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FACULTY OF SPORT, EDUCATION & SOCIAL SCIENCES

Expectancies and Their Consequences within the Coach-Athlete Relationship: An Athlete-Centred Investigation

by

Andrew John Manley

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ABSTRACT
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EXPECTANCY EFFECTS WITHIN THE COACH-ATHLETE RELATIONSHIP: AN ATHLETE-CENTRED INVESTIGATION

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Theoretical models of expectancy processes (e.g., Olson, Roese, & Zanna, 1996) have conceptualised the sources of information by which expectancies of others are formed, and suggest that expectancies have the potential to influence the cognitive, affective, and behavioural responses of both perceivers and targets. The main aim of this thesis was to examine expectancy effects within the coach-athlete relationship from the perspective of the athlete. Specifically, the aims were to examine: a) the sources of information that athletes deem influential when developing expectancies of a coach; b) the cognitive consequences of athletes' expectancies of coaches; c) the affective responses of athletes to initial expectancies of a coach; and d) the behavioural consequences of athletes' expectancies of their coach. In order to achieve these aims, the investigation employed a range of experimental methods including an explorative survey (study one); experimental designs, which involved obtaining athletes' ratings in response to a range of stimuli such as static photographs, written information, and dynamic video footage (studies two and three); and a field-based examination, which was assessed via a combination of notational analysis and questionnaire (study 4).

The main findings reveal that while static cues (e.g., gender) are deemed relatively unimportant during impression formation, dynamic cues (e.g., facial expressions) and third-party reports (e.g., reputation) are viewed by athletes as influential factors in the formation of expectancies about coaches. Specifically, the findings suggest that athletes' initial expectancies of an unknown coach's competency are influenced by the presentation of reputation information. Although the results show that coach gender also has a significant impact on athletes' expectancies, the effect of gender on athletes' expectancies was not as large as that of reputation information. In addition, reputation information is shown to significantly impact on athletes' positive affective responses to a coach. Finally, the results demonstrate that coach reputation impacts on athletes' attention, effort, and persistence during a training session. Overall, the research presented in this thesis provides support for the use of Olson et al.'s (1996) model of expectancy processes as a theoretical framework for the investigation of expectancy effects within the coach-athlete relationship. The thesis provides initial empirical support for the contention that athletes' expectancies of coaches impact on athletes' cognitive, affective, and behavioural responses. Such findings have important implications for coaching guidelines and the development of effective coach-athlete relationships. The proposal that third-party reports represent an influential source of information with regard to expectancy formation in sport has also received initial support.

PUBLICATIONS RESULTING FROM THESIS

Peer-Reviewed Papers

Manley, A.J., Greenlees, I., Graydon, J., Thelwell, R., Filby, W.C.D., & Smith, M.J. (2008). Athletes' perceptions of the sources of information used when forming initial impressions and expectancies of a coach. The Sport Psychologist, 22, 73-89.

Conference Proceedings

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Manley, A.J. (2008). The influence of coach reputation on athletes' cognitive and affective responses. Paper presented at the Annual Psychology Postgraduate Affairs Group Conference. University of Manchester, UK. 30 July – 1 August, 2008.

Manley, A.J., Greenlees, I.A., Graydon, J., & Smith, M.J. (2008). The influence of coach reputation and gender on athletes' expectancies of coaching competency. Paper presented at the Annual British Psychological Society Conference. Royal Dublin Society, Ireland. 2-4 April, 2008.

Manley, A.J., Greenlees, I., Graydon, J., Thelwell, R., Filby, W.C.D., & Smith, M.J. (2007). Sources of information used by athletes when forming initial impressions and expectancies of a coach. Paper presented at the 12th European Congress of Sport Psychology. Halkidiki, Greece. 4-9 September, 2007.

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DECLARATION OF AUTHORSHIP

I, ...**Andrew John Manley**..,

declare that the thesis entitled

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and the work presented in the thesis are both my own, and have been generated by me as the result of my own original research. I confirm that:

- this work was done wholly or mainly while in candidature for a research degree at this University;
- where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
- where I have consulted the published work of others, this is always clearly attributed;
- where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
- I have acknowledged all main sources of help;
- where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
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Signed: ....

Date:...July 2009...

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CHAPTER 1

INTRODUCTION

Expectancies are defined as "beliefs about a future state of affairs" (Olson, Roese, & Zanna, 1996, p.211) that allow individuals to develop rules and make predictions about the world around them. Expectancy effects have been examined in social psychological research since the early 1960s (e.g., McGuigan, 1963; Rosenthal & Fode, 1963). This particular area of interest was initially stimulated by reports of a phenomenon known as the experimenter bias (i.e., experimenters report the findings they expect to obtain without controlling for the potential impact of their own expectancies). These reports led to the examination of expectancy effects (e.g., Darley & Gross, 1983; Hastie & Kumar, 1979; Rosenthal & Jacobsen, 1968) and the notion that expectancies have the potential to influence and direct the nature of interpersonal interaction (Higgins & Bargh, 1987; Miller & Turnbull, 1986). Various models have been developed, which attempt to explain how expectancies may be formed and the range of effects they can have (Olson, Roese, & Zanna, 1996; Warr & Knapper, 1968).

Olson et al (1996) proposed a model of expectancy processes. This stipulates that expectancies, or predictions about the outcome of a given event, are developed as a result of the perceiver's attention to, and encoding of, the stimuli available in the surrounding environment. The subsequent expectancies that are formed are proposed to have the potential to influence the cognitive, affective, and behavioural responses of the perceiver. Research in support of the processes outlined in Olson et al.'s model have shown that expectancies of others may influence cognitions such as the perceiver's attention to specific stimuli (e.g., Chapman & Chapman, 1967), memory and recall of information (e.g., Cantor & Mischel, 1977), interpretation of a target's behaviour (e.g., Jones & Skarlicki, 2005), and attributions to explain such behaviour (e.g., White, Jones, & Sherman, 1998). Research has also demonstrated the impact of expectancies on the perceiver's affect towards the target (e.g., Dijker, 1987), and the behaviour exhibited by both perceiver and target (e.g., Rothbart, Dalfen, & Barrett, 1971). Expectancies have therefore been proposed to be powerful determinants of interpersonal interactions:

"We rarely if ever confront others without some expectations about how they should behave... We are not passive observers of our respective social worlds, but active forces in the shaping of those worlds. To an important extent we create our own social reality".

(Jones, 1986, p.41)

There is a growing body of literature that has examined expectancy effects in sport. Examples of expectancy effects have been demonstrated in research involving judges (e.g., Findlay & Ste-Marie, 2004), officials (e.g., Souchon, Coulomb-Cabagno, Traclet, & Rascle, 2004), coaches (e.g., Horn, 1984a), and athletes (e.g., Greenlees, Buscombe, Thelwell, Holder, & Rimmer, 2005). The coach-athlete relationship has received particular attention with regard to the potential for expectancy effects, although this has been mainly investigated from the perspective of the coach (e.g., Horn, 1984b; Martinek & Karper, 1986; Rejeski, Darracott, & Hutslar, 1979). Solomon, DiMarco, Ohlson, and Reece (1998) showed that when coaches have high expectations of their athletes, they provide more overall feedback, praise, and instruction than when they hold low expectancies of their athletes. Furthermore, Wilson, Cushion, and Stephens (2006) suggested that coaches' expectancies of athletes have the potential to impact on the subsequent behaviour and performance of sports performers. This research emphasises the importance of expectancies to the development of effective coach-athlete relations.

Despite examination of expectancy effects from the perspective of the coach, there is a dearth of research that examines expectancy effects that originate from athletes' beliefs and predictions about coaches. Research within the educational setting has examined the effects of students' expectancies of teachers (e.g., Kelley, 1950; Perry, Niemi, & Jones, 1974). A recent study conducted by Radel, Legrain, Wild, and Sarrazin (submitted for publication) showed that students' expectancies of teachers' motivation influences students' subsequent levels of participation. In sport, Lubker, Watson, Visek, and Geer (2005) demonstrated that certain informational cues (e.g., gender, physique, clothing, ethnicity) can determine the expectancies athletes form of sport psychologists. However, no research to date has examined expectancy effects within the coach-athlete relationship where the expectancy originates from the athlete. Given suggestions that the coach-athlete relationship should be primarily athlete-centred (Jowett & Cockerill, 2003), it is surprising that the study of expectancy effects from the perspective of the athlete has been largely neglected. Moreover, many of the problems that occur within the coach-athlete relationship (e.g., conflict between coach and athlete, lack of support, dropout from sport) are interpersonal in nature (Jowett & Poczwardowski, 2007). According to Jowett and Poczwardowski (2007), the affiliation between coach and athlete is highly interdependent, meaning that the quality of this relationship is shaped by the interactions that occur between the athlete and coach. Thus, in conjunction with the literature on coaches' expectancies of athletes, and the studies by Radel et al. and Lubker et al., Jowett and Poczwardowski indicate that athletes' expectancies of coaches may play a significant role in the development and outcomes of the coach-athlete relationship. The absence of research that has attempted to examine such issues constitutes a major gap in the literature that needs to be addressed.

The aim of this thesis is, therefore, to investigate the nature of expectancy effects within the coach-athlete relationship from the athlete's point of view. This will involve the examination of the ways in which athletes develop expectancies of coaches, and the impact of these impressions on cognitive responses such as the evaluation of coaching competency. The thesis also aims to examine whether athlete expectancies of a coach have a significant influence on athletes' affective and behavioural responses. In addition, the thesis will attempt to identify any variables that may moderate expectancy effects within the coach-athlete relationship.

OVERVIEW OF THESIS

Having reviewed theories and research concerning expectancies and their effects in Chapter 2, Chapter 3 provides an account of an explorative study into the sources of information that athletes perceive to be influential when forming initial impressions and expectancies of a coach. Directed by the subsequent findings, Chapter 4 examines the manner in which coach reputation and coach gender influence athletes' expectancies of coaching competency. Chapter 5 then examines the effect that reputation-based expectancies may have on athletes' evaluations of, and affective responses to, a coach's delivery of a coaching session. Chapter 6 describes a field-based study designed to examine the effect of coach reputation on athletes' behavioural (i.e., attention, effort, technical ability) and affective (i.e., enjoyment) responses in relation to a training session. Chapter 7 provides a general discussion of the results reported in Chapters 3 to 6, highlighting relationships between the findings, as well as the possible implications for coaches and athletes alike, and suggestions for future research.

CHAPTER 2

REVIEW OF LITERATURE

This chapter will define and explain some of the key terms used in the study of expectancy effects. This section will also outline a framework of the processes by which expectancies may be formed, as well as review the literature that has examined the various impacts that expectancies can have on perceivers' cognitive, affective, and behavioural responses to others. The literature that has investigated expectancy effects in sport from the perspective of judges, officials, athletes, and coaches will be reviewed, before paying specific attention to the role expectancies may play within the coach-athlete relationship. Finally, an overview of the research aims of the thesis will be highlighted.

DEFINITION OF EXPECTANCIES

Before attempting to assess and understand the processes by which expectancies are formed, as well as the extent to which they may impact on subsequent cognitive, affective, and behavioural responses, it is vital that expectancies themselves are clearly defined. Categorised as "beliefs about a future state of affairs" (Olson, Roese, & Zanna, 1996, p.211), expectancies represent the process of utilising past experience and knowledge in order to predict the future and develop a set of rules about the world. At any one time, perceivers can develop and hold a variety of these rules and predictions, ranging from expectancies about themselves, expectancies about other individuals or groups, and expectancies about specific situations or events (Olson et al., 1996). In other words, expectancies in social interactions not only allow the perceiver to make sense of the target and themselves, but also help people to make predictions about the ensuing interaction (Miller & Turnbull, 1986). Expectancies have been proposed to play a major role in everyday social interactions, and have the potential to influence the first impressions that are made during initial interpersonal evaluations (Darley & Fazio, 1980).

Types of Expectancies

Expectancies can be categorised in a variety of ways. Possibly the simplest form of expectancy classification was outlined by Jussim (1990), who used the terms "interpersonal" and "intrapersonal" expectancies in reference to expectancies about others and expectancies about the self, respectively. According to Olson et al. (1996), expectancies about the self may consist of performance expectancies (e.g., "I expect to play well in the upcoming competition"), self-efficacy expectancies (e.g., "I think I will be able to complete the race"), or affective/sensation expectancies (e.g., "I believe that I will feel nervous the closer it gets to the day of the final"). Performance expectancies may also be of an interpersonal nature if the perceiver focuses externally on the expected performance of others (e.g., "I think that my opponent's performance will be of a very high standard"). Interpersonal expectancies might also be exhibited in the form of outcome expectancies (e.g., "I think the team in red is going to lose"). In addition to Jussim's (1990) classification, Olson et al. (1996) suggested that expectancies might refer to non-social objects such as events (e.g., "I predict that the festival will be enjoyable") and environments (e.g., "I think it will be too hot in that room"). Ditto and Hilton (1990) used the term "impersonal" expectancies to describe such predictions.

Jones and McGillis (1976) made the distinction between target-based expectancies (i.e., expectancies derived from knowledge about the target's prior behaviour) and category-based expectancies (i.e., expectancies derived from knowledge about the categories or groups of which the target is a member). Alternatively, Anderson (1976, 1983) categorised expectancies according to the specific types of knowledge on which they are based. Anderson proposed that expectancies could be based on "declarative" knowledge, meaning they may be derived from factual information and/or beliefs about a target. For instance, the expectancy that a target football player will score a goal in his or her next game would constitute an expectancy based on declarative knowledge if it was derived from the perceiver's knowledge that the player had scored in his or her previous three games. However, Anderson stated that "procedural" knowledge (i.e., the perceiver's awareness of rules and strategies) might alter declarative knowledge and, therefore, the type of expectancy that is formed. Consider that the same target player has been selected to play in a more defensive position than in the previous three matches. The perceiver's awareness of this fact might lead them to form the expectancy that the target is unlikely to score in the next match. This would be an example of an expectancy that is based on procedural knowledge. It can be seen that there are numerous definitions by which expectancies can be classified, with researchers often focusing on one particular type over another. This review of the expectancy effect literature will focus on expectancies of others, and their potential impacts on the subsequent interaction between perceiver and target.

EARLY LITERATURE ON EXPECTANCY EFFECTS

Interpersonal perception has been defined as "the study of the ways people react and respond to others, in thought, feeling and action" (Cook, 1971, p.14), and according to Higgins and Bargh (1987), "was founded on the idea that internal factors such as...expectancies influence the outcome of perception" (p.370). Research investigating the effect of expectancies on interpersonal perception and social interaction can be traced back to the early 1960s, when experimental research within social psychology began to investigate the phenomenon of the experimenter bias. The effect of experimenter bias is exhibited when experimenters report the results they expect to obtain without controlling for the impact of their own expectancies (Venkatesan, 1967). Rosenthal and Fode (1963) conducted an experiment designed to demonstrate the effect of experimenter bias. Participants ($n = 206$) were required to complete a person-perception task, where they were asked to rate the degree to which 10 people pictured in photographs were perceived as successful (i.e., positive rating) or unsuccessful (i.e., negative rating). Participants were split into 10 separate groups and assigned an experimenter to conduct the proceedings. Half the experimenters ($n = 5$) were told to expect a high average rating of success (i.e. +5 or over), while the other half ($n = 5$) were told to expect participants to report a low average rating of success (i.e., -5 or under). Experimenters in each condition obtained results in the direction of their expectancies, suggesting that they had somehow communicated their expectancies to the participants in the study, which in turn affected the ratings provided. The results led McGuigan (1963) to label the experimenter as "the neglected stimulus object" (p.421), whose expectancies must be considered as an independent variable in their own right.

Although work on experimenter bias started research in the area, the "Pygmalion in the Classroom" study (Rosenthal & Jacobsen, 1968) transformed research regarding expectancy effects into a major topic for exploration and discussion. Rosenthal and Jacobsen (1968) manipulated teachers' expectations of pupils by falsely identifying certain students as "bloomers" (i.e., those students who were most likely to show dramatic intellectual growth throughout the course of the school year). In reality, pupils were randomly selected from the student population. Despite the fact that there was no significant difference in I.Q. scores between controls and "bloomers" at the start of the experiment, results obtained after eight months showed that "bloomers" significantly increased in performance on an intelligence test compared with control students. Rosenthal and Jacobsen postulated that the teachers' expectations influenced their behavioural response towards the two groups of students, and were the pivotal factor in obtaining such findings.

In a critique of Rosenthal and Jacobsen's (1968) study, Thorndike (1968) criticised the methodological flaws of the experiment, citing the researchers' application of an invalid measure of intelligence. In response, Rosenthal (1973) argued that the use of an unreliable measure of intelligence would actually make it harder to find significant differences in I.Q. scores between groups, thus using Thorndike's rebuke as further support for the effect of teacher expectancies on student intelligence. A meta-analysis of 18 studies investigating teacher expectancy effects on intelligence scores (Raudenbush, 1984) found a mean effect size of 0.11. The analysis supported the expectancy effect hypothesis with regard to intelligence ratings, but suggested that the effect was not as influential as Rosenthal and Jacobsen had initially implied.

Furthermore, in a critique of the original "Pygmalion in the Classroom" research, Snow (1995) questioned and reinterpreted the proposed findings. Snow did not agree that teacher expectancies influence student intelligence, especially since closer examination of the original findings showed that the behavioural confirmation effect disappeared with the omission of extreme scores. However, Snow conceded that Rosenthal and Jacobsen's (1968) work showed that teacher expectations can influence teaching and learning, reasoning that "expectancy seems most likely to affect behaviour that is in close proximity to it" (Snow, 1995, p.170). Thus, Snow proposed that teacher expectations are more likely to affect classroom behaviour than mental abilities. The debate as to whether teacher expectations are more likely to affect classroom behaviour rather than mental abilities such as intelligence is still unresolved, but the contention that expectancy effects of intelligence are dramatic and large has been disconfirmed (Raudenbush, 1984; Jussim & Harber, 2005). Subsequent research has, nonetheless, clearly demonstrated not only that expectancy effects exist in a range of contexts (e.g., Brophy & Good, 1974; Snyder, Tanke, & Berscheid, 1977; Kierein & Gold, 2000), but also that such effects can have important immediate and long-lasting impacts on interpersonal relations (Jussim & Harber, 2005).

OLSON, ROESE, & ZANNA'S (1996) MODEL OF EXPECTANCY PROCESSES

Olson et al.'s (1996) model of expectancy processes is based on a broad array of expectancy research conducted within social psychology, and provides a contemporary framework that helps to define expectancies and their consequences on interpersonal interaction. Prior to the development of Olson et al's model, other theories to explain the impact of expectancies on human behaviour had been put forward. For example, social learning theory (Rotter, 1954; 1982) proposes that the likelihood of a person engaging in a particular behaviour (i.e., behaviour potential) is governed by two things: expectancy (i.e., the subjective probability that the behaviour in question will lead to a particular outcome) and reinforcement value (i.e., the desirability of the expected outcome). In other words, if expectancy and reinforcement value are both high, then behaviour potential will also be high. Thus, Rotter argued that expectancies represent a central component in determining behaviour. Rotter suggested that expectancies are formed when an individual interacts with and interprets the environment, and are largely based on past experience. However, while social learning theory identifies that expectancies are a key determinant of behaviour, it does not fully explain the potential for expectancies to impact on cognitive and affective responses. In contrast, Olson et al. proposed that "Perceivers' beliefs about the future have important implications for their thoughts, feelings, and actions" (p.217) and it is this contention that is central to their model of expectancy processes, which is displayed in Figure 2.1. Olson et al.'s model attempts to outline the nature of expectancies, the processes by which expectancies are formed, as well as the impact of expectancies on cognitive, affective, and behavioural responses.

