disapprove of any behaviours (including social loafing) that may lead to sub-optimal performance. More research is obviously needed to investigate the validity of these speculative explanations.

The bivariate correlations between doubts about actions and the two social-loafing measures give further insight into links between perfectionism and social loafing in sport. The doubts about actions facet of perfectionism is generally recognized as a maladaptive construct (see Gotwals & Dunn, 2009; Gotwals et al., 2010) and was significantly correlated with both the PSLQ (r = .25) and SLAQ (r = .21). These positive correlations indicate that as athletes' doubts about actions increase, there is an increased tendency for athletes to (a) believe that teammates are engaging in social loafing, and (b) be more approving or accepting of others' social-loafing behaviours in training. Doubts about actions has been negatively correlated to self-esteem in previous sport-perfectionism

research (see Gotwals & Dunn, 2009; Gotwals et al., 2003). It therefore seems reasonable to speculate that athletes who have high doubts about actions recognize and endorse the "blame avoidance" strategy that is often inherent in social-loafing behaviours. In other words, athletes with high doubts about actions may be sensitive to the ego-protection benefits that social-loafing behaviours can provide in competitive sport settings. Stated differently, social loafing may help protect the self-worth of the high doubts-about-actions athlete whose self-esteem and self-worth are contingent upon success, error free performance, and the avoidance of any public demonstration of incompetence in the sport environment. As such, athletes with heightened doubts about actions may recognize the social-loafing behaviours of others while understanding (or approving) of the reasons why other athletes engage in the behaviours described in the SLAQ.

The organization facet of perfectionism was significantly correlated (r = -.19) with the SLAQ. This negative correlation indicates that as organization levels increased, athletes' acceptance of social-loafing behaviours in the training environment decreased. Gotwals and Dunn (2009) have argued that organization is an adaptive facet of perfectionism in sport because high levels of organization (including the use of pre-competitive routines) are likely to increase athletes' chances for success in competition. Organization was also positively correlated with the personal standards subscale of perfectionism (r = .40) in this study, therefore, it seems very unlikely that athletes with high levels of organization would approve of social-loafing behaviours because such behaviours would also be inconsistent with their desire to achieve high performance standards. This

negative relationship between organization and SLAQ scores appears to reinforce the potentially adaptive function of organization in sport.

Although the bivariate correlations provide valuable insight into the various independent relationships between different facets of perfectionism and perceptions of social loafing, a better understanding of how perfectionism relates to perceptions of social loafing in sport can be achieved by considering the scores across all perfectionism subscales simultaneously (see Dunn et al., 2002; Dunn, Gotwals et al., 2006; Sapieja et al., 2011; Stoeber, 2011). This argument is predicated on the assumption that all facets of perfectionism operate in conjunction with each other within the individual, and that different levels or combinations of scores across the various facets of perfectionism then determine if an individual's perfectionist orientations function in an adaptive or maladaptive manner (see Blatt, 1995; Parker, 1997; Rice & Ashby, 2007; Stoeber & Otto, 2006). To this end, canonical correlation analysis was used to determine if different perfectionist profiles (as defined by different patterns of scores across the various facets of perfectionism) would have different relationships with perceptions of social loafing among the current sample of youth soccer players.

A number of studies have empirically demonstrated the distinction between adaptive and maladaptive perfectionism in sport (see Dunn et al., 2002; Gotwals, 2011; Gotwals et al., 2010; Gucciardi et al., 2012; Sapieja et al., 2010). These studies have typically indicated that maladaptive perfectionist orientations are characterized by some pattern of high perfectionist strivings (e.g., high personal standards and high organization) combined with high perfectionist

concerns (e.g., high concern over mistakes, high perceived parental pressure, high perceived coach pressure, and high doubts about actions), whereas adaptive perfectionist orientations are characterized by some pattern of high perfectionist strivings (e.g., high personal standards and high organization) combined with low perfectionist concerns (e.g., low concern over mistakes, low perceived parental pressure, low perceived coach pressure, and low doubts about actions). The patterns of canonical loadings on the perfectionism variates in Table 7 closely resemble these two contrasting profiles of perfectionism. Specifically, the pattern of canonical loadings on the perfectionism variate in the first canonical function reflects a profile of maladaptive perfectionism whereby high perfectionist strivings (i.e., high personal standards) were combined with high perfectionist concerns (i.e., high perceived parental pressure and high doubts about actions). In contrast, the pattern of canonical loadings on the perfectionism variate in the second canonical function reflects a profile of adaptive perfectionism whereby high perfectionist strivings (i.e., high personal standards and high organization) were combined with low perfectionist concerns (i.e., low perceived parental pressure and low doubts about actions). Although these patterns of canonical loadings support the distinction between adaptive and maladaptive perfectionism in sport (see Stoeber, 2011), it is their associations with social-loafing variables that are of primary interest in this study, and which help classify each profile as reflecting either adaptive or maladaptive perfectionism.

As seen in the first canonical function (Table 7), the maladaptive perfectionism variate was positively correlated (R_{C1} = .35) with the social-loafing

variate (defined by a high positive loading for PSLQ and a moderate positive loading for SLAQ). In other words, the results indicated that as maladaptive perfectionist tendencies increased, so too did athletes' tendency to both perceive heightened social-loafing behaviours in teammates and to be more accepting of social-loafing behaviours in training. Given that maladaptive perfectionist tendencies are associated with heightened fear of failure and fear of negative social evaluation (Gucciardi et al., 2012; Sagar & Stoeber, 2009; Stoeber & Otto, 2006), it seems reasonable to speculate that athletes with maladaptive perfectionist tendencies become more accepting of social-loafing behaviours because they recognize themselves in those situations and empathize with the use of social-loafing strategies that may help avoid personal failure and negative social evaluation. Stated differently, in situations where maladaptive perfectionist athletes perceive that personal or group failure may be imminent, these athletes may engage in (or be more accepting of) social-loafing behaviours (e.g., "hide in the crowd") that help to avoid or decrease the personal blame that may follow if failure occurs. As such, social-loafing behaviours may be viewed by maladaptive perfectionists more favorably (than adaptive perfectionists) because the behaviours can protect their performance-contingent self-worth by reducing the risk of any public display of performance imperfection (cf. Blatt, 1995; Hamachek, 1978; Stoeber & Otto, 2006).

As noted previously, the profile of maladaptive perfectionism in the canonical correlation analysis was positively correlated with the social-loafing variate (that was partially defined by a strong positive loading on the PSLQ—a

loading that reflects an increased tendency to believe that teammates engage in social-loafing behaviours in sport). Because maladaptive perfectionists' self-worth is contingent upon successful completion of tasks and/or the avoidance of negative social evaluation (DiBartolo et al., 2004; Stoeber & Otto, 2006; Sturman et al., 2009), it is possible that heightened maladaptive perfectionist orientations increase an athlete's tendency to identify possible threats in the social/performance environment that might undermine the chances for individual success or increase the likelihood of individual failure. In other words, if maladaptive perfectionists feel that their self-worth is potentially threatened by how others' perform and/or try, they may be more inclined to feel that teammates are not working hard enough in the performance setting.

If teammates are not giving maximum effort (i.e., social loafing), then the maladaptive perfectionist might perceive an increased chance of personal blame for any pending failure that may occur in the team environment. Anything that increases the chance of failure or personal blame for maladaptive perfectionists is likely to be construed as a threat to their self-worth. Furthermore, maladaptive perfectionist tendencies have been linked to fear of shame and embarrassment in sport (Sagar & Stoeber, 2009) which could also lead individuals with maladaptive perfectionist tendencies to feel that teammates are engaging in social-loafing behaviours and view these behaviours as a threat to self-worth (because those behaviours have the potential to create shame or embarrassment through failure and the negative social evaluation that may come with failure).

As noted previously, the perfectionism variate in the second canonical function (see Table 7) was labelled as adaptive perfectionism because it was defined by a pattern of canonical loadings that reflect high perfectionist strivings (i.e., positive loadings for personal standards and organization) combined with low perfectionist concerns (i.e., negative loadings for perceived parental pressure and doubts about actions). The adaptive perfectionism variate was positively correlated (R_{C2} = .30) with the social-loafing variate (defined by an increased tendency to believe that teammates engage in social-loafing behaviours and a heightened tendency to be less accepting of social-loafing behaviours in training). The strong negative loading (-.91) for the SLAQ on the social-loafing variate is very different than the moderate positive loading (.42) for the SLAQ in the first canonical function (see Table 7). The strong negative loading indicates that as adaptive perfectionist tendencies increased, the degree to which athletes approved of the social-loafing behaviours of others in the training environment decreased. This finding indicates that heightened adaptive perfectionist tendencies were associated with a more disapproving view of social-loafing behaviours in soccer.

Adaptive perfectionists have high perfectionist strivings (see Stoeber & Otto, 2006) combined with low perfectionist concerns (as seen by low perceived parental pressure and low doubts about actions in the canonical analysis). Athletes with this perfectionist profile would presumably view social-loafing behaviours in sport as being incongruent with their personal motivation to plan, prepare, and strive for success in sport. As such, it seems logical that stronger adaptive perfectionist orientations in sport would lead athletes to become less accepting of

social-loafing behaviours in sport. Given that adaptive perfectionists are not overly concerned about protecting their egos or self-worth in the performance setting (Stoeber & Otto, 2006), this gives them little cause to utilize social-loafing behaviours in an effort to avoid blame or negative social evaluation (that may ensue if failure occurs). In other words, it is possible that adaptive perfectionists are primarily focused on accomplishing their lofty performance goals and therefore have less concern (than maladaptive perfectionists) about the social consequences that failure might bring in the sport environment (Gucciardi et al., 2012; Stoeber & Otto, 2006; Stoeber, Stoll, Pescheck, & Otto, 2008). Adaptive perfectionists in sport strive for perfection without being overly concerned about the consequences of failure (Stoeber, 2011) which may reduce their desire to use or endorse social-loafing strategies that might ultimately hinder individual and/or team performance.