Self-efficacy theory (Bandura, 1977; 1986), a progression of social learning theory, also holds that expectancies impact on the way a person thinks, feels, and ultimately behaves. Bandura posited that an individual's efficacy expectations (i.e., the person's

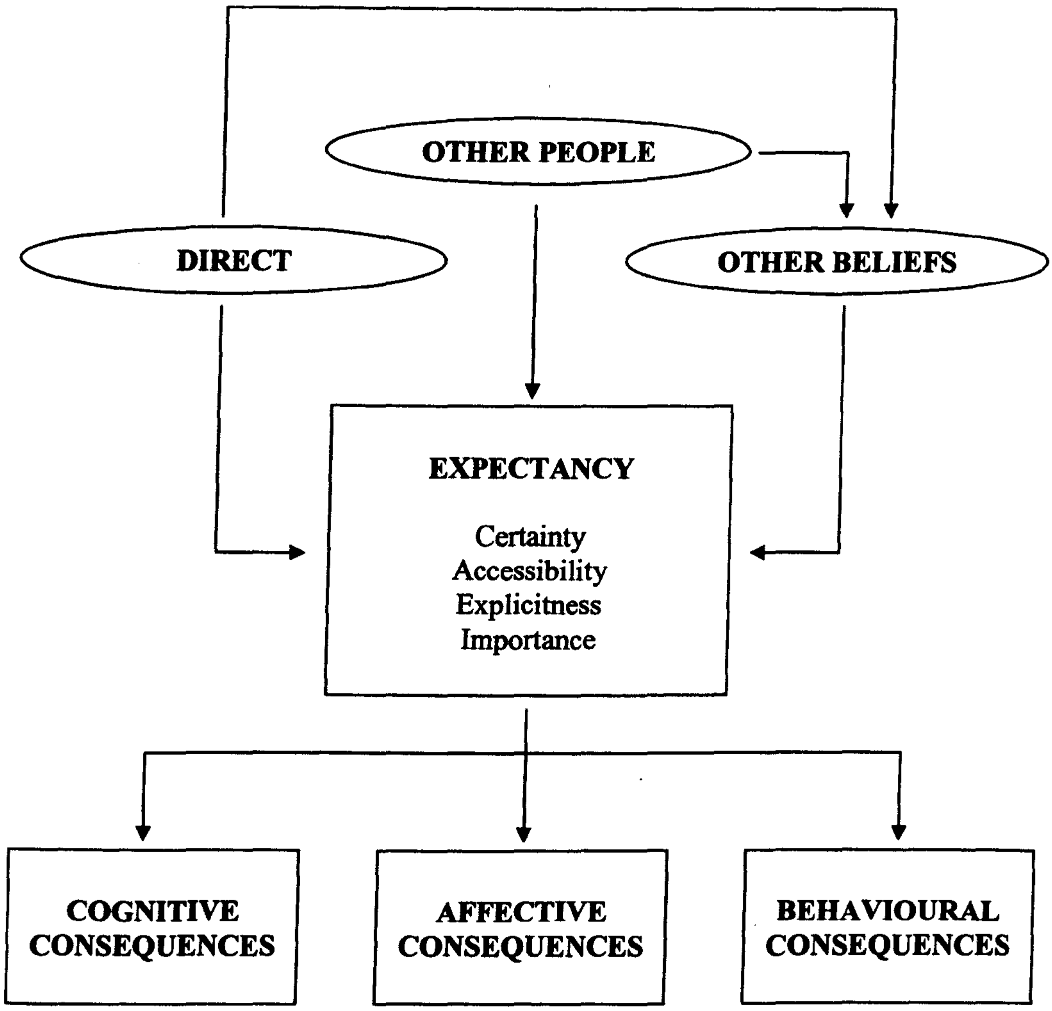


Figure 2.1. A model of expectancy processes (Olson, Roese, & Zanna, 1996)

belief that he/she is capable of performing a specific behaviour) and outcome expectations (i.e., the person's belief that the specific behaviour will be enough to bring about a desired outcome) will determine the level and strength of his/her self-efficacy, and in turn, a range of responses (e.g., the amount of effort expended, the type of coping behaviour adopted, the degree of persistence exhibited). Although self-efficacy theory links expectancies to more than just explicit behaviours and also outlines the main sources from which efficacy expectancies are believed to originate (i.e., performance accomplishments, vicarious experience, verbal persuasion, emotional arousal), the theory does not provide a comprehensive explanation of how different types of expectancies influence cognition, affect and behaviour in a range of environments; it is limited to explaining how a person's expectancies of themselves impact on performance-related responses. According to Olson et al. (1996), perceivers rely on expectancies at some level, whether they are used to make predictions about their own performance, make general assumptions about the world, or related more specifically to making judgments about the attributes and future behaviour of an individual or group. Thus, in comparison with self-efficacy theory, Olson et al.'s model of expectancy processes provides a more extensive framework for the examination of expectancy effects that occur during interpersonal interaction.

PROPERTIES OF EXPECTANCIES

Olson et al. (1996) propose that expectancies consist of four main properties – certainty, accessibility, explicitness, and importance – each with the potential to influence the degree to which a given expectancy will lead to the various consequences of interpersonal acquaintance. The four properties and their potential impacts on social interaction are described below.

Certainty

Certainty is defined as the stability of the expectancy and the perceiver's degree of confidence in the accuracy of their predictions (Jussim, 1993; Swann & Ely, 1984). According to Olson and colleagues, the level of certainty a perceiver has in his or her expectancy is determined by the nature of the experience on which the expectancy is based (i.e., direct experience leads to greater certainty than indirect experience), the degree of consensus with other people's expectancies (i.e., the more people who agree with the expectancy, the more the expectancy is reinforced), and previous examples of expectancy confirmation (i.e., recall of instances where the outcome or interaction was as predicted by the expectancy). Moreover, Olson et al. propose that belief certainty may determine the extent to which expectancy effects are exhibited.

Cognitive rigidity has been described as a personality trait (Allport, 1954), and people high in cognitive rigidity are unlikely to alter their beliefs or expectancies in the face of disconfirming evidence. Belief certainty, on the other hand, is usually construed as a situational factor (Jussim, 1993; Swann & Ely, 1984), and is based on the notion that an individual's conviction in his or her own beliefs will vary depending on the context in which those expectancies are formed (e.g., athletes are likely to have greater belief certainty in their expectancies about a coach they have worked with before compared with predictions they make about an unknown coach). Despite this distinction between cognitive rigidity and belief certainty, Jussim (1993) argues that people high in one or both of these factors are unlikely to be motivated to consider viewpoints that differ from their own. As a result, the perceiver's level of certainty in his or her own expectancies seems to be determined by both personal and situational factors and, in conjunction with Olson et al. (1996), Jussim posits that people with a high degree of certainty or confidence in their expectancies are most likely to maintain biased perceptions and thus exhibit expectancy effects.

Accessibility

The second property highlighted by Olson et al. (1996) is accessibility (i.e., the ease or speed with which the expectancy comes to mind). For the perceiver's expectancies to impact on interpersonal interaction, they must be readily accessible to the perceiver: the more accessible the expectancy, the greater the likelihood that the expectancy will be used to interpret reality, thus impacting on interpersonal interaction. Olson et al. reinforced the view that the frequency (e.g., Srull & Wyer, 1979) and recency (e.g., Higgins, Rholes, & Jones, 1977) of expectancy activation will determine the degree to which it is accessible (Plessner and Haar, 2006). In other words, recently formed and/or frequently primed expectancies of targets are more accessible to the perceiver and more likely to be used to make sense of subsequent information. For example, if a tennis player holds the expectancy that his or her opponent will be difficult to defeat, this particular expectancy will be more accessible (i.e., more likely used as a basis for the player's judgements about the opponent) if the perceiver had recently lost to the same opponent, or had failed to defeat the opponent on a number of occasions.

Olson and colleagues stated that disconfirmation of the expectancy will also enhance its accessibility by instigating greater systematic analysis. Specifically, unexpected outcomes tend to make the original expectancy more salient and provoke the perceiver to pay more attention to the initial prediction, thus making it more accessible. Expectancy accessibility is also likely to be more pronounced under conditions of high cognitive load (Fiske & Neuberg, 1990; Snyder & Stukas, 1999). When cognitive load exceeds the human capacity to process information effectively, perceivers often try to manage the task of interpreting information by relying on expectancies at the expense of attention to individuating information (Plessner, 2005). This reliance on expectancy-based processing means that expectancies become more accessible, thus increasing the likelihood that they will influence subsequent interpersonal interaction. As a result, expectancy effects may be predicted by the degree to which the perceiver's expectancies are accessible.

Explicitness

The third property of expectancies is explicitness. This refers to whether the expectancy is generated consciously or unconsciously. Expectancies can be implicit (i.e., formed outside of the perceiver's consciousness) and can impact on the responses of the perceiver even when he or she is unaware of such expectancies. For example, Chen and Bargh (1997) demonstrated that the presentation of subliminal cues (i.e., faces of African Americans) was enough to activate unconscious stereotypic expectancies. Such evidence has important implications for the extent to which the consequences of interpersonal expectancies can be harnessed and/or prevented. If expectancies are explicit (i.e., formed consciously by the perceiver), they can be more easily identified and encouraged (or challenged) where necessary than those expectancies that are implicit and thus more difficult to recognise (Wiers, van de Luitgaarden, van den Wildenberg, & Smulders, 2005). Explicit expectancies are most often developed prior to an event that is anticipated (e.g., expectancies about the opposing team the day before an important match). Explicit expectancies are also formed when the perceiver is asked directly for their predictions about a particular target's attributes or behaviour (Olson et al., 1996).

In the same way that unexpected outcomes are likely to enhance the accessibility of expectancies, disconfirmation is also likely to make expectancies more explicit. The surprise experienced when a target behaves in a way that is inconsistent with the perceiver's original hypothesis should make the initial expectancy more explicit (Olson et al., 1996). It has been suggested that awareness of the nature of expectancies is necessary for perceivers to exert control over possible expectancy effects that may occur during interpersonal interaction (Horn, Lox, & Labrador, 2001; van Ryn & Fu, 2003). Thus, perceivers' awareness of the expectancies they hold and their potential to impact on social interaction can help these individuals avoid behaving in such a way that may bring about expectancy effects.

Importance

The final property of expectancies is labelled importance, and is defined as the perceiver's motivational orientation towards social interaction. Importance is determined by the relevance of the expectancy to the fundamental needs of the perceiver, and the ensuing implications for other core values and beliefs (Neuberg & Fiske, 1987). For example, expectancies developed about a target coach will have implications for an athlete who is anticipating working with the coach. Thus, the expectancies developed by the athlete will have a high level of importance. Alternatively, expectancies formed by an athlete who is not likely to interact with the coach will be low in importance. According to Olson et al. (1996), important expectancies have stronger implications for the perceiver than do less important expectancies, particularly in terms of their impact on the perceiver's motives, values, and needs (e.g., could influence an important outcome).

SOURCES OF EXPECTANCIES

Although the application and impact of interpersonal expectancies have been studied across a variety of settings ranging from school classrooms (Jussim & Eccles, 1992; Rosenthal & Jacobsen, 1968) to job interviews (Biesanz, Neuberg, Smith, Asher, & Judice, 2001; Ridge & Reber, 2002) and other occupational environments (Kierein &

Gold, 2000; McNatt, 2000), "there has been relatively little interest in the antecedents of expectancies" (Olson et al., 1996, p.233). Despite such neglect within the expectancy effect literature, Olson et al.'s (1996) model of expectancy processes implies that expectancies are developed from three main categories of informational cues: direct personal experience, indirect experience, and other beliefs.

Direct Personal Experience

Olson et al. (1996) define direct personal experience as target-related information that is perceived or experienced directly by the perceiver. For example, a rugby player who is fouled by an opponent may form the expectancy from such direct personal experience that the culprit is aggressive and has no respect for the rules of the game. Alternatively, a perceiver who witnesses a coach consoling one of his athletes after a disappointing performance may use such direct observation to develop predictions about the personal qualities held by the coach (e.g., caring, empathetic). In agreement with this view, Cook (1971) used the term "induction" to describe the process of expectancy formation following consistent observations. Cook posited that direct experience of this kind is a major source of the ideas we form about others. Moreover, Jussim (1991) suggested that expectancies are initially formed from "background information", which he defined as anything a perceiver may use as a basis for their beliefs about a target (e.g., observation of past behaviour, group membership, previous achievements).

An alternative framework that attempts to explain how people develop expectancies of others is Warr and Knapper's (1968) schematic model of person perception. According to Warr and Knapper, the way in which a perceiver selects and interprets information about others will determine the resulting expectancy response (i.e., the predictions a perceiver makes regarding the target(s) they observe). Like Olson et al. (1996), Warr and Knapper agree that direct personal experience of a target will have a significant impact on the expectancies formed by the perceiver. However, the schematic model of person perception suggests that direct personal experience may be further broken down into three sub-categories: present stimulus person information, stored stimulus person information, and current context information.

Present stimulus person information consists of cues that are displayed by the target at the time the perceiver forms the initial impression. For example, if an athlete were asked to form an initial expectancy of a new coach, the present stimulus person information would include cues such as the coach's clothing, facial expressions, and posture at the time they were viewed by the athlete. In contrast, a perceiver may recall previous direct experiences that relate to the target that may shape their subsequent expectancies. These aspects of a person's memory make up the stored stimulus person information described in Warr and Knapper's (1968) model. Thus, the expectancies that the athlete forms about the incoming coach may be influenced by a previous encounter the athlete had with their new coach, or by previous vicarious observation of the coach's behaviour towards other athletes. Warr and Knapper also proposed that the sources of information used to form expectancies will depend on the context in which such information is presented and viewed. Hence, current context information consists of the situation or environment in which the observation or expectancy formation takes place. For instance, a coach who shouts and uses foul language during a training session with a group of young athletes may be perceived in a different way to a coach who exhibits the same behaviour with professional athletes following a lacklustre team performance.

It appears that support for Olson et al.'s (1996) concept of direct personal experience as a primary source of expectancies can be drawn from other research within the expectancy literature (e.g., Cook, 1971; Jussim, 1991; Warr & Knapper, 1968). Moreover, Fazio and Zanna (1981) reported that expectancies formed on the basis of direct personal experience are generally more robust or confidently held, more accessible, and more predictive of future behaviour than expectancies derived from other sources. However, Olson et al.'s model maintains that indirect experience is, nevertheless, a source of information that can influence the expectancy formation process.

Indirect Experience

Defined by Olson et al. (1996) as communication from other people, indirect experience represents information that can be conveyed about a target without the perceiver's direct observation, contact, or experience. For example, an athlete may have no direct personal experience of the individual who has been appointed as their new coach. However, the athlete may still be able to form expectancies of the coach by using reports provided by fellow athletes or team-mates who have either had direct contact with the coach, or have overheard specific information about him or her. A number of other researchers have also concluded that expectancies are often based on the "authority" associated with the information provided by other people (Cook, 1971), reports from third parties regarding a target's reputation (Darley & Fazio, 1980), and through the acceptance of rumour, gossip, and hearsay (Jussim, 1991). White, Jones, and Sherman (1998) share this view, stating that "expectancies may be derived from information provided by a credible 'third party agent'" (p.15). The previous quote infers that the extent to which information derived from indirect experience influences expectancy formation is determined by the degree of credibility the perceiver assigns to the source of such information. Thus, provided information comes from a trusted and reliable source, indirect experience may influence expectancies.

Other Beliefs

The third source of expectancies identified by Olson et al. (1996) is other beliefs. According to Olson et al.'s model, expectancies are often developed from inferences that are based on other beliefs held by the perceiver. Cook (1971) supported this view in two ways. First, Cook coined the term "construction" to describe the rules a perceiver may invent for themselves in order to guide expectancy formation (e.g., "all people who wear glasses are intelligent"). Thus, an athlete may base his or her expectancies of a new coach on the belief that "all male coaches are knowledgeable about their sport". Cook also proposed that expectancies may be formed by analogy, where the perceiver assumes that actions of a limited sample of people are reflective of all individuals in that particular class. Cook's analogy theory is similar to the stance held by many researchers (e.g., Darley & Fazio, 1980; Hamilton, Sherman, & Ruvolo, 1990; Macrae & Bodenhausen, 2000) that expectancies about others are heavily influenced by stereotypes. Hamilton et al. (1990) define a stereotype as "a cognitive structure containing the perceiver's knowledge and beliefs about a social group and its members...[and] an important source of expectancies about what the group as a whole is like as well as about attributes that individual group members are likely to possess" (p.36). Hamilton et al.'s definition provides further evidence to support Olson et al.'s contention that other beliefs already held by the perceiver have the potential to influence the formation of subsequent expectancies about a target.

Additional Sources of Information

In addition to the work of Olson et al. (1996), there have been other attempts to classify the sources of information utilized in person perception in terms of the mode in which cues are presented. Cook (1971) categorized sources of information as either static or dynamic. While static cues are defined as constructs that remain relatively stable over the course of short-term bouts of interpersonal interaction (e.g., physique, gender, age), dynamic cues are thought to be more changeable characteristics that may alter over short spaces of time (e.g., posture, facial expressions, body language). Within the sport literature, Horn et al. (2001) examined how coaches form expectancies of their athletes and postulated that there are two main types of informational cue that coaches use. First, "person cues" (similar to Cook's static category) include information that remains relatively stable across the interaction between coach and athlete (e.g., socio-economic status, race/ethnicity, gender, family background, attractiveness, physique). The second source of information, labelled "performance information", encompasses a variety of cues including athletes' scores on physical tests, past performances and achievements of the athlete, direct observation of athletes' performance and behaviour, and comments from other coaches regarding athletes' performance and behaviour.

Solomon and colleagues (e.g., Becker & Solomon, 2005; Solomon, 2001) proposed that dynamic or performance information, as defined by Horn et al. (2001), could be separated into three distinct categories: personal cues (i.e., body language, facial expressions), performance cues (i.e., past achievements, physical test scores), and psychological cues (i.e., confidence, anxiety). In fact, Becker and Solomon (2005) found that an athlete's psychological characteristics were perceived by coaches to be the most influential sources of information during expectancy formation. However, it has been contended (e.g., Argyle, 1994; Jones, 1990; Knapp & Hall, 2002) that psychological cues such as confidence and determination are themselves beliefs that are inferred from information that is available from the environment, rather than purely sources of information. Thus, whilst a coach may base his or her expectancies for performance on judgments of the psychological qualities of an athlete, these psychological judgments will, in turn, be developed from more observable cues. Becker and Solomon allude to this point when they state: "While personal and performance cues can be objectively interpreted, psychological cues are intangible and may be more difficult to assess." (p.252). Observable cues such as ethnicity (e.g., Razran, 1950), exercise status (e.g., Shields, Brawley, & Martin Ginis, 2007), and even reports of music preferences (e.g., Rentfrow & Gosling, 2006) may be used by perceivers in order to form expectancies of the intangible psychological characteristics that a target may possess.

Previous research has also attempted to measure the level of influence that each type of cue has on the expectancy formation process. Cook (1971) stated that while dynamic cues are more likely than static cues to allow for the formation of accurate judgments, the latter are still frequently utilized during expectancy formation (e.g., stereotypical beliefs). However, despite the potential for static informational cues to influence expectancies, dynamic behavioural cues are considered to be the major determinant of perceivers' expectancy formation (Jussim, 1993). Jussim, Coleman, and Lerch (1987) provided support for this contention when they found that behavioural cues (i.e., clothing and speech style) were used more than race as a basis for evaluations of the job suitability of applicants. Horn et al. (2001) also stated that behavioural cues are more likely to result in the formation of accurate expectancies, while Becker and Solomon (2005) reported that coaches do not view static cues as particularly salient sources of information when developing expectancies of athlete ability. Such evidence seems to suggest that expectancy formation is influenced more heavily by dynamic behavioural cues than static attributes. Despite apparent agreement that expectancies based on behavioural cues are more influential and have greater predictive validity than expectancies founded on static sources of information, research has demonstrated the importance of static cues in expectancy formation. In sport settings, informational cues such as gender (Coulomb-Cabagno, Rascle, & Souchon, 2005), race (Jowett, Frost, & Timson-Katchis, 2006), and physique (Lubker, Watson, Visek, & Geer, 2005) have been shown to shape perceivers' expectancies of a target, suggesting that static cues may also influence expectancy formation.

COGNITIVE CONSEQUENCES OF EXPECTANCIES

It has been proposed (e.g., Fiske & Taylor, 1991; Miller & Turnbull, 1986) that expectancies contribute to a number of cognitive consequences. Olson et al.'s (1996) model of expectancy processes echoes this standpoint, and highlights five potential impacts of expectancies on cognitive functioning. According to Olson et al., expectancies influence cognitive elements such as attention and encoding, memory, interpretation, attributions, and counterfactual thinking.

Impact on Attention/Encoding

In terms of information processing, attention refers to the information that the perceiver concentrates on. In sport, perceivers are often provided with complex information and asked to process it under strict time limits (e.g., judges in sports such as gymnastics and figure skating). The goal for perceivers in such situations is to attend to relevant stimuli in the surrounding environment at the expense of other irrelevant cues (Hardy, Jones, & Gould, 1996). The information that is attended to is then transferred or encoded into a mental representation that can be stored in memory and later recalled. Higgins and Bargh (1987) propose that expectancies have a direct impact on the attention/encoding process:

> "*People's expectancies...play a critical role in the selection of information from the environment to be encoded*"
>
> (Higgins & Bargh, 1987, p.378).

According to Harrison, Jr. (2001), information that is expectancy-consistent is more likely to be attended to and encoded at the expense of expectancy-disconfirming information. For example, the expectancy that a football player has an aggressive personality will likely lead the perceiver not only to attend to and encode actions of foul play (e.g., fighting, tripping an opponent), but also to discard elements of sportsmanship exhibited by the same player (e.g., kicking the ball out of play when an opponent is injured). One possible explanation for the salience of expectancy-consistent information is that it allows the perceiver to protect their original expectancy from disconfirmation (Olson et al., 1996). Since perceivers use expectancies to reinforce the notion that it is possible to make accurate predictions about the world, information that confirms original expectancies will be selectively attended to and encoded more readily than information that is counter to the initial expectancy. Miller and Turnbull (1986) further support this contention:

> "*Expectancies affect the encoding process by leading perceivers to see or attend to behaviours consistent with their expectancies*"
>
> (Miller & Turnbull, 1986, p.247).

Chapman and Chapman (1967) demonstrated that perceivers attend to expectancy-confirming information at the expense of information that is inconsistent with expectancies. Participants ($n = 108$) were presented with a total of 45 drawings of faces that had been allegedly produced by mental patients displaying a range of different symptoms. Two symptom statements (e.g., "He is suspicious of other people"; "He's worried about how manly he is") accompanied each picture. After viewing the stimuli, participants were asked to list the characteristics of drawings (e.g., enlarged eyes, small head) that were deemed to be indicative of each of the symptoms provided. Although there were no relationships between the features of the drawings and the symptoms presented, participants maintained that drawing characteristics were associated with specific symptoms. For example, drawings that featured muscular, broad shoulders were believed to be indicative of worries about masculinity, while atypical or enlarged eyes were deemed to reflect patients' suspicious nature. Thus, participants' expectancies led them to pay more attention to information that reinforced their original expectancy. Furthermore, this effect persisted even under conditions of unlimited viewing time and the inclusion of a reward for accuracy, thus ruling out the possibility that the results were the consequence of low levels of motivation or lack of time to view stimulus materials.