Social loafing has been described as a "social disease" (Latané et al., 1979) that is destructive towards team performance (see Hardy, 1990; Karau & Williams, 1993; Latané et al., 1979); this is of particular concern in team sports where so much focus is put on all individuals giving maximal effort in the pursuit of team success. From the perspective of coaches who are looking for athletes to give maximal effort whenever possible in the pursuit of achieving the team's performance goals, the current results indicate that having adaptive perfectionist tendencies may actually make an athlete a more desirable "team player" in comparison to maladaptive perfectionists who may be tempted to socially loaf (and thereby jeopardize the team's chances of success).

As noted previously, the social-loafing variate in the second canonical function was also defined by a moderate positive loading (.32) for the PSLQ. As such, adaptive perfectionist tendencies were positively associated with an increased tendency to believe that teammates engaged in social-loafing behaviours. It seems reasonable to speculate that adaptive perfectionists (who set high performance standards and who pay close attention to their performance preparation) might be more inclined to look critically at the performance efforts of other athletes and believe that these athletes are not working as hard as they could. In other words, athletes with adaptive perfectionist tendencies may be more inclined to notice (or be critical of) the effort put forth by other athletes in the performance environment, and may therefore be inclined to notice social-loafing behaviours (i.e., lack of effort) that do not reflect their own high personal standards and organized approach to competition.

Examination of some of the personal standards items contained within the Sport-MPS-2 (e.g., Item 21: "*I think I expect higher performance and greater results in my daily sport training than other athletes*"; Item 23: "*I feel that other players generally accept lower standards for themselves in sport than I do.*") seems to support the aforementioned argument about normative comparison that people high in personal standards may adopt when assessing their own achievement standards and expectations. As seen in the content of these two items, respondents are asked to judge their own performance standards against those of other athletes who are also in the competitive sport environment. More research is obviously required to determine if athletes with adaptive perfectionist

tendencies are more critical of the performance efforts of teammates who may not display the behavioural tendencies (e.g., effort) that adaptive perfectionists expect of themselves in sport.

It is interesting to note that the PSLQ had positive loadings on both social-loafing variates in the two canonical functions. In other words, both maladaptive- and adaptive-perfectionist profiles were positively correlated with the tendency to believe that teammates engaged in social-loafing behaviours. It is possible that maladaptive and adaptive perfectionists view the social-loafing tendencies of others in qualitatively different ways. Both maladaptive and adaptive perfectionists strive for high standards of personal performance. However, due to their need to avoid any public displays of imperfection (Blatt, 1995), maladaptive perfectionists may be inclined to believe that teammates socially loaf because such behaviours are viewed as a threat to the maladaptive perfectionist's self-worth. In other words, the maladaptive perfectionist may be afraid that a teammate's social loafing may increase the chance of personal failure or blame that could occur for the maladaptive perfectionist from having to make up for the teammate's lack of effort. In contrast, adaptive perfectionists are driven by a desire to succeed and are not overly concerned about the consequences of failure or negative social evaluation (Hamachek, 1978); consequently, adaptive perfectionists may not view another person's social loafing as a threat to their own self-worth. Rather, adaptive perfectionists may be inclined to perceive that teammates socially loaf because adaptive perfectionists feel that other people/athletes simply do not set and strive for the same high performance

standards that they set for themselves. For adaptive perfectionists, the increased tendency to perceive that teammates socially loaf may simply be an endorsement of the fact adaptive perfectionists believe that they have higher performance standards (which might include effort) than others in the competitive sport environment. Irrespective of the possible reasons why maladaptive and adaptive perfectionists have an increased tendency to believe that teammates socially loaf, the results of this study clearly reinforce the importance of considering personality variables in the study of social loafing (Boneh & Koslowsky, 2010; Charbonnier et al., 1998; Ferrari & Pychyl, 2012; Høigaard et al., 2010; Smrt & Karau, 2011; Tan & Tan, 2008).

Another finding that is worthy of discussion in this study relates to the role that perceived parental pressure (PPP) apparently plays in explaining the relationship between different perfectionist orientations and perceptions of social loafing. As seen in Table 7, PPP had a moderate positive loading (.31) on the maladaptive perfectionism variate. In contrast, PPP had a moderate negative loading (-.31) on the adaptive perfectionism variate. This is noteworthy because it illustrates the contrasting roles that PPP can play in defining maladaptive and adaptive perfectionism.

Perceived parental pressure is recognized as a maladaptive interpersonal facet of perfectionism (Dunn et al., 2002). Previous studies with athletes show that increased PPP in sport has been associated with debilitative achievement goal orientations (Dunn et al., 2002), negative attitudinal body image (Dunn et al., 2011), and reduced self-esteem (Gotwals et al., 2003), whereas decreased PPP has

been associated with healthy achievement goal orientations (Dunn et al., 2002), positive attitudinal body image (Dunn et al., 2011), and successful athletic performance (Gould et al., 2002). Although perceived parental pressure was unrelated to either the SLAQ or PSLQ in the bivariate correlation analysis (see Table 6), when combined with other facets of perfectionism, PPP appears to play a contributing role in explaining variance associated with perceived social loafing in sport. This result reinforces the need to include perceived parental pressure as a facet of perfectionism in sport research despite calls from some theorists (e.g., Stoeber & Otto, 2006) to abandon PPP as a facet of perfectionism on the grounds that it should be considered an antecedent of perfectionism rather than a facet of perfectionism per se.

Another interesting result regarding perceived parental pressure in this study relates to the magnitude of the mean score that was obtained for this perfectionism subscale (M = 2.92). A cursory examination of empirical research in sport that has previously published mean PPP scores of athletes (see Gotwals, 2011; Gucciardi et al., 2012; Sapieja et al., 2011; Vallance, Dunn, & Causgrove Dunn, 2006) indicates that higher mean PPP scores appear to be associated with younger samples of adolescent athletes (e.g., Sapieja et al., 2011; Vallance et al., 2006) and lower PPP scores appear to be associated with older/adult samples of athletes (e.g., Gotwals, 2011; Gucciardi et al., 2012). Dunn, Gotwals, and colleagues (2006) noted that youth athletes may be more inclined to have higher PPP levels than older/adult athletes because parents play a much stronger role in the provision of feedback regarding performance in sport when youth athletes still

live at home. This sentiment was echoed in a recent study of elite adult athletes (*M* age = 25.64 years) conducted by Gucciardi et al. (2012) who reported a very low mean PPP score (*M* = 1.95) in a sample of 423 adult athletes. The relatively high mean PPP score in the current study appears to support the arguments put forward by Dunn, Gotwals et al. (2006) and Gucciardi et al. (2012) about the role that age may play in the development of PPP in sport because the youth soccer players (*M* age = 15.25 years) in the current sample were presumably living at home and therefore highly reliant on their parents for the provision of performance-related feedback and expectations. More research is required to examine possible relationships between perceived parental pressure and age in sport.

Limitations and Future Research

Notwithstanding the important results that were obtained in this study regarding the relationships between perfectionist orientations and perceptions of social loafing in youth soccer, a number of challenges and limitations are inherent within this study that must be acknowledged. First, there is an obvious difficulty to examining social loafing in an interactive team-sport environment like soccer. Unlike laboratory settings where conditions can be controlled and social loafing (i.e., effort) can be measured objectively (e.g., in terms of power output [Anshel, 1995; Hardy & Crace, 1991; Hardy & Latané, 1988] or time to task completion [Høigaard, Tofteland et al., 2006; Swain, 1996; Williams et al., 1989]), observing athletes' social-loafing behaviours in real-life training and competitive interactive team-sport settings poses many obstacles for researchers, not the least of which

pertains to the difficulty of coding behaviours that may (or may not) reflect social loafing. How does a researcher determine whether or not a soccer player is actually engaged in a social-loafing strategy (where the player may appear to be giving less than maximal effort in a training- or game-situation)? Although the athlete may indeed be socially loafing, it is possible that the athlete may simply be fatigued or injured and is attempting to recover physically. Alternatively, the athlete may have made a strategic decision to conserve energy believing that maximal effort is no longer necessary to achieve the desired tactical objective in that particular setting. In an effort to overcome these measurement barriers, some researchers have developed self-report measures of social loafing in sport (see Høigaard et al., 2010; Høigaard, Säfvenbom et al., 2006) that do not require observational measure of social loafing. In a similar vein, the current study attempted to develop a measure of athletes' attitudes towards the acceptability of social-loafing behaviours in soccer (i.e., the SLAQ), with the goal of making inferences about the underlying reasons why athletes may justify the use of social-loafing behaviours in youth soccer.

The SLAQ was developed with the intention of measuring two potential reasons that may underlie an athlete's decision to engage in social-loafing behaviours in sport. These reasons were labelled *blame avoidance* (i.e., a decrease in effort made in order to avoid or reduce blame for group or personal failure) and *effort management* (i.e., a decrease in effort in a group setting/task stemming from the desire to save effort for a future task when the individual knows that he/she will be acting alone or in a high identifiability situation where maximum social

benefit is likely to occur). Although expert (academic) raters were able to identify and differentiate between these potential constructs/reasons (see Table 1), results of the exploratory factor analysis conducted upon the athletes' SLAQ responses indicated that the athletes did not appear to differentiate between these two constructs (see Table 3). Consequently, the SLAQ could only be used to make inferences about athletes' overall acceptance of social-loafing behaviours in soccer, and no inferences could be made about different reasons why athletes may engage in social-loafing strategies. More research is required to determine if the unidimensional factorial composition of the SLAQ that emerged in this study was an idiosyncratic feature of the current sample or if this unidimensional structure is stable across independent samples of athletes from different age groups, competitive levels, and sports.

As with any study that attempts to investigate social loafing using self-report procedures, threats to validity are always present due to social desirability response bias. In competitive sport, from a young age, athletes are repeatedly taught to try their hardest and to give their best effort. Social loafing, by definition, requires that an individual gives less than maximal effort in a group setting where maximum effort is expected. Thus, in a team sport like soccer, to admit or show approval towards social-loafing behaviours would be viewed by those involved in the performance environment as a violation of the accepted social/performance conventions of the sport. Consequently, athletes may have responded to the social-loafing items in the questionnaires (i.e., PSLQ and SLAQ) in a manner consistent with how they have been taught and how they wanted to be

viewed by others. Nevertheless, despite this obvious threat to validity, it should still be noted that variability in PSLQ and SLAQ scores was observed and that theoretically interpretable relationships between perfectionism and perceptions of social loafing were obtained. These results indicate that validity threats based on social desirability response bias may not be insurmountable when measuring social loafing with self-report measures.

Another potential limitation that should be acknowledged pertains to the unbalanced proportion of girls and boys in the current sample. While more boys' teams were contacted than girls' teams during the study, permission to collect data was obtained from only four boys' teams compared to 12 girls' teams. The reason why response rates from girls' teams were so much higher than boys' teams is unclear and may warrant further investigation. However, despite the large difference between the number of female and male participants, it should be reinforced that statistical analyses revealed no significant gender differences on any of the social loafing and perfectionism variables that were measured in the study.

Although results from this study indicate that the SLAQ has good psychometric characteristics (in terms of factor structure and internal consistency) and appears to provide insight into athletes' perceptions of social loafing (as indicated by the expert judges), it must be acknowledged that the items in the SLAQ are specific to the sport of soccer and should be interpreted within that context. In other words, generalizations about youth athletes' perceptions towards the acceptability of social loafing in other sports must be made cautiously. It

should also be noted that the current sample of athletes competed at the highest competitive levels of organized age-group soccer in the province, therefore, it is possible that results were influenced by the competitive level of the sport in which the athletes participated. Recent research on perfectionism, for example, has indicated that increased levels of perceived competence are associated with increased levels of perfectionism in sport (see Dunn et al., in press; McArdle, 2010), and it might be expected that heightened perceived competence will occur in athletes who participate in higher competitive levels of sport. As such, it is possible that perfectionist tendencies may change as athletes move between different competitive levels which, in turn, may influence relationships between perfectionism and social loafing. Similarly, perceptions of social loafing may change as a function of competitive level given that athletes involved in higher competitive levels would likely be less accepting of social-loafing behaviours (due to the increased emphasis that is placed upon winning at higher levels and the increased effort that success requires). Without additional research to investigate whether age, sport type, and competitive level have an impact upon the relationships between perfectionism and social loafing, caution should be taken when making generalizations from this study to other team sports, age groups, and competitive levels.

Another aspect of sport that might be considered in future social loafing research relates to the number of participants who are actively competing on a team at any one time. For example, team sports such as hockey or basketball have a much smaller number of athletes in the field of play at any one time compared

to soccer. This decreased number of players can result in an increase in the identifiability of competitors which would likely cause athletes to become more reluctant to engage in social-loafing behaviours (see Hardy, 1990). Further research is needed to determine what effect team size might have upon athletes' social-loafing behaviours in interactive team sports.

The fact that athletes were never actually asked to provide information about their own social-loafing behaviours in soccer is another limitation of the current study. As noted previously in the methods section, this was a deliberate research decision that was done with the intention of minimizing social desirability response bias that may have influenced the validity of the data. Although measuring athletes' perceptions of the acceptability of social-loafing behaviours in other athletes allows for some insight regarding the respondents' attitudes towards social loafing in soccer, the SLAQ clearly does not provide a direct measure of personal social loafing. To this end, Høigaard and colleagues (2010) recently modified the PSLQ to create the Self-Report Social Loafing Questionnaire (SRSLQ), which directly asks respondents to indicate their own social-loafing tendencies in sport. However, the SRSLQ has only been used in one published study, therefore psychometric and validity evidence supporting the usefulness and trustworthiness of the instrument as a direct measure of self-reported social-loafing tendencies in sport is still largely unknown. Future research is needed to investigate the degree to which social desirability response bias potentially undermines the validity of inferences that can be made about social loafing from measures that ask athletes about their own social-loafing

tendencies versus their perceptions of other peoples' social-loafing tendencies.

Future research may also wish to consider asking coaches who are very familiar with their athletes to provide information about their athletes' social-loafing tendencies; these responses could then be compared with athletes' self-report data to determine if similar conclusions about athletes' social-loafing tendencies could be reached from the results of the two procedures. The challenge for researchers is to determine whether or not athletes would be willing to admit or acknowledge their own social-loafing tendencies in sport with a self-report measure. Measuring perceptions of social loafing through items that indirectly inquire about athletes' attitudes and beliefs about social-loafing behaviours (i.e., the SLAQ) may yet prove to be one of the most effective ways for researchers to investigate social loafing in interactive team-sport settings.

This study examined perfectionism in sport using the Sport-MPS-2. However, it should be acknowledged that other established facets of perfectionism (that could theoretically relate to social loafing in sport) are not measured by the Sport-MPS-2. For example, Hewitt and Flett's (1991) Multidimensional Perfectionism Scale (HF-MPS) measures a facet of perfectionism that is labelled *other-oriented perfectionism* (OOP). The OOP subscale measures the extent to which an individual holds and expects high standards for others. It would seem logical to hypothesize that athletes who have high OOP in sport may have an increased tendency to perceive that other athletes in the performance environment fail to give the appropriate levels of effort in competition and training, and might therefore have a tendency to perceive that

teammates are more inclined to engage in social-loafing behaviours. Further research is obviously required to assess the validity of this hypothesis.

Recently, Gucciardi and his colleagues (2012) suggested that there is a need for more person-centered approaches to study differences between adaptive and maladaptive perfectionists across motivational variables in sport. Future research may therefore employ person-centered approaches (e.g., using cluster analytic techniques, see Gotwals, 2011; Gucciardi et al., 2012; Sapieja et al., 2010) to determine if social loafing differences exist between group/clusters of maladaptive and adaptive perfectionist athletes. Studies in sport that have utilized person-centered approaches have identified differences in a variety of motivational variables between maladaptive perfectionists, adaptive perfectionists, and non-perfectionists (see Gotwals, 2011; Gucciardi et al., 2012; Sapieja et al., 2010). Non perfectionists are defined as those people who have low perfectionist strivings combined with low perfectionists concerns (Stoeber & Otto, 2006). The current study did not identify any profile of non-perfectionism and therefore does not shed any light on attitudes that non-perfectionists may hold towards social loafing in sport.

Conclusions

Despite the aforementioned limitations (and challenges) to studying social loafing with self-report procedures in an interactive team-sport setting, the current study is the first to establish empirical links between the personality trait of perfectionism and social loafing in sport. Although the magnitude of all significant correlations between perfectionism and perceived social-loafing

variables was quite small, the fact that these correlations emerged, and that they were largely interpretable from a theoretical perspective suggests that perfectionism is a personality trait worth considering in future social-loafing research.

The findings from the current study have potentially important applied implications for coaches and sport psychology practitioners who work with athletes in team-sport settings. Knowing that an athlete's perfectionist orientation may be associated with (or influence) perceptions of social loafing in sport, it may be possible for coaches and sport psychologists to minimize the negative influence that certain perfectionist orientations may have upon social-loafing tendencies for athletes in team sports. Identifying athletes' perfectionist orientations and educating athletes about the potential dangers of endorsing social-loafing behaviours in sport may have beneficial outcomes for performance. Steps can also be taken by coaches and sport psychologists to create environments that help minimize the attractiveness of social loafing by increasing the identifiability of athletes or by increasing the importance that athletes place upon giving maximal effort in both training and competitive settings (see Hardy, 1990; Karau & Williams, 1993).

Social loafing has been shown to be a robust and pervasive phenomenon in sport- (Anshel, 1995; Hardy, 1990; Hardy & Crace, 1991; Hardy & Latané, 1988; Høigaard et al., 2010; Høigaard & Ommundsen, 2007; Høigaard, Säfvenbom et al., 2006; Høigaard, Tofteland et al., 2006; Swain, 1996; Williams et al., 1989) and non-sport domains (see Karau & Williams, 1993 for a review)

where people work collectively towards the pursuit of team goals. However, research on social loafing in interactive team-sport settings has been largely ignored. This study demonstrates the important role that personality may play in the social-loafing process—with specific attention to the personality trait of perfectionism in sport—and may pave the way for future investigations of social loafing in interactive team-sport settings. Understanding factors that can potentially influence social loafing in sport will ultimately give coaches and sport psychology practitioners a better chance of eradicating the deleterious effects that social loafing can have upon athletic performance. It is hoped that this study will provide an initial step in this direction by highlighting the need to consider athletes' perfectionist orientations when examining social loafing in sport.

Chapter 5

References

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Appendices

Appendix A

Demographic Questionnaire

Please provide the following background information.

1. Age:_____years, _____months
2. Gender (circle): Male Female
3. What position do you **most often** play on this team? _____
4. How many years have you been playing soccer competitively? _____
5. Identify (circle) your ethnic background:
    a. White
    b. Black
    c. Hispanic
    d. Asian
    e. First Nations
    f. Other: _____

- **There are no right or wrong answers to any of the questionnaires, just answer honestly.**
- **Results are completely confidential. No one else will see your responses.**
- **To keep questionnaires anonymous, your name will never be recorded, and no one will be able to tell which questionnaire you completed.**
- **Please take the time to read the instructions on each questionnaire.**

Appendix B

Competitive Orientations Scale (Sport-MPS-2)

INSTRUCTIONS The purpose of this questionnaire is to identify how players view certain aspects of their competitive experiences in sport. Please help us to more fully understand how players view a variety of their competitive experiences by indicating the extent to which you **agree or disagree** with the following statements. (Circle one response option to the right of each statement). Some of the questions relate to your sport experiences in general, while others relate specifically to experiences on the team that you have most recently played with. **There are no right or wrong answers** so please don't spend too much time on any one statement; simply choose the answer that best describes how you view each statement.