Although the idea that people see what they expect to see has gained some support within the expectancy effect literature (Harrison, Jr., 2001; Miller & Turnbull, 1986; Chapman & Chapman, 1967), Macrae and Bodenhausen (2000) contend that if confirmatory and disconfirmatory information are presented equally, then the counter-expectancy information is most likely to dominate the perceiver's attention and subsequent encoding during expectancy formation. Macrae and Bodenhausen's argument is based on the premise that expected material is processed in a relatively effortless manner, thus enabling perceivers to redirect their residual attentional resources to the processing of unexpected and potentially important information that might otherwise be neglected. Sherman, Lee, Bessenoff, and Frost (1998) agreed that:

> "*...once expected information has been matched to an existing knowledge structure or template in memory, attention is redirected to the encoding of unexpected or novel stimuli, as these items are potentially highly informative to perceivers*"
>
> (Sherman et al., 1998, p.106).

It has been suggested that attention to counter-expectancy information at the expense of expectancy-consistent cues is conditional on the availability of sufficient cognitive capacity and will therefore only occur when the perceiver is under low levels of cognitive load (Bargh & Thein, 1985; Macrae & Bodenhausen, 2000; Sherman et al., 1998). Cognitive load is a measure of how difficult it is to make sense of a stimulus and refers to the aggregate demand that a stimulus places on the sense-making capacity of the human mind (Spears & Haslam, 1997). Conditions of high cognitive load are commonly experienced in sport (e.g., the novice athlete attempting to learn a new skill or drill). Under such cognitively demanding conditions, a novice performer's initial expectancies may be heavily relied upon when forming impressions of others (e.g., the coach, his/her team mates), especially if the athlete is motivated to devote his/her attention to the effective development and accurate execution of the novel skill. This is because additional information that might be used to modify the athlete's original expectancies is unlikely to be encoded given the high cognitive demands of the situation (Plessner, 2005). Thus, cognitive load may be a determining factor in the effect of expectancies on attention. Despite debate as to whether expectancy-consistent or expectancy-inconsistent information will be attended to during social interactions, there is evidence to support the notion that expectancies have the potential to influence perceivers' attention and encoding processes. Olson et al. (1996) conclude that information that is either consistent or clearly inconsistent with expectancies is more likely to be noticed and processed than information that is deemed irrelevant.

Impact on Memory

Olson et al. (1996) also argue that expectancies will influence memory for information. A study by Rothbart, Evans, and Fulero (1979) demonstrated the effect that expectancies can have on memory. Participants viewed 50 male targets who were each described performing a single behaviour that was related to either friendliness, intelligence, unfriendliness, non-intelligence, or was completely unrelated to personality. Some participants were told that the group of targets as a whole was considered to be friendly and sociable, while other participants were informed that the group as a whole were considered to be intelligent and scholarly. Results of the experiment revealed that recall was significantly better for behaviours that were consistent with the initial group trait description than those that were irrelevant or unrelated to that description. Thus, the findings suggest that information that is consistent with expectancies is better remembered than other information.

However, there is evidence to suggest that expectancy-inconsistent information will be better recalled than information that is expectancy-congruent. Hastie and Kumar (1979) demonstrated this effect when asking male and female undergraduate students ($n = 24$) to recall information about six target individuals. Participants were presented with trait adjectives for each target, as well as 20 sentences describing behaviours that were congruent, neutral, or incongruent in relation to the trait adjectives. It was revealed that behaviours incongruent with the presented personality traits were better recalled than congruent or neutral behaviours.

Such findings might be explained by arguing that expectancy-inconsistent information comes as a surprise to the perceiver, and is therefore subjected to increased processing rendering it more explicit, accessible, and memorable (Olson et al., 1996). However, Higgins and Bargh (1987) state that in order for a perceiver to exhibit better recall of expectancy-inconsistent information as opposed to information that is congruent with the expectancy, he or she must have "the goal of forming an impression of the target person, as well as adequate time to consider the implications of each behaviour" (p.381). In other words, Higgins and Bargh argue that perceivers must be afforded sufficient time to process all available information, as well as the motivation to do so, if expectancy-inconsistent information is to be recalled to a greater extent then information that is consistent with the original expectancy. It appears, therefore, that as highlighted earlier, certain conditions may determine the nature of the impact that expectancies have on memory and the recall of information. However, as with processes involving attention and encoding, it is generally accepted that information regarded as either inconsistent or consistent with the perceiver's expectancies will be recalled from memory more readily than irrelevant information (Fiske & Taylor, 1991; Higgins & Bargh, 1987; Olson et al., 1996).

Expectancies can also interfere with memory by prompting the perceiver to recall information other than that which was actually presented. In a study by Cantor and Mischel (1977), participants were presented with target individuals who were described as either extraverted or introverted by various personality traits. Participants were then given a recognition test in which they were shown various personality traits and asked to indicate whether or not each one had been presented in the previous target profile. Results showed that participants exhibited a memory bias consistent with the original profile. In other words, participants provided higher recognition confidence ratings for items that were consistent with the original profile, even if they hadn't been included. Such findings imply that expectancies may lead perceivers to construct an alternative reality to what actually happened (Hamilton et al., 1990).

Impact on Perceivers' Interpretation of Targets

Olson et al.'s (1996) model advocates that expectancies can determine a perceiver's interpretation of information that is attended to, encoded, and recalled from memory. For example, stereotypic expectancies based on students' socio-economic status (i.e., low socio-economic status = low intelligence) have been shown to influence teachers' interpretation of academic performance in female pupils (Darley & Gross, 1983). Chaiken, Sigler, and Derlega (1974) also conducted a study in the educational setting that illustrated the effect expectancies can have on the meaning perceivers associate with processed information. Male and female undergraduates ($n = 42$) were given varying information about a confederate pupil's intelligence (i.e., "bright", "dull", or "neutral"/control). However, the actual behaviour of the pupil did not differ between groups, and all participants were told that the child got along well with his peers. The information was provided immediately prior to a five-minute audio/videotaped interaction between the participant and the pupil. Following the session, participants rated the pupil in terms of intelligence, adjustment, curiosity, motivation, attractiveness, warmth, and the degree to which they liked the pupil. Significant differences between groups were only found for intelligence, with pupils described as "bright" being rated as more intelligent than students labelled as "dull". The results indicate that participants' interpretation of the pupil's behaviour was influenced by the expectancies they developed as a result of the intelligence information provided prior to the interaction.

In addition to studies examining the impact expectancies may have on the way teachers interpret information about their students, expectancy effect research has also investigated the extent to which students' expectancies of their instructor influence interpretation. A classic study by Kelley (1950) studied this effect by manipulating the personality information that students received about a guest lecturer. Prior to a 20-minute class discussion, male students ($n = 55$) received a profile about the guest lecturer who was to lead the discussion. Half of the students were informed that the lecturer was "rather cold", while the other half were led to believe that he was "very warm". Following the discussion, participants were asked to rate the lecturer on 15 personality items. The results revealed that more favourable ratings were offered in response to the "warm" lecturer profile as opposed to the description of the "cold" lecturer (e.g., more considerate to others, more sociable, more humorous). Thus, the findings imply that expectancies of an instructor's central quality of "warmth" may influence the interpretation of available information. Widmeyer and Loy (1988) replicated Kelley's (1950) findings, whilst also accounting for the lecturer's area of expertise and student gender. The findings led Widmeyer and Loy to conclude:

> "*By being perceived as a warm individual, a teacher can influence students' ratings not only of his or her personality, but also of his or her teaching abilities*"
>
> (Widmeyer & Loy, 1988, p.120).

Perry, Niemi, and Jones (1974) came to a similar conclusion following results showing that regardless of lecture quality, a lecturer with a positive reputation (based on student ratings from the previous year) was rated significantly higher than a lecturer who possessed a negative reputation. More recently, Jones and Skarlicki

(2005) manipulated participants' expectancies of an experimenter's fairness behaviour and examined the impact of these expectancies on participants' interpretation of the experimenter's actual behaviour. Undergraduate psychology students (n = 105) overheard reputation information (fair vs. unfair) about an experimenter from two confederates believed by participants to be taking part in the same experiment (i.e., name-locating task). Some participants overheard a conversation of the same duration but with no reputation information. Following completion of an experimental task, participants completed a questionnaire related to attitudes toward research practices, embedded in which were items measuring participants' interpretation of interactional justice and fairness. Analysis of the results revealed that participants who heard about the experimenter's reputation for unfairness rated their behaviour as significantly less fair than participants who heard about the experimenter's reputation for being fair or heard no reputation information. Jones and Skarlicki concluded that individuals' interpretation of an authority figure's behaviour might be influenced by expectancies developed following processing of peers' opinions.

The research evidence described above provides support for the notion that the inferences perceivers make about target individuals are often determined by the expectancies that are formed and adhered to. The highlighted research also concurs with Olson et al.'s (1996) suggestion that available information is likely to be interpreted in line with perceivers' expectancies rather than as disconfirming. As well as impacting on the way in which information is interpreted, expectancies have the potential to affect the attributions that perceivers assign to other people as a way of explaining aspects of appearance and behaviour.

Impact on Attributions

The term attribution is defined as "the perceiver's inference regarding the causal origin of an observed behaviour" (Hamilton et al., 1990, p.38). Attributions about others may be made on the basis of either internal factors (i.e., causes attributed to the target's stable characteristics or dispositions) or external factors (i.e., causes attributed to situational factors outside of the target's control). It has been argued (e.g., Higgins & Bargh, 1987; Miller & Ross, 1975) that outcomes that are inconsistent with perceivers' expectancies are likely to be attributed to situational constraints rather than the characteristics of the target. For example, a poor performance by an athlete who was expected to perform well is more likely to be attributed to a situational factor that is out of the athlete's control (e.g., illness) rather than regarded as a direct reflection of the athlete's characteristics and ability. White et al. (1998) supported this argument, and applied the notion of the affective bias (i.e., attributions are determined by perceivers' liking or disliking of the target) to illustrate the point:

> "*Inappropriate actions of a liked peer are excused as accidental, whereas the same action by a disliked peer is judged as intentional and indicative of stable, negative characteristics*"
>
> (White et al., 1998, p.12).

A study by Regan, Straus, and Fazio (1974) provided further support for this contention by reporting that bad actions by a liked target were more likely to be attributed to situational factors than bad actions by a disliked target. In other words, people generally like people who are expected to exhibit positive behaviours, and when these expectancies are violated, perceivers are likely to attribute the outcome to situational elements outside of the target's control. Such a strategy is more favourable than assuming such actions are a reflection of the target's stable characteristics, since it maintains the perceiver's original expectancy and reinforces their structured view of the world (Olson et al, 1996).

Expectancies may also determine the extent to which perceivers make attributions about others. Kanazawa (1992) conducted a study in which participants listened to one of four stories about a student, where the target's grade average throughout high school (i.e., "A-grade" vs. "C-grade") and performance at college (i.e., "did well" vs. "did poorly") were manipulated. Participants were then asked to retell the target's story as if "telling the story to a friend". Kanazawa recorded the number of participants' spontaneous causal attributions (i.e., reasons for the outcome that were suggested voluntarily and without prior prompting). The results of the study showed that the number of spontaneous causal attributions was greater following unexpected outcomes (i.e., A-grade/C-grade high school average followed by poor/good performance at college, respectively) compared with expected outcomes, regardless of outcome valence. Consequently, Kanazawa deduced that expectancies are the main antecedent of spontaneous causal attributions.

Impact on Counterfactual Thinking

Counterfactual thinking involves the formation of "mental representations of alternatives to the past" (Roese, 1997, p.133). For example, a sprinter who failed to win a race might use counterfactual thinking to reconstruct an alternative outcome, thus identifying the factors that may have contributed to the result of the race had they been different (e.g., lack of concentration before the gun, poor preparation). According to Olson et al.'s (1996) model, counterfactual thinking is another cognitive function that falls under the influence of expectancies. Roese (1994) states that counterfactuals are conditional propositions that embrace both a cause (e.g., if he hadn't scored that penalty...) and a consequence (e.g., ...we would have been knocked out of the competition). Roese (1994) also suggests two dimensions of counterfactuals: direction and structure. The direction dimension of counterfactual thinking is concerned with the valence of the alternative consequence that is proposed. "Upward" counterfactuals contain alternatives that are better than what actually happened, while alternatives that are worse or less favourable than the actual outcome are termed "downward" counterfactuals. Structure, on the other hand, refers to the causal element of the counterfactual. "Additive" counterfactuals are those that add causes in order to reconstruct reality (e.g., if she *had* worn new trainers, she would have won the race; if he *had* picked a five-player midfield, his team would have won). Alternatively, "subtractive" counterfactuals remove antecedents to reconstruct what might have happened (e.g., if she *hadn't* worn new trainers, she would have lost the race; if he *hadn't* picked a five-player midfield, his team would have lost).

It has been suggested that there is a strong link between the processes involved in the formation of counterfactuals and attributions (Sanna & Turley, 1996). It is, therefore, not surprising that there are similarities in the research findings reported within the counterfactual and attribution literatures. For example, as with attributions, it has been argued that the occurrence and content of counterfactual thoughts are determined by expectancies, with events that deviate widely from expected outcomes regarded as most likely to evoke counterfactual thoughts (Kahneman & Miller, 1986; Roese, 1997).

Sanna and Turley (1996) used a methodology similar to that of Kanazawa (1992) in order to examine the effect of expectancies on counterfactual thinking. Male and female participants (n = 80) listened to a vignette about a student who was about to take an exam. The target's previous achievement (i.e., "always done well" vs. "never done well") and achievement in the current exam (i.e., "A-grade" vs. "F-grade") were manipulated, creating four experimental conditions. The vignette also described four events that preceded the exam. Two events were typical of the target's everyday routine, while two events were atypical. One of each kind of event was framed as facilitative and the other as debilitative with regard to the target's preparation for the exam. After listening to the vignette, participants were asked to retell the story as if describing it to a friend. In support of Kanazawa's (1992) findings, the results showed that unexpected events (i.e., previously successful/previously unsuccessful and F-grade/A-grade, respectively) elicited a greater number of counterfactual thoughts than did expected outcomes. Moreover, a greater number of additive than subtractive counterfactuals was reported in the unexpected failure condition (i.e., previously successful and F-grade), while the unexpected success condition (i.e., previously unsuccessful and A-grade) led to a greater number of subtractive than additive counterfactuals. Sanna and Turley (1996) also replicated the above findings in a more naturalistic setting, which examined students' prior expectancies and resulting counterfactual thoughts to their actual performance in an exam. Thus, the results provide support for the suggestion that expectancy violation can influence the volume and structure of counterfactual thoughts.

AFFECTIVE CONSEQUENCES OF EXPECTANCIES

In addition to the above-mentioned cognitive consequences, the model of expectancy processes outlined by Olson et al. (1996) proposes that expectancies may influence perceivers' affective responses to targets following interpersonal interaction. However, Olson et al.'s model fails to provide a comprehensive definition of affect, opting instead to identify the link between affect and attitudes, whilst also describing specific affective reponses (e.g., anxiety, depression) that are influenced by self-expectancies. Thus, although Olson et al.'s perspective provides an outline of how expectancies influence particular feelings and emotions, it is limited in its explanation of how expectancies of others can impact on perceivers' affective responses. According to Betsch (2005), affect is defined as "the positive and negative feelings evoked by a stimulus in the individual" (p.41). Since this section focuses on the expectancies of others and their subsequent impacts on affect, the phrase "target person" should be substituted for the word "stimulus" when referring to this definition.

The first study to address the role of affect within the context of intergroup perceptions and expectancies of others was conducted by Dijker (1987). The aim of the study was to identify the emotions that Dutch natives expected to experience when confronted by ethnic minorities residing in the Netherlands. A sample of the native Dutch population of Amsterdam were asked to report the typical and expected emotional responses to one of three target groups: Surinamers, immigrant workers from Turkey and Morocco, or people similar to themselves in background and origin (control target). Participants were asked to rate the frequency of occurrence of eleven negative emotions (e.g., anger, distrust, fear) and seven positive emotions (e.g., happiness, admiration, liking) in response to the target. Ratings were provided using 7-point scales (1 = "never" to 7 = "always"). Participants also responded to open-ended questions about hypothetical behaviours toward members of the target group (e.g., impulse to keep your distance, impulse to engage in personal contact). In addition, participants' general attitude towards the target group was indicated using a "feeling thermometer" ranging from 0 (very unfavourable) to 100 (very favourable).

Analysis of the obtained ratings revealed that attitudes towards immigrant workers from Turkey and Morocco were more negative than attitudes towards Surinamers, while attitudes toward the control group were more positive than those toward both minority groups. Results also showed that expectancies of personal contact with Surinamers were correlated with positive emotions, while personal contact with Turkish and Moroccan immigrant workers was associated with negative emotions only. Dijker (1987) suggested that this finding might have been due to participants' perception of greater cultural similarities between themselves and Surinamers (e.g., speaking the same language). The findings illustrate the effect that expectancies can have on perceivers' affective responses and attitudes to others. Since affective responses (e.g., negative mood state, feelings of enjoyment) have been shown to have a direct impact on sporting performance and athlete participation (Iso-Ahola, 1995; Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993; Totterdell & Leach, 2001), the affective consequences of expectancies in the sport setting are worthy of further investigation.

BEHAVIOURAL CONSEQUENCES OF EXPECTANCIES

The majority of research concerning expectancy effects to date has focused primarily on examining the behavioural consequences of expectancies (Jussim & Harber, 2005; Miller & Turnbull, 1986). Moreover, the bulk of the literature concerned with behavioural responses to interpersonal expectancies has evolved from and centred upon the investigation of one potential consequence in particular: the self-fulfilling prophecy. Merton (1948) used the phrase "the self-fulfilling prophecy" to describe:

> "*...a false definition of the situation evoking a new behaviour which makes the originally false conception come true*"
>
> (Merton, 1948, p.195).

The four-step expectancy cycle (e.g., Becker & Solomon, 2005; Brophy & Good, 1974; Horn et al., 2001; Martinek, 1981; Snyder & Stukas, 1999) has been suggested as a model of how self-fulfilling prophecies can occur. According to the four-step cycle (see Figure 2.2.) the process is as follows: (a) beliefs and expectancies about the target are formed by the perceiver, (b) the perceiver behaves toward the target as if his or her expectancies are true, (c) the target interprets the perceiver's behaviour towards them and behaves in accordance with this interpretation, (d) the perceiver sees the target's behaviour as evidence for the accuracy of his or her initial impression (Becker & Solomon, 2005). In other words, self-fulfilling prophecies, often termed behavioural confirmation effects (Miller & Turnbull, 1986), are instances of a target's behavioural confirmation of a perceiver's erroneous expectations, and the perceiver's subsequent deduction that the target's behaviour is evidence of the accuracy of his or her initial beliefs.

A number of other studies have identified an imbalance in the quantity of teacher-student interaction, with high-expectancy students shown to be offered greater praise (e.g., Cooper & Baron, 1977; Good & Brophy, 1975; Harris & Rosenthal, 1985), more positive non-verbal cues such as nodding and smiling (e.g., Chaiken et al., 1974;

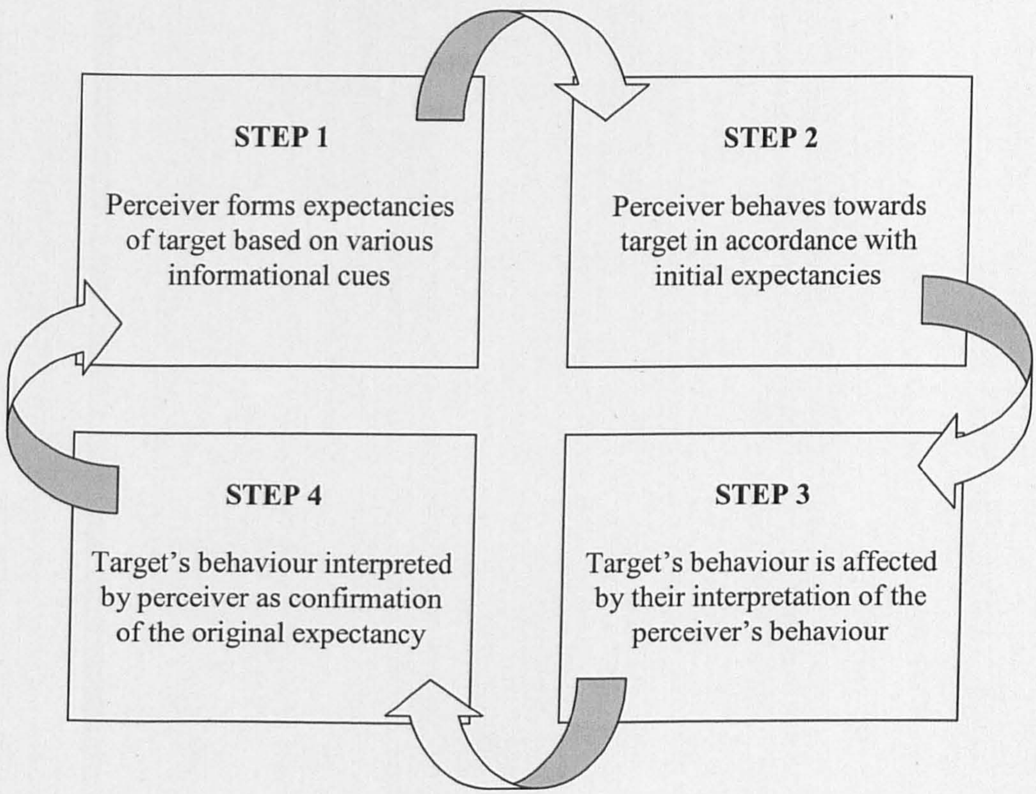


Figure 2.2. The four-step expectancy cycle (Becker & Solomon, 2005; Brophy & Good, 1974; Horn, Lox, & Labrador, 2001; Martinek, 1981; Snyder & Stukas, 1999)

Cooper & Baron, 1977), and longer, more frequent interactions with the teacher (Cooper & Baron, 1977; Harris & Rosenthal, 1985) compared with low-expectancy pupils. Other researchers (e.g., Cooper & Tom, 1984; Rubovits & Maehr, 1971) have argued that the quality rather than the quantity of teacher behaviours offered to high- and low-expectancy targets determines the extent to which self-fulfilling prophecies occur in the educational setting. However, results from both sets of researchers imply that teachers' expectancies influence their behaviour towards their students. According to Good and Brophy (1975), although often unintentional, teachers' expectancy-consistent behaviour motivates high-expectancy students, but stifles low-expectancy targets, thus leading to the occurrence of behavioural confirmation effects. Macrae and Bodenhausen (2000) propose a possible explanation for the unintentional instigation of behavioural confirmation effects:

> "*The essence of behavioural priming is that perceivers adopt the mental and motoric characteristics of primed cognitive representations, and consciousness need play no part in this process – perception can lead directly to action*"
>
> (Macrae & Bodenhausen, 2000, p.108).

In other words, if a perceiver is presented with information that triggers a particular thought, expectancy, or schema, the perceiver's resulting behaviour is likely to be consistent with such cognition, even if it falls outside of the consciousness of the individual. Given this hypothesis, the way in which information processing and expectancy formation occurs may well impact on the behaviour of both perceiver and target.

Although the nature of Rosenthal and Jacobsen's (1968) findings instigated a spate of research highlighting the negative implications of erroneous expectancies (e.g., Brophy & Good, 1974; Good & Brophy, 1975; Rist, 1970), certain researchers (e.g., Jussim & Harber, 2005; Madon, Guyll, Spoth, Cross, & Hilbert, 2003) have acknowledged the potential for expectancies to evoke positive behavioural consequences. Babad, Inbar, and Rosenthal (1982) distinguished between Galatea and Golem Effects: while the former relate to positive self-fulfilling prophecies (i.e., improvements in the performance of high-expectancy targets), the latter is a reference to the negative effects of inaccurate expectancies (i.e., decrements in the performance of low-expectancy targets). A recent study investigating the effect of mothers' expectancies on children's alcohol use (Madon et al., 2003) reported that underestimations of future alcohol use (positive expectancy) had a stronger self-fulfilling prophecy effect than overestimations (negative expectancy), thus providing support for the argument that the Galatea effect may outweigh that of the Golem.

While not as prevalent as research that has examined the effects of teachers' expectancies of students, the expectancy effect literature does contain examples of investigations into the behavioural effects of students' expectancies of teachers. For example, in Kelley's (1950) study where student expectancies of a guest lecturer were manipulated (i.e., lecturer described as either "very warm" or "rather cold"), students' participation and initiation of interaction with the lecturer were recorded during a 20-minute classroom discussion. Kelley reported that while 56% of participants in the "warm" lecturer condition entered freely into the discussion, only 32% of students did so if they were informed that the lecturer was "rather cold".

Wild, Enzle, and Hawkins (1992) examined the effect of students' expectancies of a teacher's motivation on students' subsequent attitude and behaviour. Music students were taught an introductory piano lesson by a confederate teacher who was described as either intrinsically motivated (i.e., volunteered to teach the lesson) or extrinsically motivated (i.e., agreed to teach the lesson in return for cash). The teaching style of the confederate was the same in both conditions (i.e., neither autonomy-supportive nor controlling). Once the taught song had been performed correctly twice, students were left alone for 10 minutes while their free-play behaviour was surreptitiously monitored. Finally, students completed a questionnaire by indicating their enjoyment, interest in learning, perceptions of the teacher, and mood following the lesson.

Although students in both conditions required the same number of trials to learn the song to the criterion level, participants who believed the teacher to be intrinsically motivated enjoyed the lesson more, reported more positive affect following the lesson, and reported more interest in learning new piano skills compared to participants taught by the teacher who was portrayed as being extrinsically motivated. Moreover, greater creativity and exploratory free-play behaviour was displayed by participants taught by the teacher described as intrinsically motivated compared with those taught by the teacher believed to be extrinsically motivated. Wild et al.'s (1992) results imply that students' expectancies of teachers' motivational orientation for engaging in teaching activities can influence students' subsequent behaviour, as well as their motivation towards participating in classroom activities. In light of such findings, further research is warranted to examine whether such behavioural consequences of subordinates' expectancies of an instructor/authority figure can be translated to sport (i.e., the coach-athlete relationship).

Behavioural Confirmation in Non-educational Settings

Although the majority of the self-fulfilling prophecy literature focuses on teacher-student interactions, the effect of expectancies on behaviour has been demonstrated in situations other than the educational setting. Snyder, Tanke, and Berscheid (1977) investigated expectancy effects on behaviour during a telephone-style conversation between a perceiver and target of the opposite gender. Thirty-eight pairs of previously unacquainted males (perceiver) and females (target) took part in a 10-minute, unstructured, audiotaped conversation where the perceiver and target were prevented from seeing each other. Prior to the conversation, male perceivers were presented with a photograph displaying either an attractive or an unattractive female said to be the person they would be having a conversation with. In line with the stereotype associated with attractiveness (Feingold, 1992), perceivers who viewed the attractive photograph expected the target to be warmer, more sociable, and more humorous than those in the unattractive condition. Naïve observers listened to the conversation and coded the behaviours of the female target in response to those of the perceiver. Observations revealed that targets in the attractive condition exhibited greater confidence, animation, enjoyment, and liking for their partner than targets in the unattractive condition, indicating that targets in both conditions conformed to the expectancies of the perceiver. Such results show that the occurrence of behavioural confirmation is not exclusive to the educational setting, and that expectancies based on "thin slices" or minimal information can be enough to influence the behaviour exhibited during social interaction (Ambady & Rosenthal, 1992).

CONDITIONS FOR THE OCCURRENCE OF EXPECTANCY EFFECTS

Ever since Rosenthal and Jacobsen's (1968) controversial findings (i.e., teacher expectancies influence student intelligence levels) were first published, there has been great debate concerning the exact nature, frequency, and strength of self-fulfilling prophecies. Jones (1986) posed the following question: "Is the behavioural confirmation of expectancies in social interaction inevitable?" (p.43). Rosenthal and Rubin (1978) addressed this question by conducting a meta-analysis of 345 experiments, which investigated the self-fulfilling prophecy in laboratory and naturalistic settings. It was found that one-third of the studies reached the .05 significance level, which Rosenthal and Rubin stated to be about seven times as many as would be expected if there were no significant relationship between perceivers' expectancies and targets' behaviour. Moreover, of the 87 studies that examined experimenter or teacher expectancies, about two-thirds of participants were reported to react in the direction of the expectancy. Rosenthal and Rubin also selected a stratified probability sample of 113 studies (based on area of research and statistical significance of the results) to calculate the mean effect size (as measured by Cohen's *d*). The estimated grand mean effect size over eight different areas of research was .70, ranging from a small effect for studies of reaction time ($d = .17$) to a large effect for studies of psychological judgments ($d = 1.05$). These findings support the conclusion of Brophy and Good (1974), whose review of over 60 studies established that although behavioural confirmation is not an inevitable part of interpersonal interaction, teacher expectancies can and do function as self-fulfilling prophecies.

Jones' (1986) also posed a second question: "...what are the conditions necessary for [expectancy effects] to happen?" (p.43). So far in this literature review, expectancy effects have been described and discussed in line with the three types of consequences (i.e., cognitive, affective, and behavioural) outlined in Olson et al.'s (1996) model of expectancy processes. However, the specific conditions under which expectancies are formed may determine the nature of their subsequent impact on cognition, affect, and behaviour. The cognitive demands of the situation (e.g., Darley & Fazio, 1980; Fiske & Neuberg, 1990; Plessner, 2005) and motivation (e.g., Le Poine & Yoshimura, 1999; Petty & Wegener, 1998; Towler & Dipboye, 2006) appear to be primary factors in the occurrence of expectancy effects. Other factors such as characteristics of the perceiver (e.g., cognitive rigidity, status) and characteristics of the target (e.g., self-concept) have also been shown to influence the degree to which expectancy effects are likely to occur (Jussim, 1993; Jussim & Harber, 2005).

Cognitive Demands of the Situation

Expectancy-based processing (i.e., information processing that is guided primarily by the expectancies already held by the perceiver) is likely to occur under conditions of high cognitive load (Darley & Fazio, 1980; Fiske & Neuberg, 1990; Plessner, 2005). Cognitive load refers to the total amount of mental activity imposed on attention and working memory at a given point in time (Cooper & Sweller, 1987). Conditions of high cognitive load are characterised by situations in which the perceiver lacks the time, ability, and/or motivation to consider all the available information when making a judgment (Spears & Haslam, 1997). In terms of interpersonal expectancies, cognitively demanding situations reduce perceivers' cognitive resources to attend to and process the individuating information they are presented with. In such instances, perceivers tend to rely on their expectancies to a greater extent.

The effect of cognitive load on attention to informational cues was clearly illustrated in a study conducted by Biesanz, Neuberg, Smith, Asher, & Judice (2001). Participants ($n = 230$) were grouped in same-sex pairs and given the role of either interviewer or applicant. Interviewers were instructed to interview the applicant and then rate them in terms of their suitability for a job at their university. Each interviewer was provided with a bogus profile and photo of the applicant, which was designed to evoke positive or negative expectations. In addition, interviewers were urged to form accurate impressions of applicants, while applicants were given a financial incentive to perform well in the interview. Interviewers were assigned to one of three experimental conditions, which were designed to manipulate distraction levels. During the interview, interviewers in the high distraction condition completed a difficult attention-based task (i.e., spotting letters appearing on a monitor), while interviewers in the low distraction condition completed an easier version of the same task. Interviewers in the no distraction condition simply had to conduct the interview. Undergraduate judges coded the behaviour exhibited by interviewers and applicants throughout the interview. Following the interview, interviewers rated the applicants on extraversion attributes, whilst applicants completed an 8-item, self-rating scale of extraversion. Results showed that with higher levels of distraction, interviewers exhibited stronger expectancy biases in their questions to applicants (i.e., questions were significantly influenced by the manipulated expectancy in the high distraction condition but not in the low and no distraction conditions). Furthermore, highly distracted interviewers led applicants to perform in a manner consistent with their erroneous expectancies. Thus, reduction of attentional resources during cognitively demanding situations makes the occurrence of expectancy effects more likely.

Motivation

The perceiver's goals or motivation to form accurate expectancies of the target can impact on the degree to which expectancy effects are likely to occur. Interdependence theory (Kelley, 1972) suggests that perceivers are motivated to learn about individuals on whom their outcomes depend. Such highly motivated perceivers are therefore more likely to form accurate expectancies of target individuals. For example, a professional football player is likely to be highly motivated to learn as much as possible about an incoming coach, given that the coach's decisions (e.g., team selection) may have a direct impact upon the player's future at the club. As a result, the player is likely to form an accurate expectancy of the coach given their motivation to learn about their new boss. Similarly, Petty and Wegener (1998) argued that people who are highly involved with a target (e.g., opponents who are likely to compete against each other frequently over the course of a season) are more motivated to make accurate judgments than those with low involvement (e.g., opponents who are unlikely to compete against each other). Thus, interdependence between perceiver and target leads to an increase in the perceiver's motivation to form accurate expectancies, and consequently a decrease in the likelihood of perceptual bias and the occurrence of expectancy effects (Jussim, 1993; Neuberg & Fiske, 1987).

Need for cognition is a personality trait linked to motivation that has been suggested as a possible moderator of expectancy effects (Cacioppo, Petty, Feinstein, & Jarvis, 1996; Towler & Dipboye, 2006). Defined as a "need to understand and make reasonable the experiential world" (Cohen, Stotland, & Wolfe, 1955, p.291), need for cognition refers to the degree to which individuals are motivated to process information when making judgments or predictions. Perceivers who are high in need for cognition are more likely to engage in effortful cognitive processing and actively seek out information that is relevant. Alternatively, individuals who are low in need for cognition are less likely to focus on large quantities of actual content, concentrating on more peripheral information that is easier to process (Cacioppo et al., 1996). Need for cognition has been shown to moderate the effect of reputation on students' expectancies of a lecturer, with those low in need for cognition seemingly more susceptible to reputation bias than people high in need for cognition (Towler & Dipboye, 2006).

The degree to which individuals are motivated to engage and interact with each other may also impact on the extent to which expectancy effects are observed. For example, situations where there is little exchange of knowledge or contact between perceiver and target prior to the forming of expectancies may be more liable to produce expectancy effects. In a meta-analysis of experiments that examined the influence of teachers' expectancies on students' behaviour, Raudenbush (1984) found that expectancy effects were only significant in studies where teachers had interacted with students for two weeks or less prior to the experiment. In other words, familiarisation between teacher and student lessened the influence of the teachers' expectancies on students' behaviour. Le Poine and Yoshimura (1999) proposed another explanation for Raudenbush's findings. Le Poine and Yoshimura argued that targets are driven, psychologically and socially, to politeness during initial dyadic interaction, making reciprocity the overwhelming default response. Consequently, targets meeting a perceiver for the first time may be compelled to behave in correspondence with the perceiver's expectancies, resulting in exhibition of behavioural confirmation. Thus, Le Poine and Yoshimura indicate that the target's motivation to appear polite and avoid confrontation may determine the extent to which interpersonal interactions lead to the occurrence of expectancy effects.

Characteristics of the Perceiver

Warr and Knapper (1968) proposed that the stable characteristics of the perceiver impact on the expectancies they form of a given target. By stable characteristics, Warr and Knapper were referring to the perceiver's attributes or personality traits that remain relatively constant across varying situations. Cognitive rigidity, defined as a personality trait by Allport (1954), is one characteristic of the perceiver that may determine whether or not expectancy effects occur during interpersonal interaction. It has been suggested (Jussim, 1986; 1993) that perceivers who are high in cognitive rigidity are more likely to elicit expectancy effects than those low in cognitive rigidity. Babad et al. (1982) provided evidence in support of Jussim's contention when they reported that teachers who were classed as high in cognitive rigidity behaved in a less friendly manner and directed more criticism towards low-expectancy students than high-expectancy students. In contrast, teachers classified as low in cognitive rigidity showed similar levels of friendly and critical behaviour towards high- and low-expectancy students.

The status of the perceiver in relation to the target may also determine whether the conditions are optimal for expectancy effects to occur as a result of social interaction. According to Smale (1977), interactions involving perceivers with high status or who display an air of dominance, expertise, or power (e.g., doctors, teachers, coaches) are more likely to lead to the exhibition of expectancy effects, particularly in the form of behavioural confirmation. For example, McNatt (2000) reported that self-fulfilling prophecies appear to be significantly stronger in military settings as opposed to other occupational environments. This finding may be explained by the fact that leaders within military organisations have more control over their subordinates, while military personnel tend to be younger, monitored more closely, and in no position to question authority compared with civilian organisations (Kierein & Gold, 2000). Thus, perceivers who possess high status or dominance may provide the perfect conditions for the exhibition of Pygmalion effects. In sport, this has implications for the coach, who is often revered by his or her athletes and viewed as a role model (Giacobbi, Jr. et al., 2003). However, the difference in power between perceiver and target may influence the size of expectancy effects. Copeland (1994) reported that behavioural confirmation does not occur when targets have the power to control perceivers' outcomes. This may mean that coaches of young children or low-level athletes (i.e., where the target is less involved in the decision-making process) have the potential to influence athletes' expectancies to a greater extent than coaches working with more experienced, elite performers (i.e., where athletes may view the coach-athlete relationship as more akin to a partnership).

Characteristics of the Target

According to Jussim (1993; Jussim & Harber, 2005), the characteristics of the target, as well as those of the perceiver, can influence the degree to which expectancy effects occur. However, there is some debate as to which characteristics a target must possess in order to increase the likelihood that expectancies will influence the outcome of interpersonal interaction. On the one hand, Madon, Guyll, Spoth, Cross, & Hilbert (2003) reported that children with high levels of self-esteem are more susceptible to behavioural confirmation than children who exhibit low self-esteem ratings. In contrast, there is evidence to suggest that expectancy effects seem to be most prevalent amongst targets who are classified as disadvantaged or underachievers, or those viewed (by themselves and/or their perceivers) with low expectancies (Madon, Jussim, & Eccles, 1997; McNatt, 2000). Jussim (1986) reported that expectancy effects are generally more powerful if the type of feedback that the perceiver provides reinforces the target's self-esteem or self-concept. For example, if a coach provides encouragement to athletes who hold positive self-concepts, but offers mostly negative feedback to performers with low self-esteem, the behavioural confirmation exhibited by both sets of athletes will be large.

Summary

In line with Olson et al.'s (1996) model of expectancy processes, research shows that expectancies influence the cognitions, affect, and behaviour of both the target and the perceiver, with most of the evidence suggesting that targets conform to the original expectancies of the perceiver (e.g., Brophy & Good, 1974; Rist, 1970; Rosenthal & Rubin, 1978; Snyder et al., 1977). Furthermore, there are a number of personal and situational factors that have been suggested as possible moderators of expectancy effects in terms of their strength and likelihood of occurrence (e.g., Jussim, 1993; Jussim & Harber, 2005).

EXPECTANCY EFFECTS IN SPORT

Expectancy effect research is a relatively new area of interest within sport. In one of the earliest studies that investigated expectancy effects within the physical education setting, Martinek and Johnson (1979) asked teachers ($n = 5$) to rate their expectancies of their students' physical achievement, with students ranked in the top 10 (i.e., high-expectancy) and bottom 10 (i.e., low-expectancy) selected as participants for the study. Two naïve observers coded teacher-student interactions during physical education classes, while pre- and post-test measures of students' self-concept were also recorded. Analysis of the data revealed that, in line with previous research conducted in the educational setting (e.g., Brophy & Good, 1974; Cooper & Tom, 1984; Harris & Rosenthal, 1985), high-expectancy students received significantly more contact with the teacher, more praise and encouragement, and greater teacher acceptance of their ideas than did low-expectancy pupils. Furthermore, high-expectancy participants showed significantly greater gains in post-test measures of self-concept than did low-expectancy students, suggesting that the expectancies of physical education teachers may affect not only their own behaviour, but also the cognitive responses of their students.

In a later study, Cousineau and Luke (1990) examined the effect of physical education teachers' expectancies on students' Academic Learning Time (ALT; i.e., the amount of time a student is engaged on a task at an appropriate level of difficulty). First, six elementary school teachers ranked their students (n = 36) in terms of perceived ability, thus allowing for the distinction between high-, middle-, and low-expectancy students. Teachers then delivered three basketball lessons over a two-week period, with each session lasting around 30 minutes. During the lessons, two trained observers, unaware of students' expectancy rankings, rated students' ALT. The results showed that when averaged over the three lessons, high-expectancy students scored greater ALT than did middle-expectancy pupils, who in turn scored greater ALT than low-expectancy students. These results imply that teacher expectations of ability may play an important role in the development and achievement of physical education students. On the other hand, since causality cannot be inferred, the study may reflect that ALT is a significant variable in the development of teacher expectancies within physical education.

More recently, Sarrazin, Tessier, Pelletier, Trouilloud, & Chanel (2006) attempted to build on research conducted by Pelletier and Vallerand (1996), which demonstrated that teachers' expectancies of students' motivation influenced teachers' behaviour (i.e., expectancies of intrinsic/extrinsic motivation led to autonomy-supportive/controlling behaviour, respectively). Sarrazin et al. recruited seven physical education teachers and examined the impact of their expectancies of male and female students' (n = 172) motivation on the teaching behaviours exhibited over an eight-week cycle of gymnastics lessons. Results showed that when teachers expected students to have high intrinsic motivation towards learning gymnastics, they exhibited more autonomy-supportive behaviour as opposed to when students were expected to have low intrinsic motivation. Thus, the teachers' expectancies appeared to have a strong influence on the way they treated their students.

Expectancy Effects in Judging and Officiating

It is common for people in the sport environment to actively seek out information that will allow them to form accurate impressions (Horn et al., 2001). This is especially true for sports judges and officials, whose job it is to look for cues that facilitate fair and accurate evaluations of athletes and events (Plessner & Haar, 2006). Yet, as the following section will reveal, these individuals, whose ability to display equity and fairness in their decision-making is crucial to their own performance, are often powerless against the influence of expectancies (Mascarenhas, O'Hare, & Plessner, 2006).

Cook (1971) proposed that expectancies of others might be based on unwritten rules adhered to by the perceiver. Similar to stereotypes, expectancies formed in this way assume that particular classes of people will possess and exhibit specific qualities in their behaviour. For example, it has been suggested that gymnastics judges generally adhere to the expectancy that gymnasts who appear last in their team order are better than those who appear first (Plessner, 2005). The influence of such expectancies on the ratings made by gymnastics judges was the focus of a study conducted by Scheer and Ansorge (1978). Twelve nationally certified gymnastics judges viewed video footage of male college gymnasts (n = 66) performing routines for their team. The order in which within-team routines were viewed by the judges was manipulated, in that the same routines were viewed on two occasions 48 hours apart, but the order of routine presentation within certain teams was reversed for the second viewing. In order to maximise ecological validity, judges were provided with feedback regarding the scores awarded by other judges. The results showed that, consistent with the assumption that gymnastics teams ensure that the most talented gymnasts perform last, judges rated routines performed at the end of the team order significantly higher (i.e., more than one-tenth of a point) than the same routine when it was presented first in the team order. The fact that one-tenth of a point may be the difference between winning and losing highlights the practical significance of such expectancy effects on athletic evaluation. The findings of Scheer and Ansorge have been supported by a number of subsequent studies (e.g., Ansorge, Scheer, Laub, & Howard, 1978; Plessner, 1999).