	To what extent do you agree or disagree with the following statements?	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1.	If I do not set the highest standards for myself in my sport, I am likely to end up a second-rate player.	1	2	3	4	5
2.	Even if I fail slightly in competition, for me, it is as bad as being a complete failure.	1	2	3	4	5
3.	I usually feel uncertain as to whether or not my training effectively prepares me for competition.	1	2	3	4	5
4.	My parents set very high standards for me in my sport.	1	2	3	4	5
5.	On the day of competition I have a routine that I try to follow.	1	2	3	4	5
6.	I feel like my coach criticizes me for doing things less than perfectly in competition.	1	2	3	4	5
7.	In competition, I never feel like I can quite meet my parents' expectations.	1	2	3	4	5
8.	I hate being less than the best at things in my sport.	1	2	3	4	5
9.	I have and follow a pre-competitive routine.	1	2	3	4	5
10.	If I fail in competition, I feel like a failure as a person.	1	2	3	4	5
11.	Only outstanding performance during competition is good enough in my family.	1	2	3	4	5
12.	I usually feel unsure about the adequacy of my pre-competition practices.	1	2	3	4	5
13.	Only outstanding performance in competition is good enough for my coach.	1	2	3	4	5
14.	I rarely feel that my training fully prepares me for competition.	1	2	3	4	5

	To what extent do you agree or disagree with the following statements?	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
15.	My parents have always had higher expectations for my future in sport than I have.	1	2	3	4	5
16.	The fewer mistakes I make in competition, the more people will like me.	1	2	3	4	5
17.	It is important to me that I be thoroughly competent in everything I do in my sport.	1	2	3	4	5
18.	I follow pre-planned steps to prepare myself for competition.	1	2	3	4	5
19.	I feel like I am criticized by my parents for doing things less than perfectly in competition.	1	2	3	4	5
20.	Prior to competition, I rarely feel satisfied with my training.	1	2	3	4	5
21.	I think I expect higher performance and greater results in my daily sport-training than most players.	1	2	3	4	5
22.	I feel like I can never quite live up to my coach's standards.	1	2	3	4	5
23.	I feel that other players generally accept lower standards for themselves in sport than I do.	1	2	3	4	5
24.	I should be upset if I make a mistake in competition.	1	2	3	4	5
25.	In competition, I never feel like I can quite live up to my parents' standards.	1	2	3	4	5
26.	My coach sets very high standards for me in competition.	1	2	3	4	5
27.	I follow a routine to get myself into a good mindset going into competition.	1	2	3	4	5
28.	If a team-mate or opponent (who plays a similar position to me) plays better than me during competition, then I feel like I failed to some degree.	1	2	3	4	5
29.	My parents expect excellence from me in my sport.	1	2	3	4	5
30.	My coach expects excellence from me at all times: both in training and competition.	1	2	3	4	5
31.	I rarely feel that I have trained enough in preparation for a competition.	1	2	3	4	5

	To what extent do you agree or disagree with the following statements?	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
32.	If I do not do well all the time in competition, I feel that people will not respect me as an athlete.	1	2	3	4	5
33.	I have extremely high goals for myself in my sport.	1	2	3	4	5
34.	I develop plans that dictate how I want to perform during competition.	1	2	3	4	5
35.	I feel like my coach never tries to fully understand the mistakes I sometimes make.	1	2	3	4	5
36.	I set higher achievement goals than most athletes who play my sport.	1	2	3	4	5
37.	I usually have trouble deciding when I have practiced enough heading into a competition.	1	2	3	4	5
38.	I feel like my parents never try to fully understand the mistakes I make in competition.	1	2	3	4	5
39.	People will probably think less of me if I make mistakes in competition.	1	2	3	4	5
40.	My parents want me to be better than all other players who play my sport.	1	2	3	4	5
41.	I set plans that highlight the strategies I want to use when I compete.	1	2	3	4	5
42.	If I play well but only make one obvious mistake in the entire game, I still feel disappointed with my performance.	1	2	3	4	5

Appendix C

PSLQ

The next questions are raised to identify the effort of the team members

Please indicate your *level of agreement*	**Strongly Disagree**				**Strongly Agree**
1. Members of my team are trying as hard as they can.	1	2	3	4	5
2. Members of my team are "free-loaders" (they let others do the work for them).	1	2	3	4	5
3. Members of my team contribute less than I anticipated.	1	2	3	4	5
4. Given their abilities, my team members are doing the best they can.	1	2	3	4	5
5. Members of my team try to "hide behind others" so that they don't need to try as hard as they could.	1	2	3	4	5

Appendix D

SLAQ

Instructions: The purpose of this questionnaire is to identify how acceptable the athletes' behaviours are in each situation. Please indicate the extent to which you find the behaviour in each of the following scenarios **acceptable**. (Circle one response option below each scenario). **There are no right or wrong answers** so please do not spend too much time on any one scenario; simply choose the answer that best describes how you view each scenario.

Scenario 1

Kim's coach typically waits until the end of practice to conduct physical fitness training with the team. This training usually requires players to sprint around the field in a single large group, which is followed by wind-sprint races against one other player. Kim saves giving maximal effort for when she sprints against one player believing that the winners of the one-on-one sprints receive the most recognition from the coach following each race.

To what extent is Kim's behaviour in the above situation acceptable:

Never Rarely Occasionally Sometimes Often Very Often Always

Scenario 2

Rob knows that his team captain has a tendency to single out players and to blame them when the captain's team loses during scrimmages at practice. Whenever Rob is on the captain's team at practice and it appears that his team will lose the scrimmage, Rob makes less of an effort to get actively involved in the play believing that this will decrease the likelihood of drawing the captain's attention.

To what extent is Rob's behaviour in the above situation acceptable:

Never Rarely Occasionally Sometimes Often Very Often Always

Scenario 3

Jan's teammates almost always single out the great offensive plays that happen during practice. Knowing this, Jan tends to save giving maximal effort during practice for offensive situations rather than defensive situations.

To what extent is Jan's behaviour in the above situation acceptable:

Never Rarely Occasionally Sometimes Often Very Often Always

Instructions: The purpose of this questionnaire is to identify how acceptable the athlete's behaviour is in each situation. Please indicate the extent to which you find the behaviour in each of the following scenarios **acceptable**. (Circle one response option below each scenario). **There are no right or wrong answers** so please do not spend too much time on any one scenario; simply choose the answer that best describes how you view each scenario.

Scenario 4

Tim knows his parents usually show up early to watch the end of practice. Tim saves giving maximal effort until this time in the practice when he knows his parents will be watching him.

To what extent is Tim's behaviour in the above situation acceptable:

Never Rarely Occasionally Sometimes Often Very Often Always

Scenario 5

Bob's coach has just introduced a new drill during practice which all the players find confusing. When the players are lining up to start the drill Bob allows his teammates to go first because he does not want to risk being the player who messes up the drill.

To what extent is Bob's behaviour in the above situation acceptable:

Never Rarely Occasionally Sometimes Often Very Often Always

Scenario 6

The coach has been upset with Tom's recent performances. Tom decides to hold back from aggressively seeking out the ball during practice scrimmages to decrease the likelihood of drawing the coach's attention to his play.

To what extent is Tom's behaviour in the above situation acceptable:

Never Rarely Occasionally Sometimes Often Very Often Always

Scenario 7

Ann believes that her coach values defensive play more than offensive play. Therefore, during practice, Ann saves a little effort during offensive situations so that she can give maximal effort during defensive situations.

To what extent is Ann's behaviour in the above situation acceptable:

Never Rarely Occasionally Sometimes Often Very Often Always

Instructions: The purpose of this questionnaire is to identify how acceptable the athlete's behaviour is in each situation. Please indicate the extent to which you find the behaviour in each of the following scenarios **acceptable**. (Circle one response option below each scenario). **There are no right or wrong answers** so please do not spend too much time on any one scenario; simply choose the answer that best describes how you view each scenario.

Scenario 8

Pam is feeling responsible for missing a late scoring opportunity to win the previous game. At the following practice, Pam's coach creates a shooting drill that requires the team to score at least 5 goals in a 2-minute period. Failure to score the 5 goals will result in the team running wind-sprints as punishment. With time remaining for one last shot in the drill, the team must score to avoid the punishment. Although Pam and one of her teammates have an equal opportunity to score, to avoid the risk of missing the shot that may cause the team to run the wind-sprints, Pam backs off to allow her teammate to take the final shot.

To what extent is Pam's behaviour in the above situation acceptable:

Never Rarely Occasionally Sometimes Often Very Often Always

Scenario 9

During scrimmage situations, Joe saves giving maximal effort for when he knows the coach is specifically watching his performance.

To what extent is Joe's behaviour in the above situation acceptable:

Never Rarely Occasionally Sometimes Often Very Often Always

Scenario 10

Amy's coach sets up a drill that requires all players to take a turn kicking with their non-dominant (weaker) foot. Amy attempts to avoid taking this role in the drill because she does not want to be responsible for causing the drill to fail.

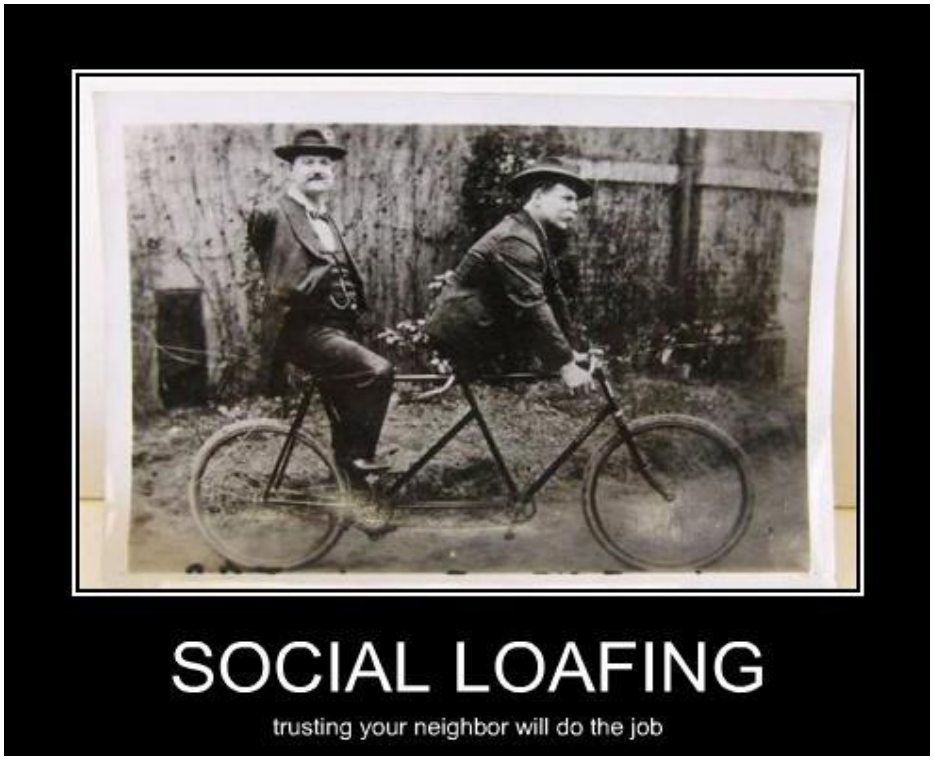
To what extent is Amy's behaviour in the above situation acceptable:

Never Rarely Occasionally Sometimes Often Very Often Always

Appendix E

Content Relevance Questionnaire

Thank you for agreeing to participate in this study. The purpose of this questionnaire is to get your expert opinion as to how well you think ten sport-specific training scenarios relate to two ***psychological reasons*** why athletes sometimes give less than maximal effort (or withdraw from an activity) when training with their teammates. This questionnaire focuses on the psychological phenomenon known as **social loafing** which will be described in more detail on page 3. Each scenario describes a situation in the sport of soccer. However, you do not need to have any soccer expertise to understand the psychological reason why the athlete described in each scenario gives less than maximal effort or withdraws from the activity. We simply want to know how well you, as an expert, feel the ten scenarios/items measure the psychological reasons we are attempting to study.



This questionnaire will take approximately 20 minutes to complete. Due to your level of expertise and knowledge in the social sciences, sport psychology, and/or the instrument validation process, your assessment of the scenarios is very important to us. Please carefully read and follow the instructions in each section.

If you have any questions regarding any aspect of this questionnaire or this study, please feel free to contact Matt Vaartstra or Dr. John Dunn through e-mail at **mvaartst@ualberta.ca** or **john.dunn@ualberta.ca** respectively.

After you have rated all the scenarios, please return the completed questionnaire to me (Matt Vaartstra) at your earliest convenience by email (**mvaartst@ualberta.ca**) or by mail to **"Dr. John Dunn, E-488 Van Vliet Centre, Faculty of Physical Education & Recreation, University of Alberta, Edmonton, AB, T6G 2H9".**

Demographic Questionnaire

1. Gender: Male / Female (please circle the appropriate response)

2. What is the highest academic degree that you have attained (e.g., B.Sc., M.A., PhD)? _____

3. What is the name of your faculty/department? _____

4. What is your academic rank (e.g., lecturer, assistant professor, associate professor, full professor)?

   _____

5. Would you like a copy of the overall results of the expert-judges' ratings upon the completion of the project? Yes / No

Part A

Instructions: Listed below are definitions of the psychological phenomenon known as social loafing. Please take a moment to **read over** and familiarize yourself with these definitions before proceeding to the next section.

Social Loafing:

> Social loafing is the reduction in motivation and effort put forward by individuals when they work collectively on a task compared to when they work individually on a task (Karau & Williams, 1993). Simply put, social loafing refers to the situation when individuals put forth less effort when working as part of a group than when working alone (Latané, Williams, & Harkins, 1979). This reduction in effort may also include withdrawal from (or avoidance of) a group activity in which the individual's participation (and maximum effort) is expected.
>
> An example that is frequently used to illustrate the concept of social loafing is a rope pulling task where individuals are asked to pull on a rope with maximal effort when working alone or when working with others as part of a team. Research has shown that many individuals give maximal effort when pulling the rope on their own but reduce their effort when pulling on the rope as part of a team.

A number of reasons have been proposed as to why social loafing occurs. Two of those reasons have been labelled as ***Blame Avoidance*** and ***Effort Management***. The definitions of *blame avoidance* and *effort management* are shown below.

Blame Avoidance:

> *Blame avoidance* is a decrease in effort made by an individual in a group setting/task in order to avoid or reduce personal blame for group or personal failure. Sometimes termed "hiding in the crowd", *blame avoidance* describes situations where an individual attempts to decrease personal identifiability within the group when group or personal failure is likely.

Effort Management:

> *Effort management* is a decrease in effort in a group setting/task stemming from the desire to save effort for a future task when the individual believes that he/she will be acting alone or acting in a high identifiability situation where maximum social benefit (e.g., recognition or praise) is likely to occur.

Part B

Instructions: Listed below are 10 sport-specific scenarios that were developed to either assess ***Blame Avoidance*** or ***Effort Management*** (as defined on the previous page) in soccer practice settings. Please take a moment to read over and familiarize yourself with these scenarios.

1. Kim's coach typically waits until the end of practice to conduct physical fitness training with the team. This training usually requires players to sprint around the field in a single large group, which is followed by wind-sprint races against one other player. Kim saves giving maximal effort for when she sprints against one player believing that the winners of the one-on-one sprints receive the most recognition from the coach following each race.

2. Rob knows that his team captain has a tendency to single out players and to blame them when the captain's team loses during scrimmages at practice. Whenever Rob is on the captain's team at practice and it appears that his team will lose the scrimmage, Rob makes less of an effort to get actively involved in the play believing that this will decrease the likelihood of drawing the captain's attention.

3. Jan's teammates almost always single out the great offensive plays that happen during practice. Knowing this, Jan tends to save giving maximal effort during practice for offensive situations rather than defensive situations.

4. Tim knows his parents usually show up early to watch the end of practice. Tim saves giving maximal effort until this time in the practice when he knows his parents will be watching him.

5. Bob's coach has just introduced a new drill during practice which all the players find confusing. When the players are lining up to start the drill Bob allows his teammates to go first because he does not want to risk being the player who messes up the drill.

6. The coach has been upset with Tom's recent performances. Tom decides to hold back from aggressively seeking out the ball during practice scrimmages to decrease the likelihood of drawing the coach's attention to his play.

7. Ann believes that her coach values defensive play more than offensive play. Therefore, during practice, Ann saves a little effort during offensive situations so that she can give maximal effort during defensive situations.

8. Pam is feeling responsible for missing a late scoring opportunity to win the previous game. At the following practice, Pam's coach creates a shooting drill that requires the team to score at least 5 goals in a 2-minute period. Failure to score the 5 goals will result in the team running wind-sprints as punishment. With time remaining for one last shot in the drill, the team must score to avoid the punishment. Although Pam and one of her teammates have an equal opportunity to score, to avoid the risk of missing the shot that may cause the team to run the wind-sprints, Pam backs off to allow her teammate to take the final shot.

9. During scrimmage situations, Joe saves giving maximal effort for when he knows the coach is specifically watching his performance.

10. Amy's coach sets up a drill that requires all players to take a turn kicking with their non-dominant (weaker) foot. Amy attempts to avoid taking this role in the drill because she does not want to be responsible for causing the drill to fail.

If you plan to return this inventory by e-mail, please use the "underline" function of your word processor to identify your numerical ratings for each scenario on the following pages.

Part C

Instructions: Using the 5-point scale (1 = Poor Fit; 5 = Excellent Fit) please rate the degree to which you think the scenarios fit or match with each of the two reasons for social loafing: namely, Blame Avoidance and Effort Management.

Blame Avoidance: A decrease in effort made by an individual in a group setting/task in order to avoid or reduce personal blame for group or personal failure. Sometimes termed "hiding in the crowd", blame avoidance describes situations where an individual attempts to decrease personal identifiability within the group when group or personal failure is likely.

Effort Management: A decrease in effort in a group setting/task stemming from the desire to save effort for a future task when the individual believes that he/she will be acting alone or acting in a high identifiability situation where maximum social benefit (e.g., recognition or praise) is likely to occur.

Scenario 1

Kim's coach typically waits until the end of practice to conduct physical fitness training with the team. This training usually requires players to sprint around the field in a single large group, which is followed by wind-sprint races against one other player. Kim saves giving maximal effort for when she sprints against one player believing that the winners of the one-on-one sprints receive the most recognition from the coach following each race.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

Scenario 2

Rob knows that his team captain has a tendency to single out players and to blame them when the captain's team loses during scrimmages at practice. Whenever Rob is on the captain's team at practice and it appears that his team will lose the scrimmage, Rob makes less of an effort to get actively involved in the play believing that this will decrease the likelihood of drawing the captain's attention.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

Instructions: Using the 5-point scale (1 = Poor Fit; 5 = Excellent Fit) please rate the degree to which you think the scenarios fit or match with each of the two reasons for social loafing, namely Blame Avoidance and Effort Management.

Blame Avoidance: A decrease in effort made by an individual in a group setting/task in order to avoid or reduce personal blame for group or personal failure. Sometimes termed "hiding in the crowd", blame avoidance describes situations where an individual attempts to decrease personal identifiability within the group when group or personal failure is likely.

Effort Management: A decrease in effort in a group setting/task stemming from the desire to save effort for a future task when the individual believes that he/she will be acting alone or acting in a high identifiability situation where maximum social benefit (e.g., recognition or praise) is likely to occur.

Scenario 3

Jan's teammates almost always single out the great offensive plays that happen during practice. Knowing this, Jan tends to save giving maximal effort during practice for offensive situations rather than defensive situations.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

Scenario 4

Tim knows his parents usually show up early to watch the end of practice. Tim saves giving maximal effort until this time in the practice when he knows his parents will be watching him.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

Instructions: Using the 5-point scale (1 = Poor Fit; 5 = Excellent Fit) please rate the degree to which you think the scenarios fit or match with each of the two reasons for social loafing, namely Blame Avoidance and Effort Management.

Blame Avoidance: A decrease in effort made by an individual in a group setting/task in order to avoid or reduce personal blame for group or personal failure. Sometimes termed "hiding in the crowd", blame avoidance describes situations where an individual attempts to decrease personal identifiability within the group when group or personal failure is likely.

Effort Management: A decrease in effort in a group setting/task stemming from the desire to save effort for a future task when the individual believes that he/she will be acting alone or acting in a high identifiability situation where maximum social benefit (e.g., recognition or praise) is likely to occur.