Plessner (1999) conducted a similar study, in which male expert gymnastics judges (n = 48) watched a video of gymnastics routines performed by a team of five gymnasts on each of three "fast" (i.e., vault, pommel horse, horizontal bar) and three "slow" apparatus (i.e., parallel bars, floor, rings). The placement of a target gymnast within the team order was manipulated so that some judges saw the target appear first in the team order, while other judges witnessed the target gymnast performing last. Plessner found that the target gymnast appearing last in the team order was favoured more in judges' scoring (i.e., awarded more bonus points, had less points deducted) than the target gymnast who appeared first, but this effect was only reported for scores of "fast" apparatus routines. Plessner suggested that this effect is likely to be the result of increased expectancy-based processing following exposure to conditions of time-pressure and lacking the resources to cope with the judging demands (Fiske & Neuberg, 1990). In other words, Plessner argues that when faced with a complex information-processing task that surpasses the limited human capacity to process information (e.g., judging a gymnast's performance on "fast" apparatus), gymnastics judges will rely more heavily on their expectancies (e.g., gymnasts who appear last in team order are better than those who appear first) to inform the judging process. Thus, gymnastics judges may be influenced by order-related expectancies. This supports the contention that cognitively demanding situations are most likely to provoke expectancy-based information processing (Darley & Fazio, 1980; Fiske & Neuberg, 1990).

Support for the existence of expectancy-induced bias in figure skating judges was provided by Findlay and Ste-Marie (2004), where the influence of skaters' reputation on judges' ratings was examined. Twelve qualified Canadian figure skating judges were shown a video consisting of routines performed by 14 skaters. Participants were asked to judge each of the figure skaters according to standard criteria (i.e., technical merit, artistic impression, identification of performance elements, deductions for errors detected in performance). Half of the skaters were either known to the judge (i.e., positive reputation), while the remaining half of performers were unknown to participants (i.e., no reputation). The results suggested a reputation bias, since the average ranking of skaters was significantly higher when they were known to judges than when unknown. Findlay and Ste-Marie interpreted the award of higher marks to performers with a positive reputation as an indication that the judges were adjusting their ratings in order to maintain consistency with their expectancies.

Sports officials, umpires, and referees – along with judges – are expected to be impartial, equitable, and accurate in their decision-making processes. In fact, it is often taken for granted that referees will act without bias when attempting to officiate a game, match, or contest. However, Rainey, Larsen, and Stephenson (1989) maintain that, as previously mentioned with regard to figure skating judging, sports officiating is not based exclusively on rules and regulations, and is often guided by personal expectancies and subjective norms. In an experiment investigating the extent to which the colour of a team's uniform can influence impression formation, Frank and Gilovich (1988) presented spectators and referees with a series of videos displaying competitive action between two American football teams. Although participants viewed the same plays, some participants viewed the defensive team wearing a black strip, while others saw footage of the defensive team dressed in white. Frank and Gilovich proposed that black clothing would carry an expectancy of aggression. After watching the clips, participants were asked to rate the likelihood that they would penalise the defending team for their actions in each of the plays. The results showed that when the defensive players were wearing black uniforms, participants were more likely to penalise their actions compared to when they were wearing white. These findings suggest that refereeing decisions, which are supposed to be based on relevant, unbiased information, may nevertheless be guided by subtle, unrelated cues such as the characteristics that are implied by the colour of a team's clothing.

Consistent with Frank and Gilovich's (1988) results, Jones, Paull, and Erskine (2002) proposed that the reputation of a team or athlete may influence the decision-making strategies employed by sports officials. In Jones et al.'s study, a sample of football referees were split into two groups and presented with clips from competitive football matches. Although both groups viewed identical stimuli, reputation information was manipulated prior to viewing the footage (i.e., half the participants were told that one of the teams had a tendency to play aggressively, while the remaining referees were provided with no reputation information). Having viewed the videos, participants were asked to indicate the kind of action they would engage in if they were in charge of each incident. Reports from participants revealed that significantly more yellow and red cards were awarded to the team with an aggressive reputation compared to when they were provided with no reputation information. Thus, the team's reputation appeared to influence the way in which their behaviour was evaluated and dealt with.

Expectancy Effects in Athletes

In addition to judges and referees, athletes are also open to the influence of expectancies. Given the view of Buckolz, Prapavesis, and Fairs (1988) that "prediction...is the primary method for combating a time-pressure situation" (p.20), it is logical to assume that in the multitude of sports where rapid response and decision-making is crucial to success, expectancies based on the performance cues of an opponent may help the athlete in attempting to correctly execute suitable skills. For example, in their study of the advance cues used by players from the All-Canadian Tennis Academy (n = 34), Buckolz et al. revealed that expectancies based on the immediate pre-shot position of an opponent's body and racquet were consistently used by tennis players in order to reduce reaction time. However, judgments made by athletes based on their expectancies may also have detrimental effects on their experience of competitive athletic encounters. Miki, Tsuchiya, and Nishino (1993) examined the impact of expectancies on attention in sport. Male and female undergraduate students (n = 17) were told that they would be competing against an opponent on a golf task. Participants were then presented with a bogus record sheet displaying information about the opponent's past performance on the golf task (i.e., four wins, four losses, or no record) and their self-evaluations of ability on the golf task (i.e., positive or negative).

Miki et al. (1993) found that profiles of opponents that contained no past performance information received more attention (i.e., participants spent more time providing reactions to the profile) than those with past performance information. This finding showed that when an expectancy of the opponent was cued through the presentation of previous winning record, participants relied on this expectancy to a greater extent than other information such as the opponent's positive or negative self-evaluations. Further support for this argument was drawn from participants' pre-task ratings of their opponent. When compared with ratings of opponents displayed without past performance information, opponents described as having a winning record were rated better, while opponents with losing records were rated as worse. Miki et al.'s results demonstrated that when athletes hold an expectancy of an opponent, they are more likely to rely on this expectancy than other individuating information when evaluating their opponent.

Stone, Perry, and Darley (1997) reported the existence and use of racial stereotypes during the assessment of athletic performance. In this study, participants viewed a player profile before listening to a 20-minute recording of the player in action during a game. While the recording remained the same for each participant, the photo (i.e., head and shoulders) included in the player profile was manipulated in terms of ethnicity (i.e., "white" vs. "black") and perceived athleticism (i.e., "athletic" vs. "unathletic"). After viewing the profile and listening to the recording, participants rated the target on natural ability, personal performance, and contribution to the team's performance. The results were consistent with the racial stereotypes of basketball players: "black" athletes were rated as having more physical ability, being better team players, and having better positional play than "white" athletes, while "white" players were perceived to have more basketball intelligence and more "hustle" or work ethic than "black" performers. Furthermore, "athletic" and "white" targets were perceived as less team oriented, while targets described as "unathletic" and "white" were rated as more intelligent players. The results from this study indicate that expectancies based on stereotypes or beliefs about individual members of specific groups may influence the judgments perceiver's make about athletic performers.

A study by Buscombe, Greenlees, Holder, Thelwell, and Rimmer (2006) investigated whether specific non-verbal cues could lead to expectancy effects during athletes' evaluation of potential opponents. Body language and clothing had previously been shown to influence athletes' expectancies (Greenlees, Bradley, Holder, & Thelwell, 2005; Greenlees, Buscombe, Thelwell, Holder, & Rimmer, 2005). Buscombe et al. (2006) recruited a sample of forty white, male tennis players to participate in the study. Athletes viewed video clips of a hypothetical opponent warming up before a match and then performing a series of rallies in which an equal number of winning shots and unforced errors were hit. Athletes were asked to make judgments regarding four specific elements of the target's performance (i.e., forehand, movement, speed, and power), and to rate their expectancies of success against the opponent. A significant interaction effect was found between body language and clothing for ratings of the opponent's performance. Athletes evaluated the performance of opponents displaying positive body language and tennis specific clothing to be better than targets who displayed negative body language and wore either tennis specific or general sports clothing.

Expectancy Effects Within the Coach-Athlete Relationship

The importance of examining the effect of expectancies on interactions between coaches and athletes is largely due to the highly interdependent nature of this relationship. Jowett and Poczwardowski (2007) define the coach-athlete relationship as "a situation in which a coach's and an athlete's cognitions, feelings, and behaviours are mutually and causally interrelated" (p.4). According to this definition, the coach-athlete relationship is dynamic in nature, and is shaped by the interactions that occur between the members within it. Given that expectancies have the potential to significantly impact on the cognitive, affective, and behavioural consequences of social encounters (Olson et al., 1996), it follows that expectancies may be important determinants of the way in which the affiliation between coach and athlete is allowed to develop and function. Specifically, the expectancies that are held, exhibited, and responded to by coaches and athletes could have positive and negative impacts on performance and psychological well being within such an interdependent relationship. As a result, one of the most crucial reasons for conducting expectancy effect research within the context of the coach-athlete relationship is to generate knowledge that may enable coaches and athletes to satisfactorily manage their interpersonal interactions, thus allowing for the development of an effective working alliance. The findings of such research might also inform coaches, athletes, and sport psychologists of the ways in which they can harness the beneficial effects, as well as avoid the detrimental consequences, of expectancies on the important bond between coach and athlete.

Much of the early research regarding expectancy effects during interactions between coach and athlete was conducted in youth sport settings (e.g., Horn, 1984a; Martinek & Karper, 1986; Rejeski, Darracott, & Hutslar, 1979). As with experiments that examined the effect of teacher expectancies on student behaviour, early work scrutinised the behaviours coaches displayed to athletes and showed that it was possible to differentiate between high- and low-expectancy athletes based on the coach's treatment of them. Rejeski et al. (1979) examined the behaviour of basketball coaches (n = 14) towards male youth athletes (n = 71, aged 8-12 years), who were classed as either high- or low-expectancy players by the coaches. Observations of dyadic coach-athlete interactions were made at one game and one practice session during the final three weeks of the competitive season. Coding of observations using the Coach Behaviour Assessment System (CBAS; Smith, Smoll, & Hunt, 1977) revealed that high-expectancy athletes received more reinforcement than did low expectancy athletes. This fits with the research findings within the educational setting (e.g., Brophy & Good, 1974; Harris & Rosenthal, 1985; Rist, 1970), which showed that high-expectancy students received more positive encounters with the teacher than did low-expectancy pupils. Such findings indicate that expectancies affect the behaviour of the perceiver.

However, some of Rejeski et al.'s (1979) findings run counter to those reported in the self-fulfilling prophecy literature. Despite receiving less reinforcement than high-expectancy athletes, low-expectancy players experienced more general technical instruction and less non-reinforcement than high-expectancy athletes. Similar findings were reported by Horn (1984a), who studied high school softball coaches (n = 5) and players (n = 72, mean age = 13.9 years) over a period of nine weeks. Two trained observers used the CBAS to record coaches' behaviour during four practice sessions and three games. Analysis of the data revealed that while coaches treated high- and low-expectancy athletes differently, these behavioural differences were not consistent with the self-fulfilling prophecy literature. Low-expectancy athletes received more technical instruction, more feedback, and more reinforcement following successful skill execution than did high-expectancy athletes.

One possible explanation for the results obtained by Rejeski et al. (1979) and Horn (1984a) is that, in the context of the research, youth league rules dictated that all children had to play equivalent time periods, making coaches more motivated to concentrate on their weaker players if they wanted the team to achieve success. Moreover, in the youth sport context, coaches may perceive it as acceptable for a child not to be highly competitive. This is in direct contrast to the classroom situation (in which most of the expectancy effect literature has been conducted), where all children must achieve certain levels of competence. Thus, the most likely explanation is that the context in which the coaching took place influenced coaching behaviour to a greater extent than the coaches' expectancies. Since the primary emphasis within the youth sport setting is on skill development and maximum participation by all athletes (i.e., instruction over competition), stronger behavioural confirmation effects may occur in settings where competition between athletes is encouraged (Horn, 1984b).

Martinek and Karper (1986) conducted a closer examination of the effect of context on coaches' expectancies of young athletes within the physical education setting. Three teachers were asked to deliver a 24-week training programme to a group of first-, second-, and third-grade students (n = 126). The programme consisted of three eight-week phases, and teachers were asked to employ a different theme of instruction during each phase. In phase one, teachers placed emphasis on individual development (i.e., self-improvement); phase two stressed competitive performance (i.e., performing better than peers); and phase three promoted cooperation (i.e., teamwork between students). Prior to the start of the programme, teachers rated their expectancies of students' ability. Results showed partial support for the findings of Horn (1984a) and Rejeski et al. (1979). In the competitive phase, high-expectancy pupils' ideas were accepted and implemented by teachers significantly more compared with low-expectancy students, while in the individual phase, high-expectancy students received significantly more information from teachers than did low-expectancy pupils. This supports the notion that high-expectancy students will receive more positive teaching or coaching behaviours when the emphasis is on competition or individual achievement. During the cooperation phase, the ideas offered by low-expectancy students were accepted and implemented by teachers to a greater extent compared with suggestions from high-expectancy students. This finding is also counter to the traditional self-fulfilling prophecy literature, and suggests that when the emphasis is on cooperation within youth sport, the subsequent behaviour of the teacher or coach may allow low-expectancy students to thrive at the expense of high-expectancy athletes' development.

Expectancy effect research involving elite and more experienced athletes has been shown to reflect the self-fulfilling prophecy literature to a greater extent than experiments conducted in youth sport. For example, Sinclair and Vealey (1989) examined field hockey coaches' ($n = 3$) expectancies of female athletes ($n = 41$, aged 15-23 years) and the coaching behaviours that athletes received. Results showed that 82% of athletes in the study could be correctly classified as high- or low-expectancy based solely on the type of coach feedback they received: high-expectancy performers received significantly more one-on-one communication with the coach as well as more specific and evaluative feedback than low-expectancy athletes. A study conducted by Solomon, DiMarco, Ohlson, and Reece (1998) involving collegiate basketball players ($n = 23$, aged 18-23 years) found that high-expectancy athletes received more overall feedback, praise, and instruction from their coach than low-expectancy athletes. However, Solomon, Golden, Ciapponi, and Martin (1998) provided evidence to suggest that the nature of such expectancy effects within the coach-athlete relationship is dependent upon the timing of expectancy formation, as well as the expectancies themselves.

Solomon, Golden, et al. (1998) examined the behaviour of male high school basketball coaches ($n = 4$) towards their athletes ($n = 49$) over the course of an entire season. Solomon, Golden, and colleagues reported that in the early part of the season, coaches provided more management feedback to athletes who they believed had low potential for improvement than those perceived to have high potential for improvement. However, during the latter stages of the season, the opposite trend was observed in terms of the amount of instruction offered to athletes (i.e., more instruction was offered to athletes perceived by coaches to have high potential for improvement compared with those regarded as having low potential for improvement). Moreover, athletes who the coach expected to be high in ability received more management feedback and overall feedback at the end of the season than athletes who were expected to have lower levels of ability. Thus, there is evidence to suggest that the coaching behaviour of collegiate coaches may be influenced not only by the nature of their expectancies, but also the stage of the season at which they are formed.

Wilson, Cushion, and Stephens (2006) attempted to provide further support for the existence of self-fulfilling prophecies within the coach-athlete relationship. Coaches of basketball and football teams (ranging from high school to elite academy level) rated their expectancies of athletes (n = 200, aged 14-18 years) in terms of effort and ability and ranked them in order. The top third were labelled high-expectancy athletes, while the bottom third were classified as low-expectancy performers. Coaches were observed interacting with players during training sessions and games over a period of four months, and were also interviewed regarding their coaching behaviours and cognitions. At the end of the observation period, coaches were asked to indicate whether athletes had exceeded, fulfilled, or failed to fulfil their original expectancies. Coaches perceived that the majority of low-expectancy athletes had failed to exceed original expectancies of effort (82%) and ability (93%). Furthermore, they believed that almost two-thirds (65%) of high-expectancy players had exceeded initial expectancies of effort, while only 2% had failed to do so, and one-third had met the original prediction. Thus, the results represent further evidence to suggest that self-fulfilling prophecies can occur within the coach-athlete relationship.

Although the literature reviewed so far has provided evidence for the existence of expectancy effects within the coach-athlete relationship, there is also evidence which runs counter to the proposition that coaches' expectancies of athletes determine the behaviour exhibited during coach-athlete interactions. For instance, Solomon and Kosmitzki (1996) found no link between coaches' expectancies of athlete ability and the coaching behaviour that was exhibited over the course of a season. In addition, Solomon, Wiegardt, Yusuf, Kosmitzki, Williams, and Stevens (1996) investigated the behavioural impacts of coach (n = 8) expectancies related to male and female basketball players' (n = 23) ethnicity and ability. Six observation sessions, which consisted of three 30-minute periods, were conducted over the entire season. Coaches' behaviour was measured using the CBAS and voice recordings of coaches' feedback to athletes. Solomon, Wiegardt, et al. reported that coaches' expectancies of athletes that were based on either ethnicity or ability did not elicit any observable expectancy effects. Hence, there appears to be equivocal evidence as to the exact nature and occurrence of expectancy effects during coach-athlete interactions.

There are two main problems with the research alleging that self-fulfilling prophecies occur within the coach-athlete relationship. The first of these is related to sample size. Many of the studies previously outlined (e.g., Horn, 1984b; Martinek & Johnson, 1979; Martinek & Karper, 1986; Sinclair & Vealey, 1989; Solomon, Golden, et al., 1998) rely on a limited population sample, particularly in terms of the numbers of coaches recruited as participants (ranging from $n = 3$ to $n = 5$). This has certain implications for the degree to which the findings can be described as robust, thus leaving some of the conclusions open to question. However, a counter argument to this position would be that the nature of these research studies (the majority of which are naturalistic or field-based) makes the recruitment of large participant numbers particularly problematic. This may be due to several factors. First, there may be reluctance from potential participants to invest the time and effort required, particularly when the study is conducted over several sessions during a competitive season (e.g., Martinek & Karper, 1986; Solomon, Golden, et al., 1998). Second, there may be a scarcity of suitable participants, which becomes more likely when the study aims to examine the impact of expectancies within a highly-specific population (e.g., high school basketball coaches). Finally, studies designed to observe the effects of expectancies on interpersonal interaction within naturalistic settings will often need to consider the trade-off between high participant numbers and maintaining manageable protocols. For example, participant numbers may need to be fairly low in order to ensure simplicity and accuracy of data collection and analysis methods. Thus, although the low sample size employed by these studies must be cited as a limitation, it is important to consider not only the difficulties inherent in designing and conducting such field-based research, but also the fact that, in comparison with traditional laboratory-based experiments, examination of naturally occurring expectancy effects can provide information about their power and pervasiveness in real-world contexts such as the coach-athlete relationship (Jussim, 1991).

The second problem with the research is that it fails to account for the possibility that coaches may be accurate in their expectancies and predictions of athletes' effort and ability (Jussim, 1991, 1993; Jussim & Eccles, 1992; Jussim & Harber, 2005; Trouilloud, Sarrazin, Martinek, & Guillet, 2002). The research that has been reviewed in this section has recruited coaches and athletes who have worked with each other prior to the start of the experiments. In some cases (e.g., Wilson et al., 2006), this period of acquaintance is in excess of six years, which allows the coach plenty of opportunity to form accurate expectancies regarding the subsequent ability, effort, and performance of the athlete. If expectancy effect research is to inform psychologists about the true extent to which self-fulfilling prophecies occur within the coach-athlete relationship, investigators need to account for the accuracy of expectancies that are formed by perceivers. In outlining their model of expectancy processes, Olson and colleagues (1996) make such a recommendation, suggesting that "the accuracy of expectancies needs to be explored; it is a complex issue that requires careful research." (p.234). In light of this statement, a limitation of Olson et al.'s suggested model is that it does not include or account for expectancy accuracy. Ostensibly, this seems surprising given the emphasis that Olson et al. place on the issue of accuracy within expectancy research. Thus, while the authors provide a valuable addition to the expectancy literature by outlining a model that does not focus solely on the behavioural impacts of expectancies, it could be argued that Olson and colleagues have neglected to include accuracy as a fifth property of expectancies.

The work of Jussim and colleagues (Jussim, 1991, 1993; Jussim & Eccles, 1992; Jussim & Harber, 2005) conveys that it is possible for expectancies to represent an accurate prediction of behaviour (i.e., expectancies reflect social reality) rather than being a moderator of behaviour (i.e. expectancies construct social reality). The research does, however, maintain that inaccurate expectancies formed as a result of perceptual biases do have the potential to influence behavioural responses to a degree. In light of Jussim's recommendations, it is vital that research examining the impact of expectancies on the coach-athlete relationship is carefully designed so that the findings can be confidently identified as expectancy effects as opposed to accuracy in the perceiver's predictions. One simple way of addressing this issue would be to recruit coach and athlete participants who have not encountered each other prior to the experiment. The cited examples of equivocal findings and methodological flaws within the sport literature highlight the importance of examining expectancy effects within the coach-athlete relationship with a more stringent and robust methodology.

Effects of Athletes' Expectancies of Coaches

The bulk of research regarding the occurrence of expectancy effects as a result of coach-athlete interaction has focused solely on the examination of coach expectancies and behaviours. Smoll and Smith (1989), however, identified that "the ultimate effects that coaching behaviour exerts are mediated by the meaning that players attribute to them" (p.1527). Horn (2002) agreed that the influence of coach behaviour on athletes' attitudes, self-perception, and performance is partly mediated by athletes' evaluations and expectancies of the coach, and argued that by understanding how athletes form impressions and expectancies, coaches will be in a position to utilise their own behaviour as a beneficial tool. Despite these realisations, there is no research to date that has examined expectancy effects within the coach-athlete relationship from the perspective of the athlete.