Scenario 5

Bob's coach has just introduced a new drill during practice which all the players find confusing. When the players are lining up to start the drill Bob allows his teammates to go first because he does not want to risk being the player who messes up the drill.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

Scenario 6

The coach has been upset with Tom's recent performances. Tom decides to hold back from aggressively seeking out the ball during practice scrimmages to decrease the likelihood of drawing the coach's attention to his play.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

Instructions: Using the 5-point scale (1 = Poor Fit; 5 = Excellent Fit) please rate the degree to which you think the scenarios fit or match with each of the two reasons for social loafing, namely Blame Avoidance and Effort Management.

Blame Avoidance: A decrease in effort made by an individual in a group setting/task in order to avoid or reduce personal blame for group or personal failure. Sometimes termed "hiding in the crowd", blame avoidance describes situations where an individual attempts to decrease personal identifiability within the group when group or personal failure is likely.

Effort Management: A decrease in effort in a group setting/task stemming from the desire to save effort for a future task when the individual believes that he/she will be acting alone or acting in a high identifiability situation where maximum social benefit (e.g., recognition or praise) is likely to occur.

Scenario 7

Ann believes that her coach values defensive play more than offensive play. Therefore, during practice, Ann saves a little effort during offensive situations so that she can give maximal effort during defensive situations.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

Scenario 8

Pam is feeling responsible for missing a late scoring opportunity to win the previous game. At the following practice, Pam's coach creates a shooting drill that requires the team to score at least 5 goals in a 2-minute period. Failure to score the 5 goals will result in the team running wind-sprints as punishment. With time remaining for one last shot in the drill, the team must score to avoid the punishment. Although Pam and one of her teammates have an equal opportunity to score, to avoid the risk of missing the shot that may cause the team to run the wind-sprints, Pam backs off to allow her teammate to take the final shot.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

Instructions: Using the 5-point scale (1 = Poor Fit; 5 = Excellent Fit) please rate the degree to which you think the scenarios fit or match with each of the two reasons for social loafing, namely Blame Avoidance and Effort Management.

Blame Avoidance: A decrease in effort made by an individual in a group setting/task in order to avoid or reduce personal blame for group or personal failure. Sometimes termed "hiding in the crowd", blame avoidance describes situations where an individual attempts to decrease personal identifiability within the group when group or personal failure is likely.

Effort Management: A decrease in effort in a group setting/task stemming from the desire to save effort for a future task when the individual believes that he/she will be acting alone or acting in a high identifiability situation where maximum social benefit (e.g., recognition or praise) is likely to occur.

Scenario 9

During scrimmage situations, Joe saves giving maximal effort for when he knows the coach is specifically watching his performance.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

Scenario 10

Amy's coach sets up a drill that requires all players to take a turn kicking with their non-dominant (weaker) foot. Amy attempts to avoid taking this role in the drill because she does not want to be responsible for causing the drill to fail.

	Poor Fit	Fair Fit	Good Fit	Very Good Fit	Excellent Fit
Blame Avoidance	1	2	3	4	5
Effort Management	1	2	3	4	5

If you have any comments about the scenario's content or structure, please write them here:

After you have rated all the scenarios, please return the completed questionnaire to me (Matt Vaartstra) at your earliest convenience by email (**mvaartst@ualberta.ca**) or by mail to **"Dr. John Dunn, E-488 Van Vliet Centre, Faculty of Physical Education & Recreation, University of Alberta, Edmonton, AB, T6G 2H9".**

Appendix F

Contact Letter for Edmonton Soccer Associations

UNIVERSITY OF ALBERTA
Faculty of Physical Education and Recreation

E488 Van Vliet Centre
Edmonton, Alberta, Canada T6G 2H9

Date

Name
Association
Location
Street Address
City, Province
Zip Code

To whom it may concern:

As part of a sport psychology research program based out of the University of Alberta, we are currently conducting a study looking into youth soccer players' attitudes and experiences surrounding competition. The purpose of this letter is to ask for your permission to approach the coaches and players of U-12 through to U-16 soccer teams during the 2011/12 indoor season. The study is titled, ***Perfectionism and Perceptions of Social Loafing in Youth Soccer Players,*** and will be conducted by Matt Vaartstra (under the supervision of Dr. John Dunn) as part of Matt Vaartstra's Master's thesis. In the present study we are attempting to:

> (1) examine the relationship between athletes' perfectionist orientations and their perceptions of social loafing.

Perfectionism reflects an intense striving for the attainment of very high performance standards. Social loafing reflects the reduction in effort that sometimes occurs when individuals work in groups/teams compared to when they alone.

It is our intention that the results of the study will be used to help researchers and coaches of youth athletes to gain a better understanding of both social loafing and perfectionism. We hope that the information will ultimately be used to help practitioners and coaches identify athletes who may be prone to social loafing and thereby take action to decrease the potential effects that social loafing can have in team sports. There is currently a lack of research examining the impact that personality (e.g., perfectionist tendencies) has on athletes' tendencies to socially loaf in team sports such as soccer.

If you agree to give us permission to approach the coaches and players, we would ask for your assistance with only one administrative job: namely, provide us with the contact information of the coaches. We would then assume the responsibility of contacting the coaches for permission and then directly hand the information letters to athletes.

Procedures

In terms of the commitments that would be involved for the teams, the following is a summary of the procedures that we would employ in the Greater Edmonton region:

(1) At a team meeting, athletes would complete four brief self-report questionnaires to measure demographic characteristics, perfectionist orientations, and perceptions of social loafing. (Copies of the questionnaires have been attached for your perusal).

(2) The four questionnaires will take **no more than one 30-minute session** to complete.

(3) The questionnaires would be completed in a suitable room at each team's training facility or competition facility in the Greater Edmonton region, and would be scheduled to meet the convenience of the teams.

(4) All questionnaires will be administered by Matt Vaartstra. Matt is a second year Master's student working at the University of Alberta in the area of sport psychology under the supervision of Dr. John Dunn.

Ethical Issues

(1) It will be made clear to all athletes that their participation in the study is entirely voluntary, and that their decision to participate (or not) will have no impact upon their playing status on their respective teams.

(2) All information supplied by the players will be kept strictly confidential, and the anonymity of individual players will be ensured at all times. Only the research team will have access to individual results. Team mates, parents, and coaches will not be given access to individual results.

(3) Coaches and parents will be asked to leave the room during the time that questionnaires are completed by the athletes so that players do not feel pressure to participate.

(4) There are no inherent psychological or physical risks associated with the protocol.

(5) The study has been cleared by the Faculty Research Ethics Board at the University of Alberta. A copy of the ethics clearance is available upon request.

Copies of the information letters and consent forms that we would send to coaches, parents, and players have been attached for your examination. Parental consent will be required before a player will be allowed to participate in the study.

Retention of Data and Information Dissemination

(1) All data will be coded and stored in a locked office to which only the researchers (i.e., Matt Vaartstra and Dr. John Dunn) will have access.

(2) All data will be destroyed five years post publication (i.e., following conference presentations, journal publications, etc.).

(3) An executive report of the study's findings will be provided to INSERT ASSOCIATION, and to the coaches of the teams should they wish a copy.

(4) We will be happy to discuss, in person, any aspect of the study with members of INSERT ASSOCIATION.

(5) Participants (i.e., the athletes) can ask for a free copy of the report from the researchers when the report has been completed in the summer of 2012.

(6) A statement of recognition acknowledging the assistance of INSERT ASSOCIATION will be incorporated into presentations of the study's findings.

We hope that the preceding information clarifies our intent and procedures. Please feel free to contact Matt Vaartstra (e-mail: mvaartst@ualberta.ca) or Dr. John Dunn (780-492-2831; e-mail: john.dunn@ualberta.ca) if you have any questions or concerns about the study. Alternatively, if you wish to speak to someone who is not directly involved with this study, please contact Dr. Kelvin Jones, Chair of the Faculty Research Ethics Board, at 780-492-065.

We hope that you will consider our request to allow us to conduct the study, the results of which should make a valuable contribution to understanding the attitudes and experiences of youth soccer players in Alberta. In the event that you wish to know more about our current research program before making any decision about participation, a summary of Dr. John Dunn's research and applied sport psychology consulting work can be found at the following website: http://www.per.ualberta.ca/jdunn/

Thank you for your consideration.

Sincerely,

Matt Vaartstra, B.S. John G. H. Dunn, PhD

Appendix G

Information Letters for Coaches

UNIVERSITY OF ALBERTA
Faculty of Physical Education and Recreation

E488 Van Vliet Centre
Edmonton, Alberta, Canada T6G 2H9

Date

Coach XXX

Dear Coach,

As part of a sport psychology research program based out of the University of Alberta, we are currently conducting a study looking into youth soccer players' attitudes and experiences surrounding competition. The INSERT ASSOCIATION has given us permission to contact you. The purpose of this letter is to ask for your permission to access the players who you will be coaching on your soccer team during the 2011/12 indoor season. The study is titled, ***Perfectionism and Perceptions of Social Loafing in Youth Soccer Players,*** and will be conducted by Matt Vaartstra (under the supervision of Dr. John Dunn) as part of Matt Vaartstra's Master's thesis. In the present study we are attempting to:

> (1) examine the relationship between athletes' perfectionist orientations and their perceptions of social loafing.

Perfectionism reflects an intense striving for the attainment of very high performance standards. Social loafing reflects the reduction in effort that sometimes occurs when individuals work in groups/teams compared to when they alone.

It is our intention that the results of the study will be used to help researchers and coaches of youth athletes to gain a better understanding of both social loafing and perfectionism. We hope that the information will ultimately be used to help practitioners and coaches identify athletes who may be prone to social loafing and thereby take action to decrease the potential effects that social loafing can have in team sports. There is currently a lack of research examining the impact that personality (e.g., perfectionist tendencies) has on athletes' tendencies to socially loaf in team sports such as soccer.

If you agree to give us permission to approach the players, we would ask for your assistance with (a) scheduling a meeting with the principal investigator (Matt Vaartstra) so that he may distribute information letters and parental consent forms to the players on your team, (b) hold athletes' signed parental consent forms when they are returned by players/parents, and (c) accessing the players on your team for one 30-minute period at a time and location that best meets the needs of you and your team.

Procedures

In terms of the commitments that would be involved for your team, the following is a summary of the procedures that we would employ:

> (1) At a team meeting, athletes would complete four brief self-report questionnaires to measure demographic characteristics, perfectionist orientations, and perceptions of social loafing. (Copies of the questionnaires have been attached for your perusal).

(2) The four questionnaires will take **no more than one 30-minute session** to complete.

(3) The questionnaires will be completed in a suitable room at your team's training facility or competition facility in the Greater Edmonton region, and will be scheduled to meet the convenience of your team.

(4) All questionnaires will be administered by Matt Vaartstra. Matt is a second year Master's student working at the University of Alberta in the area of sport psychology under the supervision of Dr. John Dunn.

Ethical Issues

(1) It will be made clear to all athletes that their participation in the study is entirely voluntary, and that their decision to participate (or not) will have no impact upon their playing status on their respective team.

(2) All information supplied by the players will be kept strictly confidential, and the anonymity of individual players will be ensured at all times. Only the research team will have access to individual results. Team mates, parents, and coaches (i.e., yourself) will not be given access to individual results.

(3) Parents and coaches (i.e., yourself) will be asked to leave the room during the time that questionnaires are completed by the athletes so that players do not feel pressure to participate.

(4) There are no inherent psychological or physical risks associated with the protocol.

(5) The study has been cleared by the Faculty Research Ethics Board at the University of Alberta. A copy of the ethics clearance is available upon request.

Copies of the information letters and consent forms that we would send to parents and players have been attached for your examination. Parental consent will be required before a player will be allowed to participate in the study.

Retention of Data and Information Dissemination

(1) All data will be coded and stored in a locked office to which only the researchers (i.e., Matt Vaartstra and Dr. John Dunn) will have access.

(2) All data will be destroyed five years post publication (i.e., following conference presentations, journal publications, etc.).

(3) An executive report of the study's findings will be provided to coaches (i.e., yourself), should you wish a copy.

(4) We will be happy to discuss, in person, any aspect of the study.

(5) Participants (i.e., the athletes) can ask for a free copy of the report from the researchers when the report has been completed in the summer of 2012.

(6) A statement of recognition acknowledging the assistance your team will be incorporated into presentations of the study's findings.

We hope that the preceding information clarifies our intent and procedures. Please feel free to contact Matt Vaartstra (e-mail: mvaartst@ualberta.ca) or Dr. John Dunn (780-492-2831; e-mail:

john.dunn@ualberta.ca) if you have any questions or concerns about the study. Alternatively, if you wish to speak to someone who is not directly involved with this study, please contact Dr. Kelvin Jones, Chair of the Faculty Research Ethics Board, at 780-492-065.

We hope that you will consider our request to allow us to conduct the study, the results of which should make a valuable contribution to understanding the attitudes and experiences of youth soccer players in Alberta. I (Matt Vaartstra) will try to contact you next week either by phone or by e-mail to discuss our proposal. In the event that you wish to know more about our current research program before making any decision about participation, a summary of Dr. John Dunn's research and applied sport psychology consulting work can be found at the following website: http://www.per.ualberta.ca/jdunn/

Thank you for your consideration.

Sincerely,

Matt Vaartstra, B.S. John G. H. Dunn, PhD

Appendix H

Information Letters for Parents

UNIVERSITY OF ALBERTA

Faculty of Physical Education and Recreation

E488 Van Vliet Centre
Edmonton, Alberta, Canada T6G 2H9

Date

Dear Parent/Guardian,

The purpose of this letter is to ask for your permission to allow your son/daughter to participate in a research project (titled, ***Perfectionism and Perceptions of Social Loafing in Youth Soccer Players***) that is being conducted by Matt Vaartstra, Dr. John Dunn, and Dr. Nick Holt from the University of Alberta (U of A). This study is part of Matt Vaartstra's Master's thesis in the area of sport psychology.

The purpose of this study is to examine whether athletes social loafing tendencies are associated with certain personality characteristics (namely, perfectionism) of youth soccer players. Perfectionism reflects an intense striving for the attainment of very high performance standards. Social loafing reflects the reduction in effort that sometimes occurs when individuals work in groups/teams compared to when they alone.

Although the results of this study will have no immediate benefits for you and your child, it is hoped that the information obtained will ultimately be used by coaches, parents, or sport psychologists to help them better understand how different personality characteristics may affect the social loafing tendencies in youth athletes. We hope that the information will ultimately be used to help practitioners and coaches identify athletes who may be prone to social loafing and thereby take action to decrease the potential effects that social loafing can have in team sports. There is currently a lack of research examining the impact that personality (e.g., perfectionist tendencies) has on athletes' tendencies to socially loaf in team sports such as soccer.

Should you agree to let your child participate in the study, he/she would be asked to commit 30 minutes of his/her time to complete four questionnaires. The questionnaires would be completed in a locker room setting at a team meeting scheduled by your child's head coach. The questionnaires would ask your child to provide information about his/her playing experiences, his/her motives and goals in soccer, and how he/she perceives his/her parents' parenting practices. To ensure confidentiality and anonymity, he/she will *not* be asked to put his/her name on any questionnaires, and no individual information will be shared with players, coaches, and parents at any time. All data will be coded and stored in a locked office at the U of A. Only the three researchers (Matt Vaartstra, Dr. John Dunn, and Dr. Nick Holt) will have access to your child's individual information. There are no known psychological or physical risks inherent with the research process.

Please understand that your child's participation in the study is voluntary. You or your child may decline to participate or withdraw from the study at any time, for any reason, without consequence. Should you or your child decide to withdraw or not participate, the decision can be expressed either verbally or in writing to any member of the research team at any time. Your child's information would then be removed from the study upon your request.

The study has been approved by the Faculty Research Ethics Board at the University of Alberta, the INSERT ASSOCIATION, and by the head coach of your team. However, your child is in no way obliged to participate in the study. Failure to participate in the study will have no bearing on your child's playing involvement with his/her team. Your child's coaches will not know if he/she participates in the study or not. Coaches and parents will not be present in the room during the time your child completes the questionnaires. Normally, information is retained for a period of five years following any publication of the group information (e.g., conference presentation or journal publication), after which time all individual information will be destroyed. You can obtain a free copy of the final report by contacting Matt Vaartstra, Dr. John Dunn, or Dr. Nick Holt when the study is completed in the summer of 2012.

Please feel free to contact Matt Vaartstra (e-mail: mvaartst@ualberta.ca), Dr. John Dunn (780-492-2831; e-mail: john.dunn@ualberta.ca), or Dr. Nick Holt (780-492-7386; e-mail: nicholas.holt@ualberta.ca) if you have any questions or concerns about the study. Alternatively, if you wish to speak to someone who is not directly involved with this study, please contact Dr. Kelvin Jones, Chair of the Faculty Research Ethics Board, at 780-492-065.

Given that your child will be under 18 years of age when he/she completes the questionnaires, we are required to have your written consent before he/she will be allowed to participate. If you are willing to let your child participate, please complete the yellow consent form and return it to YOUR CHILD'S HEAD COACH at your earliest convenience. Your child will not be permitted to participate in the study if a signed copy of the yellow consent form is not returned to the coach.

We hope that you will consider this request to let your child participate in the study. Your child will be assisting with the development of scientific knowledge pertaining to the psychological characteristics of Canadian youth soccer players. We want to reinforce that we would only need your child for one 30-minute session when he/she is with his/her team in the Greater Edmonton region. In the event that you or your child wish to know more about our current research program before making any decision about participation, a summary of Dr. John Dunn's research and applied sport psychology consulting work can be found at the following website: http://www.per.ualberta.ca/jdunn/

Thank you for your time and consideration.

Sincerely,

Matt Vaartstra, B.S. Dr. John Dunn, PhD Dr. Nick Holt, PhD

Appendix I

Parental Consent Form

UNIVERSITY OF ALBERTA

Faculty of Physical Education and Recreation

E488 Van Vliet Centre
Edmonton, Alberta, Canada T6G 2H9

Title of Project: ***Perfectionism and Perceptions of Social Loafing in Youth Soccer Players***

Principal Investigators: ***Matt Vaartstra, e-mail: mvaartst@ualberta.ca***
Dr. John Dunn, University of Alberta, Tel. 780-492-2831, e-mail: john.dunn@ualberta.ca
Dr. Nick Holt, University of Alberta, Tel. 780-492-7386, e-mail: nicholas.holt@ualberta.ca

Part 2 (TO BE COMPLETED BY THE PARENT/GUARDIAN OF THE PARTICIPANT):

Name of participant for whom consent is being granted:

_____ (please print)

Do you understand that your child has been asked to be in a research study?	Yes	No
Have you read and received a copy of the attached Information Sheet?	Yes	No
Do you understand the benefits and risks involved in taking part in this research study?	Yes	No
Do you understand that your child is free to refuse to participate, or to withdraw from the study at any time, without consequence, and that your child's information will be withdrawn at his/her request?	Yes	No
Do you understand that you are free to (1) refuse to allow your child to participate, and (2) withdraw your child's participation at any time, without consequence, and that your child's information will be removed from the study at your (or his/her) request?	Yes	No
Has the issue of confidentiality been explained to you? Do you understand who will have access to your information?	Yes	No

If you have any questions or concerns regarding this study, you can contact any of the investigators whose names have been provided above. If you wish to speak to someone who is not directly involved with this study, please contact Dr. Kelvin Jones, Chair of the Faculty Research Ethics Board, at 780-492-065.

_____

Signature of Participant's Parent/Guardian Date

_____

Printed Name

- **If you wish to allow your child to participate in the study**, **PLEASE RETURN TO HEAD COACH.**

- *Participants can contact Matt Vaartstra, Dr. John Dunn, of Dr. Nick Holt for a free summary of the results in the summer of 2012, following the completion of the data analysis phase of the study.*

Appendix J

Questionnaire Assessment Procedure

Immediately prior to completing the questionnaires, the researcher reminded participants that there were no right or wrong answers and that the questionnaires were not tests that were graded. Coaches and parents were asked to leave the room, and athletes were then reminded that no one other than the researcher was going to see their individual responses. Specifically, the athletes were told that their coaches, parents, and other teammates would not see any of the individual data at any time. Additionally, athletes were instructed to refrain from putting their name on the questionnaires (thereby ensuring anonymity) and to answer all questions as honestly as possible. Athletes were also asked to refrain from talking with their teammates after the first page of demographic information had been completed to ensure that each athlete responded to the items individually. Athletes were informed that their participation was important to research in the area of youth soccer, and that their participation was greatly appreciated by the researcher. Finally, athletes were encouraged to seek the researchers help if they needed assistance or clarification when answering any of the questionnaires.