There is no research that has examined athletes' use of information when forming expectancies of their coach. Although athletes' affective and attributive responses towards coaches have been studied with specific reference to cues such as differences in race and ethnicity between coach and athlete (Jowett et al., 2006) and the coach's use of humour (Grisaffe, Blom, & Burke, 2003), this research does not specifically examine the process by which athletes form expectancies of the coach, nor does it address the impact that such expectancies might have on the coach-athlete relationship. Research scrutinising the particular cues that athletes use when forming expectancies and attitudes toward their coach has also been neglected. A recent study by Lubker et al. (2005) is the closest example of such an investigation.

Lubker et al. (2005) explored the way in which athletes' first impressions of a sport psychologist impacted on their subsequent expectancies about the target. Athletes rated their first impressions of 11 Psychological Enhancement Consultants (PECs), where the clothing (i.e., athletic vs. academic), physique (i.e., lean vs. large build), gender (i.e., male vs. female), and ethnicity (i.e., Caucasian vs. African American) of PECs were manipulated. Athletes also rated the extent to which each variable influenced their ratings. Results showed that when PECs were Caucasian and male, those with lean build and academic dress were rated highest on personality traits (i.e., trustworthy, friendly, sensitive, sense of humour, good communicator). Ratings of sport knowledge were highest for lean, athletically dressed PECs and lowest for PECs with academic dress and large build. Moreover, athletes reported that they were significantly more likely to seek the services of PECs with a lean physique rather than large PECs, regardless of clothing type. In all, despite findings that female PECs were rated significantly higher on personality traits than male PECs, and that the ethnicity of athletes seemed to influence impressions to a certain extent, the overall data suggested that physique and clothing were cues that influenced athletes' expectancies to a greater extent than gender and race.

Lubker and colleagues (2005) have highlighted the possibility that certain impression cues are more likely than others to influence athletes' expectancies of those they collaborate with in the sporting context. Consequently, it is important that coaches are made aware of which sources of information are most salient for the athlete when developing expectations. This knowledge should enable the coach to exert more control over the impression they want to create, and ultimately facilitate more effective coach-athlete interactions. The extent to which athlete preferences in forming expectancies of coaches are understood has important implications regarding the way in which the coach-athlete relationship is allowed to develop. However, although the findings of Lubker et al. (2005) contribute to our understanding of the cues athletes use to form expectancies of others, the study used sport psychologists as their target of choice. As a result, the extent to which the findings can be used to inform coaches is minimal, therefore reiterating the need for research to be conducted in this area.

Radel, Legrain, Wild, and Sarrazin (submitted for publication) have conducted the most recent example of research examining athlete-elicited expectancy effects. Novice students (n = 72) were taught a new sporting activity by a teacher, who was described as either intrinsically motivated (i.e., volunteer) or extrinsically motivated (i.e., paid employee). After learning the new activity, students were then asked to teach the same activity to two naïve "second generation" students. Results showed that students taught by the "volunteer" teacher reported more intrinsic motivation than those taught by the "paid employee" teacher. Moreover, the levels of intrinsic motivation reported by "first generation" learners appeared to be transferred to "second generation" learners. In other words, "second generation" learners who were taught by students from the "volunteer" teacher group reported more intrinsic motivation compared with "second generation" learners who were taught by students from the "paid employee" teacher group. Thus, the findings suggest that students' expectancies of the degree to which teachers are intrinsically motivated to teach a sporting activity influence the cognitive, affective, and behavioural responses of the students. In addition, this expectancy effect appears to be so robust that it is translated to students who experience the effect second-hand through the teaching of the original perceiver. The findings therefore imply that athletes' expectancies play a significant role in determining the nature and outcome of interpersonal interactions and learning of sport skills.

The study by Radel et al. (submitted for publication) adds credence to the importance of examining athlete-induced expectancy effects. However, since the study was conducted within the context of a physical education class, it is an examination of the effect of students' expectancies of their teacher, rather than athletes' expectancies of their coach. Moreover, the research does not examine the students' expectancies of the competency and quality of the physical educator. This is particularly surprising given that there has been much investigation of coaches' expectancies of athlete ability and their subsequent impact on the coach-athlete relationship (e.g., Sinclair & Vealey, 1989; Solomon, DiMarco, et al., 1998; Wilson et al., 2006).

Summary

The previous section has provided evidence that predictions, impressions, and expectancies are frequently formed within the sport setting and may influence the cognitive, affective, and behavioural responses of individuals such as judges (e.g., Scheer & Ansorge, 1978; Findlay & Ste-Marie, 2004; Plessner, 1999), officials (e.g., Frank & Gilovich, 1988; Jones et al., 2002), coaches (e.g., Rejeski et al., 1979; Sinclair & Vealey, 1989; Solomon, DiMarco, et al., 1998), and athletes (e.g., Buscombe et al., 2006; Greenlees, Bradley et al., 2005; Greenlees, Buscombe et al., 2005). However, there remains a gap in the literature regarding the nature of expectancy effects within the coach-athlete relationship, specifically from the perspective of the athlete. The effect of athletes' expectancies of coaches is one that is yet to be directly investigated, despite initial indications that such a line of inquiry is warranted (Radel et al., submitted for publication). By conducting such research and developing a greater understanding of the entire expectancy effect process, it is envisaged that researchers will be in the position to develop specific guidelines that may be useful in not only combating the potentially negative effects of expectancies within the coach-athlete relationship, but also harnessing the positive aspects of this phenomenon.

SUMMARY OF AIMS AND STRUCTURE OF THESIS

From the above review of literature, it is clear that further research examining the expectancy formation process within the coach-athlete relationship is warranted. The main objective of this thesis is to identify the potential impacts athletes' expectancies may have on their cognitive, affective, and behavioural responses towards the coach. The specific aims of this research are:

1. To examine the sources of information that athletes deem influential when developing expectancies of a coach.

2. To examine the cognitive consequences of athletes' expectancies of coaches.

3. To examine the affective responses of athletes to initial expectancies of a coach.

4. To examine the behavioural consequences of athletes' expectancies of their coach.

CHAPTER 3

STUDY 1: ATHLETES' PERCEPTIONS OF THE SOURCES OF INFORMATION USED WHEN FORMING INITIAL IMPRESSIONS AND EXPECTANCIES OF A COACH

INTRODUCTION

The first aim of this thesis is to identify the sources of information that athletes perceive to be influential during the initial development of impressions and expectancies of a coach. There have been previous attempts to categorise the informational cues used by perceivers during expectancy formation (e.g., Argyle, 1994; Becker & Solomon, 2005; Cook, 1971; Horn et al., 2001; Jussim, 1993; Olson et al., 1996). Such research has provided greater understanding of the antecedents of expectancies, and the particular sources of information that perceivers are likely to use as a basis for the formation of expectancies, predictions, and judgments. However, there is no research that has examined athletes' use of information when forming impressions and expectancies of their coach. As a result, there is a lack of understanding regarding the sources of information athletes use to form expectancies of coaches, as well as the potential impacts that these expectancies may have on coach-athlete interaction.

The coach-athlete relationship is a dynamic alliance that is shaped through the interaction between coach and athlete, specifically the expression of, and response to, each other's cognitions, emotions, and behaviours (Jowett & Poczwardowski, 2007). Thus, in order to comprehend the nature and content of the coach-athlete relationship, research must investigate the way in which interrelated factors (e.g., thoughts, feelings, and behaviours) are developed. Expectancies have been shown to impact on such factors (e.g., Olson et al., 1996), and an understanding of the methods employed by athletes when forming expectancies of coaches may have important implications for the development of effective coach-athlete relationships. Consequently, the aim of this study was to examine the observable cues that athletes deem influential when developing expectancies of a coach. Since no previous research has attempted to investigate athletes' perceptions of the cues they use during such expectancy formation, a survey method was adopted to achieve this aim, and was deemed the most appropriate means of obtaining accurate quantitative information regarding the opinions and beliefs of a large athlete population (Sturgis, 2006).

A secondary aim of this study was to examine the extent to which demographic differences between performers determines the cues that are processed when forming expectancies of a coach. Warr and Knapper's (1968) schematic model of person perception proposes that the information that is selected during person perception not only determines the nature of affective, attributive, and expectancy responses to a target, but also varies depending on the perceiver's stable characteristics (i.e., their dispositions or personality traits that tend to be fairly robust across a range of situations). Since gender, type of sport, and level of participation can be categorized as stable characteristics, the model suggests that such factors may influence the formation of athletes' expectancies. Just as these characteristics have been suggested as moderating factors in athletes' preferred leadership style (Chelladurai, 1990), demographic background may determine the cues athletes use during initial expectancy formation. Thus, the present study will examine the effects of athlete gender, type of sport, and level of participation on athletes' perceived use of informational cues when forming initial expectancies of a coach. Given the exploratory nature of this study, no hypotheses have been suggested. However, the study will address some specific research questions, namely whether or not previous models of the cues used during expectancy formation (e.g., Cook, 1971; Horn et al., 2001; Jussim, 1993; Olson et al., 1996) can be applied to athletes' expectancies of coaches.

METHOD

Participants

A total of 538 athletes, recruited from four universities in the south-east of England, volunteered to take part in the present study. However, 48 volunteers did not fully complete the questionnaire and their data were excluded from the analysis. The remaining 490 participants (Mean age = 20.34 years, SD = 4.02) consisted of 310 males (63.3%) and 180 females (36.7%), with a mean of 9.87 years (SD = 4.26) experience in their primary sport. Ninety-five percent of participants ($n = 466$) were White Caucasian, with the remaining 5% consisting of Black African ($n = 10$), Asian

($n = 5$), Hispanic ($n = 2$), and Mixed Race ($n = 7$) athletes. Although participants were predominantly British (92.9%), other nationalities were represented. Natives of various European countries (3.6%), America and Canada (1.7%), Australia and New Zealand (1.3%), and China (0.6%) were included in the sample. About two-thirds of athletes (61.0%) reported primary participation in team sports, with participation in individual sports reported by 38.4% of athletes. The remaining 0.6% of participants ($n = 3$) did not specify a primary sport. The majority of athletes reported their highest level of participation to be at either regional/county level (42.4%), or while representing their university or club (35.5%). Almost a fifth (17.6%) of athletes had experience at either the national or professional level, while 3.5% of participants described themselves as recreational athletes. The highest level of performance was not specified by 1% of the population sample.

Measures

Athlete demographic questionnaire.

Athletes' background information was obtained via athlete demographic questionnaires (Appendix 1.1). Age, gender, race/ethnicity, nationality, primary sport, number of years experience in primary sport, highest level of participation, age during highest level of participation, and number of years experience at highest level were obtained.

Information Sources Scale (ISS).

The Information Sources Scale (ISS; Appendix 1.2) was developed as a means of investigating which impression cues athletes perceive to be most important when forming an initial impression of their coach. Following examination of a number of sources (e.g., Argyle, 1994; Cook, 1971; DePaulo, 1992; Knapp & Hall, 2002) concerning person perception and the cues employed during initial impression formation, a primary list of 28 items was constructed. The author of the present study considered including the psychological cues outlined by Becker and Solomon (2005), given coaches' reported reliance on such prompts when assessing athlete ability. However, it was decided that these items did not represent observable cues that may be encoded at the earliest point of social interaction. Since the present study was limited to the examination of such observable information sources, psychological cues were not included in the ISS. Male ($n = 9$) and female ($n = 4$) athletes from the

University of the author (Mean age = 24.85 years, SD = 3.11; Mean sport experience = 12.00 years, SD = 4.93) volunteered to scrutinise the list of items and suggest any sources of information not mentioned that they may use when forming a first impression of a coach. Qualitative analysis of participant responses led to the addition of three items – "*Language*", "*Clarity of voice*", and "*Presence/absence of assistant*" – to the ISS. A full list of the items used in the ISS can be seen in Table 3.1.

The method of rating the items included as part of the ISS was adapted from the Solomon Expectancy Sources Scale (Becker & Solomon, 2005). In their study, Becker and Solomon (2005) presented participants with a list of 30 factors that coaches may consider when assessing athlete ability (e.g., leadership qualities, courage, agility). Participants were then asked to read the following sentence, completing it by inserting each of the listed factors in turn: "*When evaluating athlete ability, ________ is a component that I use a majority of the time*". Finally, participants were required to rate their agreement with each of the sentences they had constructed using the list of components. A similar method was used for obtaining participant ratings of the cues listed in the ISS. Each cue was evaluated as to its appropriateness regarding the following declaration: "*When forming an initial impression of a coach, ____________ is a major source of information that influences my impressions*". Each item listed was used in turn to complete the sentence. Ratings for each cue were provided using a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). The ISS also afforded respondents the opportunity to suggest any further sources of information not listed that may influence their initial impressions of a coach.

Procedure

Participants were recruited over a period of approximately four months. Participants who described themselves as athletes currently participating in sport were provided with the athlete demographic questionnaire, ISS, and a consent form. Questionnaires were distributed to athletes during lectures or seminar classes, and were completed in the presence of the author (or a fully briefed assistant) so that any questions could be answered. The questionnaires took around 10-20 minutes to complete. Once the questionnaires were fully completed, athletes were thanked for their participation. The study was carried out in line with University of Chichester's ethics procedures.

Data Analysis

Mean scores for items on the ISS were analysed in an attempt to identify the sources of information that athletes deem most influential when forming expectancies of their coach. An Exploratory Factor Analysis (EFA) of ratings obtained from the ISS was also conducted in order to determine the collective factors associated with the cues athletes reported to be influential in expectancy formation. For the factor analysis, principal-component analysis was the extraction method used, and the varimax method of rotation was employed. Multivariate analysis of variance (MANOVA) and follow-up analysis of variance (ANOVA) tests were performed on data obtained from the ISS with the aim of identifying any differences in ratings that may have occurred as a result of variations in demographic background between athletes (i.e., gender, type of sport, level of participation).

RESULTS

Descriptive Statistics

The main purpose of the present study was to identify the cues that influence the formation of athletes' expectancies of their coach. Table 3.1 displays mean scores and standard deviations for items included in the ISS. From scrutiny of these data, it can be seen that while coaching experience, clarity of voice, success rate, and body language/gestures were rated highly by athletes as cues that may influence the development of initial impressions regarding their coach, cues such as race/ethnicity, nationality, hair style, and attractiveness received low athlete ratings in terms of the extent to which they were perceived to impact on the formation of expectancies. Five of the nine items (55%) that were given a mean rating of 5 or above could be categorized as static cues (e.g., skill level, equipment, etc.), while the remaining four sources of information could be more appropriately classified as dynamic behavioural cues (e.g., language used, eye contact, etc.). In contrast, of the 13 items that obtained a mean rating of less than 4 (i.e., below the mid-point in a 7-point rating scale), 69% (n = 9) could be classified as static cues and included items such as physique/body type, age, social status, and gender. Thus, the mean ratings for items included in the

Item	Mean	*SD*
Coaching experience	5.57	1.12
Clarity of voice	5.43	0.95
Success rate	5.32	1.12
Body language/Gestures	5.20	1.06
Language (e.g. simple, technical, etc.)	5.16	1.06
Eye contact	5.15	1.15
Skill level	5.14	1.20
Equipment	5.03	1.20
Qualifications	5.02	1.31
Playing experience	4.91	1.31
Reputation	4.89	1.35
Posture	4.55	1.33
Tone of voice	4.53	1.39
Speed of speech	4.51	1.20
Clothing	4.48	1.33
Personal space/Distance	4.27	1.26
Odour	4.19	1.53
Facial expressions	4.13	1.34
Touching behaviour	3.93	1.34
Presence/Absence of assistant	3.79	1.48
Physique/Body type	3.73	1.41
Age	3.26	1.49
Social status	3.24	1.36
Accent of voice	3.21	1.36
Items of jewellery	3.02	1.53
Gender	2.94	1.62
Wearing of glasses/sunglasses	2.77	1.33
Attractiveness	2.74	1.50
Hair style	2.58	1.33
Race/Ethnicity	2.49	1.41

Table 3.1. Mean scores and standard deviations for ratings of items included in the ISS.

ISS indicated that athletes may utilize information from dynamic behavioural cues to a greater extent than static sources of information when forming initial impressions and expectancies of a coach. In order to examine this contention more fully, Exploratory Factor Analysis (EFA) of the data was conducted.

Data Reduction

The Kaiser-Meyer-Olkin (KMO) statistic was computed as a test of sampling adequacy before proceeding with the EFA. For analyses regarding the ISS, KMO was .85. This value was above the recommended value of .60 required in order to proceed with the EFA (Garson, 2006). Pearson's product moment correlations were conducted for items included in the ISS in order to check for multicollinearity. According to Tabachnick and Fidell (1996), bivariate correlations of greater than .70 are indicative of multicollinearity. Examination of the correlation matrix revealed multicollinearity between nationality and race/ethnicity ($r = .77$). Stevens (1996) suggests that an effective method of combating multicollinearity is to combine variables that are highly correlated to form a single measure. Hence, the ratings for nationality and race/ethnicity were pooled to form a single variable for race/ethnicity.

Factors were assessed according to four main determinants: (a) Kaiser's criterion (i.e., eigenvalues greater than 1.0), (b) examination of the scree plot, (c) scrutiny of variable means (i.e., large differences between variable means indicate statistical rather than substantive bases of attribution), and (d) analysis of residual values (i.e., the larger the number of nonredundant residuals with absolute values greater than .05, the greater the doubt in the extracted model). Following principal-components analysis (PCA) with orthogonal (varimax) rotation, 7 factors with eigenvalues greater than 1.0 were initially extracted. However, examination of the scree plot, variable means, and residual values (31% nonredundant) meant that a three-factor model of information sources was suggested, which explained approximately 42% of the cumulative variance. Defining variables of each factor were characterized as those with factor loadings above .40 (Garson, 2006). The factors, associated variables, and rotated factor loadings are listed in Table 3.2.

Identified factor	Associated variables	*RFL*
Static cues (SC)	Gender	0.846
	Race/Ethnicity	0.803
	Age	0.744
	Hair style	0.663
	Accent of voice	0.560
	Attractiveness	0.537
	Social status	0.413
Dynamic cues (DC)	Eye contact	0.690
	Tone of voice	0.664
	Facial expressions	0.661
	Posture	0.623
	Body language/Gestures	0.559
	Clarity of voice	0.546
	Language (e.g. simple, technical, etc.)	0.508
	Motivational climate/coaching style*	-
	Professionalism*	-
Third-party reports (3P)	Coaching experience	0.845
	Success rate	0.797
	Qualifications	0.688
	Reputation	0.544
	Playing experience	0.529
	Significant others*	-

RFL = rotated factor loading

* additional items extracted following conceptual analysis

Table 3.2. Factor loadings and categorisation of the types of cues athletes use when forming expectancies of coaches.

The sources of information within the first factor were defined as static cues, and accounted for 24.3% of the variance. Factor loadings dictated that gender, race/ethnicity, age, hair style, attractiveness, accent of voice, and social status should be grouped together. The second component, dynamic cues, accounted for 9.8% of the variance and included the items eye contact, tone of voice, facial expressions, posture, body language/gestures, clarity of voice, and language. The third extracted factor consisted of five variables: coaching experience, success rate, qualifications, playing experience, and reputation. This component was labelled third-party reports and accounted for 7.8% of the variance. Examination of variable means indicated that while athletes reported low use of static cues when forming initial impressions of a coach, dynamic cues and third-party reports were deemed much more influential in determining an athlete's impression formation of a new coach.

In addition to items that were included as part of the ISS, 13.9% of all participants (n = 74) provided additional informational cues that they considered influential when forming an initial impression of a coach. Conceptual analysis of this data was conducted using guidelines proposed by Krippendorff (1980). These guidelines suggest that qualitative data should be coded into meaningful units of information so that certain characteristics of the text can be categorized with respect to the specific research question. Three main themes were identified from the cues suggested: motivational climate/coaching style, professionalism, and significant others (i.e., athletes' perceptions of the nature of relationships between the target coach and other individuals within the sport setting).

Motivational climate/coaching style was the construct that most of the reported items seemed to relate to (n = 46). A large number of responses within this category seemed to suggest that the athletes generally valued a democratic style of coaching. By identifying key words and coding them relative to the context in which they were conveyed, cues that were suggested included the extent to which the coach displays behaviour that would lead them to be perceived as "*friendly*", "*understanding*", "*fair*", "*supportive*" and "*approachable*" (n = 28). Eleven participants also suggested that the extent to which the coach "*socializes*" with athletes outside the coaching environment is a potentially influential source of information. However, some athletes (n = 7) proposed that more autocratic coaching behaviour such as "*maintaining control*" and "*demanding respect*" are cues that might influence their expectancies. Since these cues are descriptions of coaching behaviour, motivational climate/coaching style is included in Table 3.2 under dynamic cues.

The second main theme that was extracted from the conceptual analysis of additional cues suggested by participants was labelled professionalism, and there were a total of 13 responses that were grouped into this category, which included "*organisation of training sessions*" (n = 4), "*punctuality*" and "*timekeeping*" (n = 3), the way the coach "*introduces themselves and others*" (n = 4), and their use of "*swear words*" (n = 2). Again, in Table 3.2, professionalism has been placed under the category of dynamic cues, since the additional factors cited in this context can be most appropriately described as behavioural sources of information.

The third theme extracted following conceptual analysis of participants' suggestions was classified as significant others (n = 13), and this item is included in Table 3.2 under third-party reports. Cues categorized under significant others included "*contacts*" with other coaches and support staff (n = 3), "*opinions*" and "*views*" of the target coach from the perspective of other coaches, support staff, and athletes (n = 4), the "*level of past athletes*" or the "*current team*" with whom the coach was/is working (n = 4), and the level of "*demand*" for the coach's services (n = 2). There were two other cues reported as potential influences on the formation of expectancies regarding a coach (i.e., "*use of video analysis*" and "*facilities used*"). However, it was decided that "*equipment*", which was already included as an item on the ISS, was a sufficient definition to cover such aspects.

The conceptual analysis of additional influential cues suggested by participants provides further support for the three-factor model extracted via EFA. Additional items were classified as either dynamic cues (i.e., motivational climate/coaching style, professionalism) or third-party reports (i.e., views from significant others), with no suggestion from athletes' self-reports that the ISS was missing static cues that may be influential when forming an impression of a coach. Thus, the conceptual analysis reinforces the results of the EFA that athletes appear to regard dynamic cues and third-party reports as more influential than static cues when impressions and expectancies of a coach are initially created.

Effect of gender, type of sport, and level of participation

An overall rating for each component extracted from the EFA was calculated by summing the ratings of individual items within each factor. Each relevant factor was then classified as a single dependent variable in the MANOVA that followed. Before the MANOVA was conducted, cases with missing data (i.e., no rating provided for items relating to extracted factors, primary sport and/or highest level of participation not specified) were omitted from the data sample. In addition, participants who stated their highest level of participation was recreational were not included in the analysis, since an inadequate frequency of such responses (n = 17) was recorded. Participants who had spent less than one year at their highest level of participation were also excluded since it was reasoned that such athletes had not spent sufficient time interacting with coaches at that level. Thus, a total of 19 cases were omitted. The remaining 471 cases were included in the MANOVA.

No significant main effects were found for gender (Wilks' Lambda $_{3, 457} = 1.00$, $F = 0.79$, $p > .05$, $\eta^2 = .01$), type of sport (Wilks' Lambda $_{3, 457} = 0.99$, $F = 1.35$, $p > .05$, $\eta^2 = .01$), or level of participation (Wilks' Lambda $_{6, 914} = 0.97$, $F = 2.09$, $p > .05$, $\eta^2 = .01$) with regard to the informational cues athletes use to form initial impressions of their coach. In addition, the MANOVA did not reveal any significant interaction effects between the independent variables (gender x type of sport: Wilks' Lambda $_{3, 457} = 1.00$, $F = 0.49$, $p > .05$, $\eta^2 = .003$; gender x level of participation: Wilks' Lambda $_{6, 914} = 0.98$, $F = 1.27$, $p > .05$, $\eta^2 = .01$; type of sport x level of participation: Wilks' Lambda $_{6, 914} = 0.99$, $F = 0.84$, $p > .05$, $\eta^2 = .01$; gender x type of sport x level of participation: Wilks' Lambda $_{6, 914} = 0.98$, $F = 1.97$, $p > .05$, $\eta^2 = .01$). This reveals that there is general consensus between athletes regarding the cues that are deemed to be most influential when forming expectancies, regardless of gender, sport type, and participation level.

DISCUSSION

The aim of this study was to examine the observable cues that may be used when athletes form first impressions of a coach. According to mean ratings obtained using the ISS, coaching experience, clarity of voice, success rate, and body language/gestures were the cues perceived as most influential in shaping an athlete's initial impression of their coach. These findings support previous reports that coach experience (Solomon, DiMarco, et al., 1998), tone of voice/speech style (Jussim et al., 1987), success rate (Miki et al., 1993) and body language (Buscombe et al., 2006; Greenlees, Bradley et al., 2005; Greenlees, Buscombe et al., 2005) may be instrumental in expectancy formation in sport. Furthermore, the high mean rating for clarity of voice supports work that has claimed good communication skills are critical to coaching success (e.g., Crisfield, Cabral, & Carpenter, 1999). Consequently, clarity of voice could be suggested to be a valid cue with regard to evaluating a coach's communication skills and ultimately their coaching ability. In contrast, race/ethnicity, nationality, hair style, and attractiveness received low mean ratings, suggesting that athletes view these cues as less influential in the formation of expectancies of their coach. These findings may indicate that athletes are aware of and adhere to the suggestion that accurate judgments are more likely when based on dynamic behavioural cues as opposed to static sources of information (Cook, 1971; Horn et al., 2001; Jussim, 1993).

Exploratory factor analysis of athlete feedback also yielded a three-factor model regarding the informational cues that athletes attend to when forming an initial impression of their coach. The three components extracted were labelled static cues, dynamic cues, and third-party reports. Static cues (i.e., gender, race/ethnicity, age, accent of voice) are more stable over time and generally uncontrollable, while dynamic cues (i.e., eye contact, tone of voice, facial expressions, body language/gestures) are episodic behaviours that are more malleable. However, although certain static cues (e.g., age, accent of voice) are amenable to change over time, such cues are considered here in the context of initial, short-term interactions between coach and athlete (e.g., minutes, hours, days) as opposed to long-term periods of contact (e.g., weeks, months, years). The extraction of static and dynamic cues falls in line with Olson et al.'s (1996) model of expectancy processes, which suggests that expectancies are formed through the perception of informational cues that are observed via direct experience (e.g., witnessing a target's body language), and might be used to construct or reinforce other beliefs (e.g., "all male coaches are strict"). These first two categories also match Cook's (1971) classification that static and dynamic cues are the two main sources of information that people use when forming impressions and expectancies of others.

Third-party reports (i.e., coaching experience, success rate, qualifications, reputation) are also clearly defined by the factor label, and consist of information that is conveyed to the perceiver (either verbally or in writing) via a third-party. This is consistent with Olson et al.'s (1996) proposal that expectancies may be based on information gleaned from other people. This third grouping also provides an addition to Horn et al.'s (2001) dual classification of informational cues. While cues categorized as static in the present study are a good match for the "person cues" suggested by Horn et al., "performance information", as defined by Horn et al., seems to encompass both dynamic behavioural cues that may be witnessed during direct observation of the target (e.g., facial expressions, posture), and third-party reports, which may include the opinions of other athletes or coaches. The fact that the present study revealed that dynamic cues and third party reports are two distinct sources of information leads the author to suggest that the two-factor model as proposed by Horn et al. may warrant expansion. Further research is required to examine this conclusion.

Mean scores indicated that while athletes view dynamic cues and third-party reports as influential in the creation of their expectancies of coaches, static cues were deemed to have less impact. These results support previous suggestions that although static cues influence expectancies regarding personality and behaviour, dynamic behavioural cues seem to be the major determinant of a perceiver's impression formation (Becker & Solomon, 2005; Cook, 1971; Horn et al., 2001; Jussim, 1993; Jussim et al., 1987). Such findings have important implications for the development of coaching guidelines and models of best practise. For instance, it appears that factors out of the coach's control (e.g., gender) are deemed less influential than controllable cues (e.g., body language) in terms of the impact they have on the expectancy formation of athletes. This would suggest that coaches have a great deal of control over the expectancies that athletes form of them.

The implication that third-party reports outweigh static cues in terms of their perceived impact on expectancy formation also supports the findings reported by Plunkett, Kohli, and Milad (2002). Plunkett et al. found that although female patients initially based their preference for a doctor on gender (i.e., female doctors were initially preferred), this static cue became much less salient when patients were asked to consider the doctor's reported reputation (i.e., experience, bedside manner, and competency). Nevertheless, a myriad of studies support the potential influence of static cues such as race/ethnicity (e.g., Jowett et al., 2006), gender (e.g., Jacobs & Eccles, 1992), and body type/physique (e.g., Hash, Manna, Vogel, & Bason, 2003) on expectancy formation. There are a number of explanations that may account for the fact that the results of the present study contradict such findings.

First, there is the question of reliability regarding the data collection methods employed in this study. Since the ratings were based solely on athlete self-report, certain judgment biases may have influenced the overall findings. For instance, it is possible that participants feared they would be labelled sexist or racist if they rated gender or race/ethnicity as a highly influential factor regarding their impression formation of a coach (Jussim et al., 1987). Although it was made clear to participants that all responses would remain confidential, the athlete may still have been disturbed by their own thoughts regarding the possibility that their expectations of others could be influenced by such controversial cues (Turiel, 1983). In order to combat such cognitive dissonance and convince themselves of their good nature, athletes may have provided low ratings for certain items. Guyll and Madon (2003) reported examples of such self-induced social conformity, and suggested that the need to maintain a positive self-schema may override the desire and motivation to provide a truthful response. However, further scrutiny of the effects of social conformity on impression formation is required before such a contention can be confidently accepted.

Second, self-report ratings may not accurately reflect the cues that athletes use when forming expectancies since it is possible that the athletes themselves may be unaware of their encoding of certain cues. This is in line with Olson et al.'s (1996) model of expectancy process, which suggests that expectancies can be formed implicitly (i.e., outside of the perceiver's consciousness). Previous research (Chen & Bargh, 1997) has shown that cues presented outside the consciousness of the perceiver are still powerful enough to influence subsequent thought and behaviour. Chen and Bargh found that the processing of informational cues and subsequent behaviour can be unconscious, and that unintentional expectancy effects may develop as a result.

Hence, athletes may unintentionally utilize static cues such as race/ethnicity, gender, and attractiveness, and consequently base expectancies of their coach on information that is processed subconsciously. The potential influence of cues presented outside of the perceiver's consciousness has not been examined in a sporting context. Future research designed to compare the strength of expectancies developed as a result of consciously and subconsciously presented stimuli would be useful in attempting to further understand the processes involved in the expectancy formation of athletes. According to the ratings obtained in the present study, athletes believed that third-party reports were highly influential sources of information with regard to expectancy formation, a finding that may be explained by the notion that such cues could be viewed as less susceptible to subjective bias. It has been suggested that less objective criteria (e.g., perception of static cues via photographs and videos) may facilitate inaccurate expectancies or perceptual biases than more subjective cues (e.g., provision of concrete statistics and quantitative values via third-party reports) when used as a basis for evaluation of a person's ability (Jussim & Eccles, 1992; Stone et al., 1997). This may be due to the fact that objective cues such as statistics and scores are less open to the perceiver's own interpretation than a subjective aspect such as attractiveness (Stone et al., 1997). Thus, athletes may choose to use third-party reports at the expense of static cues due to the belief that the former make a more reliable basis for expectancy formation than the latter (Horn et al., 2001). The use of such cues has, however, been reported to lead to a "reputation bias" (Findlay & Ste-Marie, 2004), where an athlete's reputation has a greater influence than their actual performance on a perceiver's judgment of that athlete. Findlay and Ste-Marie found that even when there were no differences between figure skaters in terms of actual performance, judges awarded better scores to performers who were known to have a good reputation for skating compared with those athletes whose skating reputation was unknown to the judges. It is vital that future research examines the extent to which athletes' use of third-party reports when forming impressions of coaches can evoke expectancy effects such as reputation bias.

Multivariate analysis of the data revealed that there were no significant main effects for gender, type of sport, or level of participation of the athlete. Moreover, all interaction effects between the three variables were non-significant. Such findings suggest that whether they are male or female, individual or team performers, amateur or elite, athletes generally agree on the informational cues regarded as influential in forming initial expectations of a coach. Although Warr and Knapper's (1968) model suggests that impression formation may be determined according to the perceiver's demographic background, the current findings of the present study imply that this contention does not hold for athletes who form impressions of coaches. However, there remain other factors that may impact on such impression formation.

Since the population sample was primarily made up of student athletes of a similar age, it was not possible to investigate the effect of age or background on the cues athletes use to form expectancies of a coach. This would be a valuable area for future scrutiny in an attempt to discover whether other demographic differences between athletes signify the need to revise specific coaching guidelines. If athletes of varying backgrounds and/or age groups use different cues to help them form impressions of a coach, then a greater understanding of these differences in information selection is essential to ensure that coaches are sufficiently educated and able to adapt their behaviour appropriately depending on the target population. Moreover, in addition to perceivers' stable characteristics (e.g., age, cultural background), Warr and Knapper's (1968) model proposes that the perceiver's current state (i.e., the situation they are in, their episodic thoughts and feelings at the time of viewing the target) has the potential to influence impression formation. The perceiver's current state was not accounted for within the present study, signifying another area which future research needs to address.

The aim of this study was to identify the observable cues that athletes perceive to be most influential when forming initial expectancies of their coach. Exploratory factor analysis led to the extraction of a three-factor model, which revealed that dynamic cues (e.g., eye contact, facial expressions, body language) and third-party reports (e.g., coaching experience, success rate, reputation) are rated by athletes as highly influential during impression formation, while static cues (e.g., gender, race/ethnicity, age) are deemed to be less relevant sources of information in this context. The findings also proposed that athletes of different gender, type of sport, and level of participation hold similar views regarding the cues deemed influential in evaluating the efficiency of coaching staff.

It must be conceded that the present study contains certain limitations. For example, it could be argued that some of the measurement items employed (e.g., items of jewellery, touching behaviour) may be too open to athlete interpretation to provide an accurate representation of specific cues that might be used during an athlete's expectancy formation. Moreover, for certain items that were rated highly by athletes as important sources of information but loaded heavily on factors that were not included in the extracted three-factor model (e.g., clothing, equipment, skill level), it may be appropriate to reduce such items into further sub-categories (e.g., equipment used to aid delivery of coaching vs. equipment used to aid analysis of athlete performance). Qualitative research would have been an appropriate method which may have accounted for such problems of interpretation and classification, and might also have led to the extracted model explaining a larger percentage of the total variance. Thus, by allowing for the clear definition of the cues used when forming expectancies of coaches, as well as providing the opportunity to expand on the range of cues examined in the present study, qualitative research methods are recommended as an appropriate means of further investigation. The present findings, nevertheless, have implications for guidelines of coaching practice, and suggest that coaches should be mindful of the way in which athletes perceive particular sources of information. The results of this explorative study propose that by developing strategies to convey appropriate dynamic behavioural cues (e.g., positive body language) and third-party reports (e.g., limiting the information conveyed to athletes), coaches and their employers will be better equipped to create desirable impressions and expectancies within their athletes.

The next step for research in this area is to empirically test the validity of these findings via the manipulation of informational cues and the measurement of athletes' subsequent expectancies of a coach. In particular, the role of third-party reports (e.g., reputation) during athletes' expectancy formation would prove to be an element worthy of further scrutiny, especially in light of the present findings, which indicate that cues such as reputation are a major source of information in their own right. Further research should examine the impact of such informational cues not only on the formation of athletes' initial expectancies of a coach, but also on the cognitive, affective, and behavioural consequences that may be brought about by such expectancies.

CHAPTER 4

STUDY 2: THE INFLUENCE OF COACH REPUTATION AND GENDER ON ATHLETES' EXPECTANCIES OF COACHING COMPETENCY

INTRODUCTION

The results from study one provided a preliminary model for the types of cues athletes use as a basis for the formation of expectancies about a coach. The study provided a three-factor model, which suggested that while athletes perceive dynamic cues (e.g., body language, facial expressions) and third-party reports (e.g., reputation, coaching experience) to be highly influential sources of information during expectancy formation, static cues (e.g., gender, age, race/ethnicity) are seen by athletes to have less of an impact on the expectancies they form of coaches. The main aim of the second study is to test the reliability of this proposed model by examining the impact of specific informational cues on the initial expectancies of a coach's competency.

One of the most interesting findings reported in study one was the extraction of third-party reports as a distinct category of information sources that may be used by athletes when developing expectancies of a coach. This is in line with Olson et al.'s (1996) model of expectancy processes, which proposes that expectancies may be based on indirect experience in the form of the beliefs of other people (i.e., third-parties). However, given that this finding from study one contrasted with previous sport specific research that had tried to categorise the sources of information used to form expectancies in sport (e.g., Becker & Solomon, 2005; Horn et al., 2001; Solomon, 2001), the influence of third-party reports on the creation of initial expectancies was deemed worthy of further investigation within the present study. Initial evidence has been provided to support the notion that third-party reports such as reputation can impact on the expectancies formed by sports personnel such as judges (Findlay & Ste-Marie, 2004) and referees (Jones et al., 2002). Thus, the first aim of the present study was to discover the extent to which athletes' expectancies of coaches are influenced by the reputation of the coach. There are many ways in which the reputation of a target can be manipulated.

Fizel and D'itri (1996) stated that employers of coaches often use previous results and success records as an indication of a coach's competency and ability. As a result, information regarding the number of honours the coach had won during their career to date, and the performance of the team they coached the previous season was used as a reputation manipulation. Given the indication from the results of study one and evidence from previous research (e.g., Findlay & Ste-Marie, 2004; Jones et al., 2002), it was hypothesised that reputation information would have a direct influence on the expectancies athletes form of the target coaches:

Hypothesis 1: Athletes will provide significantly more favourable ratings of coaching competency for targets who have a successful reputation than targets who have an unsuccessful reputation.

According to Chelladurai (1990), many athletes believe that the actual behaviour of a coach is influenced by the coach's personal characteristics (e.g., age, gender, personality). If this belief is adhered to, then the mere perception of these attributes may influence the expectancy formation process. Chelladurai's view runs counter to the results of study one, which revealed that athletes don't seem to regard cues such as age or gender as particularly influential when forming expectancies of a coach. However, previous research has shown that perceivers are not always aware of the sources of information that are used during expectancy formation (e.g., Chen & Bargh, 1997). Thus, the extent to which static cues impact on expectancy formation in the coach-athlete relationship warrants further clarification.

Previous research indicates that both men and women prefer to be coached by men (Brackenridge, 1991). Other researchers have attributed this trend to the stereotypic belief that it is not appropriate for women to participate in sport, especially when it comes to sports such as soccer that are traditionally perceived by both men and women as masculine or male-oriented (Csizma, Wittig, & Schurr, 1988; Koivula, 1995). Such reports may go some way to explaining statistics that show a decline in the number of American female coaches, despite greater overall female participation in sport (Carpenter & Acosta, 1991). More recently, however, Riemer and Visio (2003) found that adolescent male and female athletes perceived soccer as a neutral sport in terms of its gender-orientation. This finding supports the view that the traditional stigmas associated with female sport participation may be slowly changing, and that sport is starting to be perceived equally as a male and female domain

(Sherman, Fuller, & Speed, 2000). Despite such evidence, there remains evidence that reinforces traditional sex role stereotypes in sport. For example, Kontos (2003) reported that in cross-gender coach-athlete relationships, female coaches were perceived to engage in more negative coaching behaviours (e.g., punishing players, ignoring mistakes) than male coaches.

The above findings indicate that gender has the potential to influence athletes' expectancies of sporting individuals, despite evidence to suggest that this expectancy effect as a function of gender is beginning to become less prevalent (Riemer & Visio, 2003; Sherman et al., 2000). Given such debate, the second aim of the present study was to examine the degree to which the gender of the coach would influence athletes' expectancies. Following reports from previous research examining the effect of gender on coach-athlete relationships (e.g., Bird & Williams, 1980; Brackenridge, 1991; Kontos, 2003), it was hypothesised that both male and female athletes will evaluate female coaches less favourably than male coaches. Moreover, in line with the findings from study one, it is hypothesised that athletes will perceive gender to have less of an impact than reputation on the expectancies they develop of the target coach, and that these ratings of perceived influence will not differ significantly between male and female athletes.

Hypothesis 2: Male target coaches will be rated as significantly more competent than female target coaches regardless of athlete gender.

Hypothesis 3: Male and female athletes will perceive reputation to influence their expectancies of the target coach to a greater extent than gender.

METHOD

Participants

A total of 384 athletes, recruited from amateur and British university sports teams, volunteered to take part in the present study. However, 71 volunteers did not fully complete the questionnaire and their data were excluded from the analysis. In order to ensure equal group sizes for each experimental condition (n = 38), a further nine data sets were omitted from the overall analysis. The remaining 304 participants (Mean age = 21.31 years, SD = 3.31) consisted of 152 males and 152 females, with a mean of 8.88 years (SD = 4.66) experience in their primary sport. Athletes were predominantly White Caucasian (95.6%), with the remainder made up of Black (1.7%), Asian (1.2%), and Mixed Race (1.5%) participants. A total of eight sports were represented by the population sample, including football/soccer (30.3%), ultimate frisbee (27.3%), rugby union (15.1%), netball (9.9%), field hockey (8.2%), cricket (4.3%), basketball (3.0%), and volleyball (2.0%). The majority of athletes reported their highest level of participation to be at either university/club level (48.4%), or while representing their region or county (43.8%). A total of 24 participants (7.9%) had experience at either the national or professional level.

Materials

Participants viewed and rated a total of two coach profiles: one control coach profile and one of four experimental coach profiles. Each coach profile consisted of a greyscale photograph of the target coach (see Appendices 2.1, 2.2 and 2.3) accompanied by a brief written description. In light of the recommendation by Johnson, Hallinan, and Westerfield (1999) that "...the use of photographs and rotated descriptors can provide a useful device for eliciting the underlying localised assumptions which may be attributed to various population groups" (p.52), photographs and written descriptions were deemed to be suitable stimulus objects for the present study. Each description informed participants of the target coach's name, age, gender, coaching experience, coaching qualifications, and reputation (successful vs. unsuccessful). All of the descriptions were based on a template used by Greenlees, Webb, Hall, and Manley (2007), with details altered to include information specific to coach reputation. The description of the successful coach was as follows:

> *"[Paul/Susan] is a 25-year-old coach from London. [He/She] has been a full-time coach for 6 years. [Paul/Susan] holds a number of recognised coaching qualifications. [He/She] has worked with athletes of varying age and ability, ranging from novice children to elite-level adults. During [his/her] coaching career, [Paul/Susan] has won a number of honours with both amateur and semi-professional teams, and the team [he/she] coached last season won their regional cup competition. [Paul/Susan] is enthusiastic about [his/her] sport and enjoys [his/her] job."*

The description of the unsuccessful coach was exactly the same as above, except that the penultimate sentence was altered to read:

> *"During [his/her] coaching career, [Paul/Susan] has not won any honours with the teams [he/she] has worked with, and the team [he/she] coached last season was ultimately relegated."*

The profile of the control target (i.e., male) was similar to the experimental profiles, but there was no mention of reputation information within the written description. The control coach was included as a means of demonstrating that when reputation and gender were not manipulated, athletes' expectancies of the target coach were not significantly different between experimental groups.