Appendix K

Psychometric Evaluation of the PSLQ and Sport-MPS-2

Although the PSLQ has been used in previous research (see Høigaard, 2006; Høigaard et al., 2010; Høigaard & Ommundsen, 2007; Høigaard, Säfvenbom, et al., 2006), an investigation of its latent structure was nevertheless conducted to ensure that the instrument was functioning in accordance with theoretical expectations in this study. The correlation matrix of the male and female PSLQ responses was therefore examined using a Principal Axes exploratory factor analysis (EFA). Cattell's (1978) scree-test (see Figure K1) and the results of a parallel analysis (see Table K1) clearly indicated the retention of one factor. As seen in Table K2, all items had factor loadings > .30 on the retained factor, supporting previous research that has proposed a unidimensional structure for the instrument (Høigaard, Säfvenbom, et al., 2006).

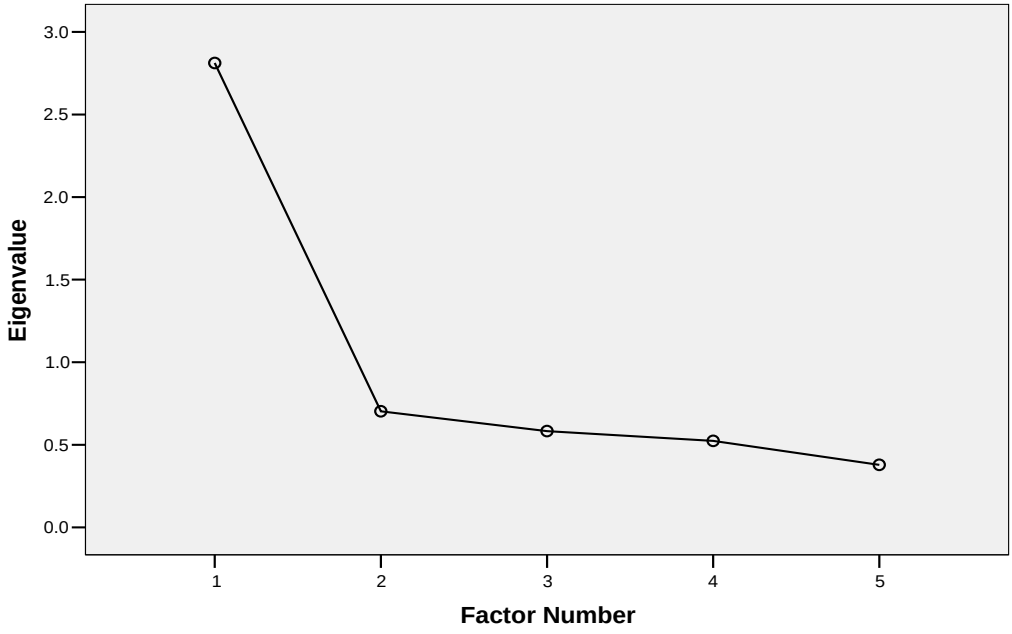


Figure K1. Scree plot of eigenvalues corresponding to factors following the Principal Axes analysis of PSLQ data.

Table K1

Eigenvalues from Exploratory Factor Analysis (EFA) of PSLQ Data and Corresponding Parallel Analysis

Factor	Eigenvalue from EFA	Eigenvalue from Parallel Analysis
1.	2.81	1.19
2.	0.71	1.08
3.	0.58	1.00
4.	0.52	0.91
5.	0.38	0.82

Table K2

Factor Loadings from Principal Axes Factor Analysis of PSLQ Data

		Coefficients
Item		F1
1.	Members of my team are trying as hard as they can.	.72
2.	Members of my team are "free-loaders" (they let others do the work for them).	.67
3.	Members of my team contribute less than I anticipated.	.64
4.	Given their abilities, my team members are doing the best they can.	.75
5.	Members of my team try to "hide behind others" so that they don't need to try as hard as they could.	.59

To ensure that the Sport-MPS-2 was also functioning in accordance with theoretical expectations, the latent structure of the instrument was examined. The correlation matrix of the male and female Sport-MPS-2 responses was examined

using a Principal Axes exploratory factor analysis (EFA). In accordance with theory, Cattell's (1978) scree-test (see Figure K2) and the results of a parallel analysis (see Table K3) clearly indicated the retention of six factors. As seen in Table K4, following a direct oblimin rotation (delta = 0) all items had pattern coefficients > .30 (with the exception of Item 1) on the intended factor and almost all items demonstrated adequate simple structure (Thurstone, 1947). The factorial composition and factor structure of the instrument clearly reflect the six factors/subscales that previous research has identified (Gotwals & Dunn, 2009; Gotwals et al., 2010); these factors were labelled concern over mistakes (factor 1), organization (factor 2), perceived parental pressure (factor 3), personal standards (factor 4), doubts about actions (factor 5), and perceived coach pressure (factor 6).

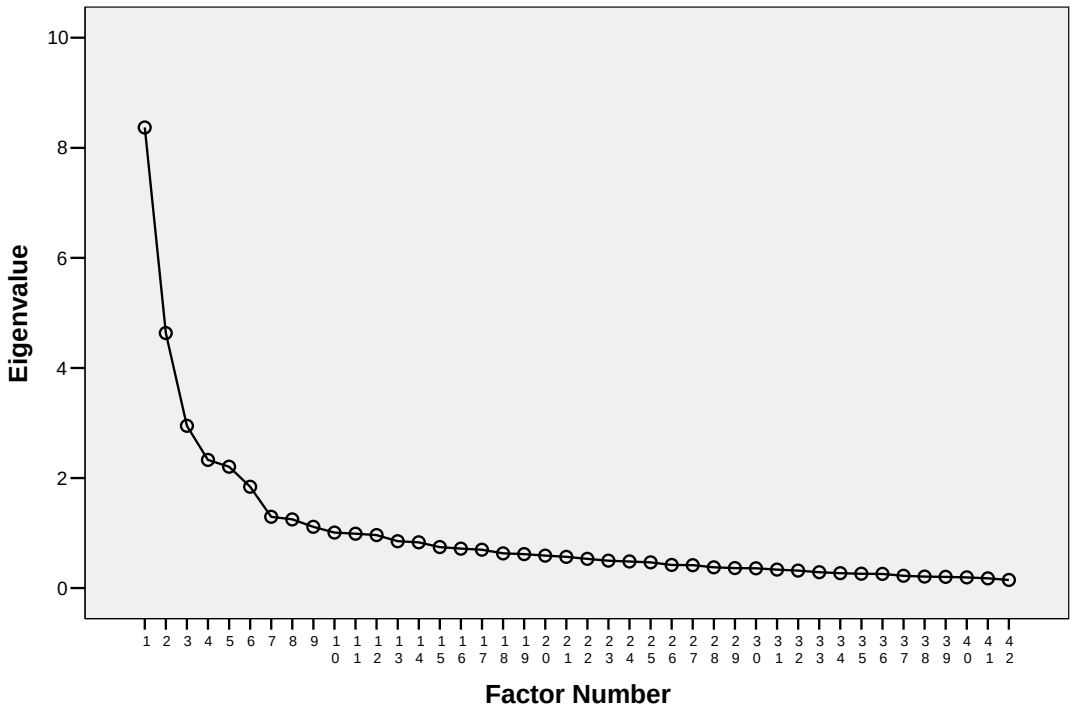


Figure K2. Scree plot of eigenvalues corresponding to factors following the Principal Axes analysis of Sport-MPS-2 data.

Table K3

Eigenvalues from Exploratory Factor Analysis (EFA) of Sport-MPS-2 Data and Corresponding Parallel Analysis

Factor	Eigenvalue from EFA	Eigenvalue from Parallel Analysis
1.	8.37	1.96
2.	4.63	1.85
3.	2.95	1.76
4.	2.33	1.69
5.	2.21	1.63
6.	1.84	1.57
7.	1.30	1.51

Table K4

Pattern Matrix from Principal Axes Factor Analysis of Sport-MPS-2 Data Following a Direct Oblimin Rotation

Item	Anticipated Factor	F1	F2	F3	F4	F5	F6
39	COM	.70					
2	COM	.61					
32	COM	.60					
24	COM	.59					
10	COM	.54					
16	COM	.50					
42	COM	.42					
28	COM	.36					
18	ORG		.87				
5	ORG		.86				
27	ORG		.79				
9	ORG		.78				
41	ORG		.49				
34	ORG		.40		.32		
19	PPP			.78			
4	PPP			.72			
29	PPP			.71			
25	PPP			.71			
7	PPP			.68			
40	PPP			.63			
11	PPP			.63			
15	PPP			.60			
38	PPP			.54			
36	PS				.75		
33	PS				.74		
21	PS				.66		
23	PS				.48		
17	PS				.42		
8	PS	.31			.40		
1	PS				.29		
20	DAA					.65	
31	DAA					.64	
3	DAA					.62	
14	DAA					.50	
12	DAA					.50	
37	DAA					.33	
6	PCP						.67
22	PCP						.63
13	PCP						.60
26	PCP						.59

Table K4 (continued)

Item	Anticipated Factor	F1	F2	F3	F4	F5	F6
30	PCP						.52
35	PCP					.30	.48

Note. Only pattern coefficients ≥ .29 have been reported in the table. Factor abbreviations: PS = personal standards; COM = concern over mistakes; PPP = perceived parental pressure; PCP = perceived coach pressure; DAA = doubts about actions; ORG = organization. Interfactor correlations ranged from -.06 ($r_{F2.F5}$) to .34 ($r_{F2.F4}$).