Pilot testing was conducted to ensure that there were no significant differences between the experimental profile photographs, with no reputation differences, in terms of perceived age, attractiveness, coaching experience, body language, build/physique, and perceived friendliness. Since these factors had the potential to act as confounding variables (Feingold, 1992; Furnham, Petrides, & Temple, 2006; Solomon, DiMarco, et al., 1998), it was vital that their potential influence on the athletes' expectancies of the coaches was accounted for. A sample of male ($n = 28$) and female ($n = 28$) athletes from the University of the first author (Mean age = 23.34 years, SD = 3.98; Mean sport experience = 10.24 years, SD = 4.89) volunteered to participate in the pilot testing. Participants indicated the perceived age, attractiveness, and coaching experience of each target using 5-point Likert scales. Independent samples t-tests revealed that there were no significant differences between the profile photographs in terms of perceived age ($t = 1.528$, $df = 54$, $p > .05$), attractiveness ($t = -1.978$, $df = 54$, $p > .05$), coaching experience ($t = 1.669$, $df = 54$, $p > .05$), body language ($t = 0.359$, $df = 54$, $p > .05$), build/physique ($t = 0.000$, $df = 54$, $p > .05$), and perceived friendliness ($t = -0.173$, $df = 54$, $p > .05$).

Measures

Athlete demographic questionnaire.

Background information of athletes was obtained via athlete demographic questionnaires (see Appendix 2.5). Athletes' age, gender, race, primary sport, number of years experience in primary sport, team(s) they currently represented, and highest level of participation were obtained.

Adapted Coaching Competency Scale (CCS-A).

An adapted version of the Coaching Competency Scale (CCS; Myers, Feltz, Maier, Wolfe, & Reckase, 2006), displayed in Appendix 2.6, was developed as a means of examining athletes' expectancies of coaches following the provision of initial information. The original scale consists of 24 statement items, which measure four key areas of coaching competency: motivation competency (i.e., the ability to affect the psychological mood and skills of athletes), game strategy competency (i.e., the ability to select and execute appropriate competitive strategies), character-building competency (i.e., the ability to instil positive attitudes and influence athletes' personal development), and technique competency (i.e., the ability to teach the athlete in terms of skill development). Participants are asked to use each item to complete the following sentence: "How competent is your head coach in his or her ability to ___________?"

Myers and colleagues (Myers, Feltz, et al., 2006; Myers, Wolfe, Maier, Feltz, & Reckase, 2006) have provided evidence for the reliability and validity of the CCS, although this only extends to studies involving high school and collegiate athletes participating in team sports. However, since the population sample within the present study satisfies these criteria, the adapted version of the CCS was deemed to be a useful tool in the examination of athlete expectancies regarding their coach. Myers, Wolfe, et al. (2006) also reported that motivation competency (i.e., athletes' evaluations of their coach's ability to affect athletes' psychological mood and skill) had a moderately large and positive relationship with athletes' satisfaction with the coach within teams. In addition, Myers, Wolfe, et al. suggested that "studies that investigate...how a coach's behaviour influences athletes' perceptions of their coach's competency could advance understanding in coaching effectiveness and extend validity evidence for the CCS" (p. 461-462). Thus, inclusion of the adapted CCS as an assessment item within the present study was considered appropriate. Since the participants in the present study were presented with profiles of coaches who were unknown to them, the sentence of the original CCS was altered to read: "I believe that this coach would ___________". Participants provided ratings for all items using a 7-point Likert scale (e.g., 1 = *Very strongly disagree* to 7 = *Very strongly agree*).

Perceived influence questionnaire.

A post-experimental questionnaire was included to examine which of the manipulated cues athletes believed had the greatest influence over the expectancies they developed about the target coach. Athletes' perceptions of the influence of each of the independent variables on their expectancy formation was measured by a method similar to that used by Lubker et al. (2005). After they had rated the coaches, participants were asked to rate the extent to which they believed each of the independent variables (i.e., gender and reputation) had influenced the expectancies they had formed of the target coaches (see Appendix 2.7). Perceived influence was indicated using 5-point Likert scales (e.g., 1 = *Not at all influential* to 5 = *Extremely influential*).

Procedure

Participants were approached and recruited at various amateur and university sports events over a period of approximately three months. Participants were provided with the test battery, which consisted of a consent form, athlete demographic questionnaire, control coach profile, one of the four experimental coach profiles (i.e., male-successful; male-unsuccessful; female-successful; female-unsuccessful), two copies of the CCS-A (one for each coach profile), and the perceived influence questionnaire. Athletes were asked to carefully study and rate their expectancies of each coach profile separately. The questionnaires were completed in the presence of the author (or a fully briefed assistant) so that any queries from participants could be answered. The questionnaires took around 10 minutes to complete. Once athletes had completed the test battery, they were fully debriefed and thanked for their participation. The study was carried out in line with University of Chichester's ethics procedures.

Data Analysis

In order to assess the dependent variables for multicollinearity, Pearson product-moment correlations were conducted. Multicollinearity (i.e., an indication that two dependent variables are measuring the same construct) was assumed for correlations greater than .80 (Stevens, 1996). In the event of multicollinearity, the two dependent variables would be combined to form a single variable, again following the recommendation of Stevens (1996). Multivariate analysis of variance (MANOVA) and follow-up univariate analysis of variance (ANOVA) tests were performed on subscale scores obtained from the CCS-A with the aim of identifying any differences in ratings that may have occurred as a result of manipulation of the independent variables (i.e. gender and reputation). Eta squared (η^2) effect sizes were also computed. In line with the recommendations of Clark-Carter (1997), effect sizes of between .001 and .058 were classified as small, effect sizes of between .059 and .137 classified as medium, and effect sizes of .138 and over were classified as large. In addition, an independent samples t-test on athletes' responses to the perceived influence questionnaire was conducted in order to identify which of the independent variables athletes believed had the greatest impact on expectancy formation. MANOVA and follow-up ANOVA tests were also conducted to check for any differences in ratings of perceived influence as a function of participant gender.

RESULTS

Descriptive Statistics

Analysis of Pearson product-moment correlations revealed that no relationship exceeded Stevens' (1996) multicollinearity criterion value of .80. As a result, all items were included in the subsequent analyses. Since Box's M tests indicated significant differences in the covariance matrices of the dependent variables ($p < .05$), Pillai's trace was used as the criterion value in the analyses that followed.

Ratings of Control Coach

A 2 (Participant gender) x 2 (Coach gender) x 2 (Reputation) MANOVA was conducted to see whether there were any significant differences in athletes' ratings of the control coach between the eight experimental conditions. A significant main effect was found for participant gender on ratings of the control coach, Pillai's trace $_{4,}$

$_{293} = 0.07$, $F = 5.80$, $p < .001$, $\eta^2 = .07$, observed power = .98. Mean scores and standard deviations are displayed in Table 4.1. Follow-up ANOVAs revealed that female athletes rated the control target significantly higher than did male athletes on motivation competency ($F = 4.24$, $p = .04$, $\eta^2 = .01$, observed power = .54), game strategy competency ($F = 13.13$, $p < .001$, $\eta^2 = .04$, observed power = .95), character-building competency ($F = 9.74$, $p = .002$, $\eta^2 = .03$, observed power = .88), and technique competency ($F = 6.06$, $p = .01$, $\eta^2 = .02$, observed power = .69). However, no other significant main effects or interaction effects were found. Thus, the observed differences are limited to participant gender and do not extend to include target gender or reputation. In other words, when participants were of the same gender, expectancies of the control coach's level of competency were the same across all experimental conditions.

Ratings of Experimental Coach

A 2 (Participant gender) x 2 (Coach gender) x 2 (Reputation) MANOVA was conducted to detect whether the manipulated variables had an impact on the impressions athletes formed of the experimental coach. As hypothesised, a significant main effect was found for reputation, Pillai's trace $_{4, 293} = 0.43$, $F = 54.61$, $p < .001$, $\eta^2 = .43$, observed power = 1.00. Mean scores and standard deviations are displayed in Table 4.2. Follow-up ANOVAs revealed that coaches with a successful past record were rated significantly higher than coaches with an unsuccessful past record on motivation competency ($F = 111.06$, $p < .001$, $\eta^2 = .27$, observed power = 1.00), game strategy competency ($F = 205.88$, $p < .001$, $\eta^2 = .41$, observed power = 1.00), character-building competency ($F = 15.26$, $p < .001$, $\eta^2 = .05$, observed power = .97), and technique competency ($F = 103.87$, $p < .001$, $\eta^2 = .26$, observed power = 1.00). A significant main effect was also observed for target gender on ratings of the experimental coach, Pillai's trace $_{4, 293} = 0.04$, $F = 3.15$, $p = .02$, $\eta^2 = .04$, observed power = .82. Follow-up ANOVAs revealed that the female coach was rated significantly worse than the male coach on game strategy competency ($F = 6.49$, $p = .01$, $\eta^2 = .02$, observed power = .72), and technique competency ($F = 10.63$, $p = .001$, $\eta^2 = .04$, observed power = .90). No significant main effect was found for participant gender, Pillai's trace $_{4, 293} = 0.02$, $F = 1.34$, $p = .26$, $\eta^2 = .02$, observed power = .42.

A significant target gender x reputation interaction effect was found, Pillai's trace $_{4, 293}$ $= 0.03$, $F = 2.58$, $p = .04$, $\eta^2 = .04$, observed power = .72. However, follow-up ANOVAs did not reveal any significant effects for character-building competency ($F = 1.08$, $p = .30$, $\eta^2 = .00$, observed power = .18); game strategy competency ($F = 0.02$, $p = .88$, $\eta^2 = .00$, observed power = .05); motivation competency ($F = 2.21$, $p = .14$, $\eta^2 = .01$, observed power = .32); or technique competency ($F = 1.77$, $p = .18$, $\eta^2 = .01$, observed power = .26). This indicates that while reputation and gender combine to have an effect on athletes' overall expectancies of coaching competency, the two independent variables do not contribute to a significant change in athletes' ratings when each of the four specific coaching competencies are examined separately (Maxwell, 2001). Scrutiny of the mean scores displayed in Table 4.2 suggest that when the coach was male and had a successful reputation, he was perceived to be more competent than when the coach had an unsuccessful reputation, regardless of whether they were male or female. In addition, the mean scores indicate that when the coach was female and successful, athletes perceived her to be more competent than a coach who was either male and had an unsuccessful reputation, or female and had an unsuccessful reputation. There were no other significant interaction effects between the independent variables: participant gender x target gender, Pillai's trace $_{4, 293} = 0.02$, $F = 1.11$, $p = .35$, $\eta^2 = .02$, observed power = .35; participant gender x reputation, Pillai's trace $_{4, 293} = 0.02$, $F = 1.26$, $p = .29$, $\eta^2 = .02$, observed power = .39; participant gender x target gender x reputation, Pillai's trace $_{4, 293} = 0.02$, $F = 1.27$, $p = .28$, $\eta^2 = .02$, observed power = .40.

Ratings of Perceived Influence

A paired samples t-test was conducted to find out the extent to which athletes believed that coach gender and reputation influenced their subsequent expectancies. Mean scores indicated that coach gender (Mean = 2.20, $SD = 1.10$) and reputation information (Mean = 3.81, $SD = 0.91$) were deemed by athletes to have some impact on the expectancy formation process. However, results of the t-test revealed that participants believed reputation to be significantly more influential than the gender of the coach during the development of their expectancies ($t = -21.25$, $df = 303$, $p < .001$).

	Participant Gender									
	Male (n = 152)					**Female** (n = 152)				
	Target Coach Gender/Reputation									
Competency	**Male-Successful** (n = 38)	**Male-Unsuccessful** (n = 38)	**Female-Successful** (n = 38)	**Female-Unsuccessful** (n = 38)	**Overall** (n = 152)	**Male-Successful** (n = 38)	**Male-Unsuccessful** (n = 38)	**Female-Successful** (n = 38)	**Female-Unsuccessful** (n = 38)	**Overall** (n = 152)
Character-building Competency (CBC)	19.74 (2.95)	18.61 (3.70)	19.55 (3.48)	18.42 (4.02)	19.08** (3.57)	20.16 (3.48)	21.24 (3.57)	20.26 (4.20)	20.03 (4.40)	20.42** (3.92)
Game Strategy Competency (GSC)	35.68 (4.53)	35.39 (4.72)	36.03 (5.33)	34.05 (4.74)	35.29*** (4.85)	37.29 (3.92)	37.68 (4.05)	35.92 (4.14)	37.89 (5.10)	37.20*** (4.35)
Motivation Competency (MC)	34.87 (5.11)	35.21 (4.79)	36.05 (4.83)	34.26 (4.48)	35.10* (4.80)	35.84 (4.84)	37.58 (5.05)	35.34 (5.27)	36.39 (5.85)	36.29* (5.28)
Technique Competency (TC)	31.37 (4.22)	31.16 (3.37)	32.26 (4.61)	30.00 (5.17)	31.20* (4.42)	31.37 (3.91)	33.18 (3.97)	32.13 (3.72)	32.79 (3.95)	32.37* (3.91)

Note. Standard deviations are in parentheses. Significant differences for "overall" values in the same row are indicated as follows: * $p < .05$ ** $p < .01$ *** $p < .001$. All item ratings were made on a 7-point scale. Maximum(minimum) possible scores: CBC = 28(4); GSC = 49(7); MC = 49(7); TC = 42(6).

Table 4.1. Mean scores and standard deviations for athletes' ratings of the control coach.

	Target Gender/Reputation							
Competency	**Male-Successful** ($n = 38$)	**Male-Unsuccessful** ($n = 38$)	**Female-Successful** ($n = 38$)	**Female-Unsuccessful** ($n = 38$)	**Male Overall** ($n = 152$)	**Female Overall** ($n = 152$)	**Successful Overall** ($n = 152$)	**Unsuccessful Overall** ($n = 152$)
Character-building Competency (CBC)	21.71 (3.26)	19.80 (3.60)	21.34 (3.29)	20.24 (3.23)	20.76 (3.55)	20.79 (3.30)	21.53^ (3.27)	20.02^ (3.42)
Game Strategy Competency (GSC)	40.86 (4.30)	31.38 (6.56)	39.09 (6.02)	29.82 (5.54)	36.12* (7.30)	34.45* (7.41)	39.97^ (5.29)	30.60^ (6.12)
Motivation Competency (MC)	39.38 (4.25)	31.99 (5.94)	37.38 (5.73)	31.82 (5.43)	35.68 (6.35)	34.60 (6.23)	38.38^ (5.13)	31.90^ (5.67)
Technique Competency (TC)	34.76 (4.19)	29.68 (5.71)	33.66 (4.95)	27.05 (4.96)	32.22*** (5.60)	30.36*** (5.95)	34.21^ (4.60)	28.37^ (5.49)

Note. Means and standard deviations are for male and female participants combined. Standard deviations are in parentheses. Significant differences as a function of target gender for "overall" values in the same row are indicated as follows: * $p < .05$ *** $p < .001$. Significant differences as a function of reputation for "overall" values in the same row are indicated as follows: ^ $p < .001$. All item ratings were made on a 7-point scale. Maximum(minimum) possible scores: CBC = 28(4); GSC = 49(7); MC = 49(7); TC = 42(6).

Table 4.2. Mean ratings and standard deviations for athletes' ratings of the experimental coach.

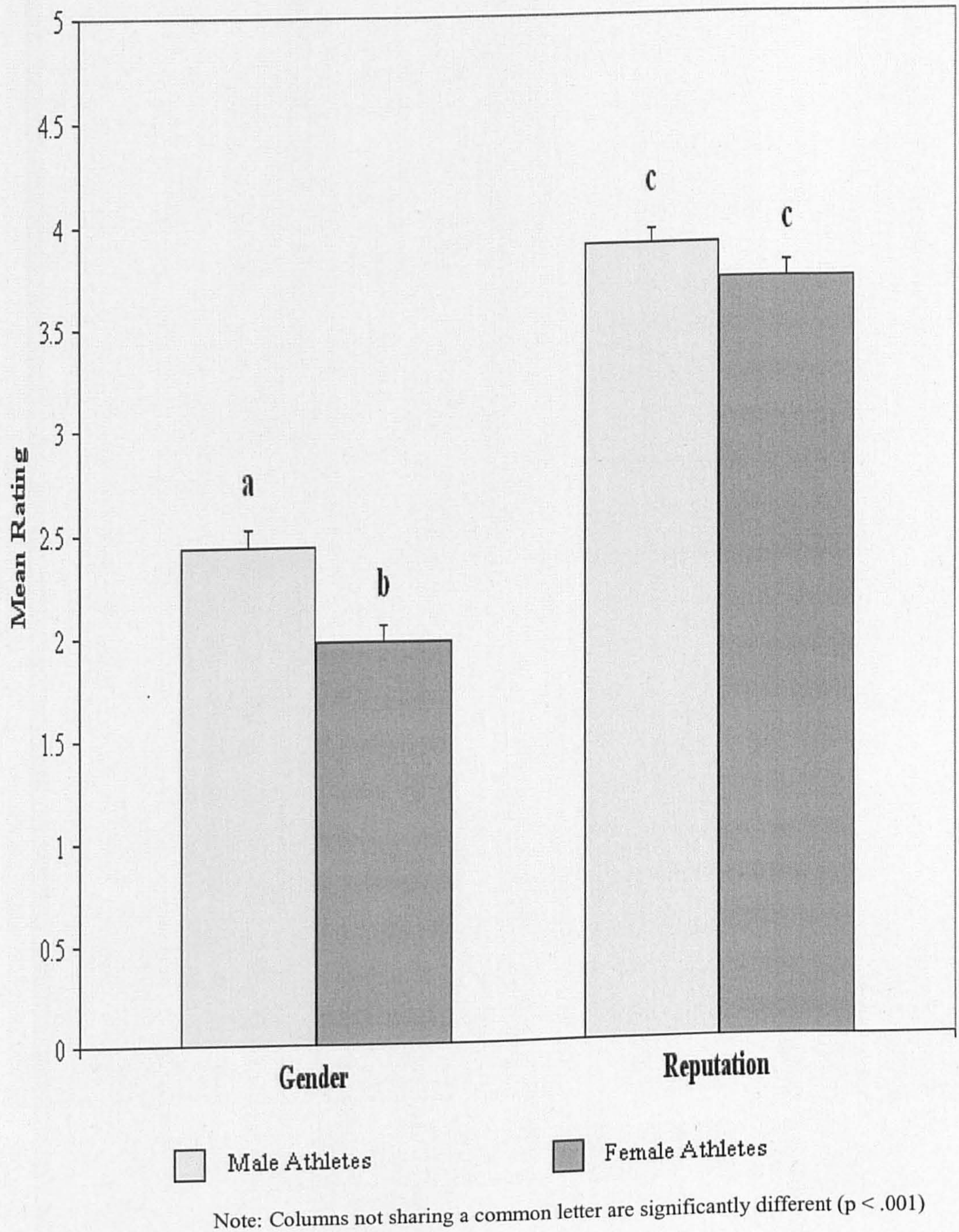


Figure 4.1. Male and female athletes' mean ratings of perceived influence for gender and reputation.

In order to find out if there was any difference between male and female athletes in terms of the importance they attached to coach gender and reputation as sources of information, a One-Way MANOVA was conducted. Since Box's M test was non-significant ($p > .05$), Wilks' Lambda was used as the criterion value in the analyses that followed. Contrary to hypothesis four, a significant main effect was found for participant gender on ratings of perceived influence of the manipulated sources of information, Wilks' Lambda $_{2, 301} = 0.95$, $F = 7.60$, $p = .001$, $\eta^2 = .05$, observed power $= .95$. Follow-up ANOVAs revealed that while there was no significant difference between male and female athletes regarding the perceived influence of reputation on their expectancies of a coach ($F = 2.68$, $p = .10$, $\eta^2 = .01$, observed power = .37), male athletes rated coach gender to be a significantly more influential source of information than did female athletes ($F = 13.91$, $p < .001$, $\eta^2 = .04$, observed power = .96). However, although male athletes perceived coach gender to have more of an impact on their expectancies than did female athletes, Figure 4.1 clearly illustrates that both male and female athletes perceived reputation information to be more influential than coach gender.

DISCUSSION

The purpose of the present study was to test the findings of study one by examining the degree to which third-party reports (i.e., reputation) and static cues (i.e., gender) influence the expectancies of a coach's competency that are formed by athletes participating in team sports. The first hypothesis stated that reputation would influence the expectancies that athletes formed of the target coach. Specifically, it was expected that coaches with a successful reputation would be rated as more competent than coaches with an unsuccessful reputation. The first hypothesis was supported for all measures of coaching competency. In comparison to "unsuccessful" coaches, athletes expected "successful" coaches to be significantly more competent in terms of the character-building of athletes, identifying and developing game-strategies, motivating athletes, and teaching relevant skills. Thus, the results of the present study support the findings of study one, as well as evidence from previous research (e.g., Findlay & Ste-Marie, 2004; Jones et al., 2002), that third-party reports such as reputation information are influential sources of information that athletes use when forming expectancies of a coach.

The second hypothesis stated that gender would have an impact on the expectancies that athletes formed of the target coach's competency. Based on previous sport specific research that had examined the effect of gender on the coach-athlete relationship (e.g., Bird & Williams, 1980; Brackenridge, 1991; Kontos, 2003), it was predicted that male coaches would be rated as significantly more competent than female coaches, regardless of athlete gender. The results showed that gender did have an influence on athletes' expectancies of the target coaches' competency, but only for two of the four independent variables. Male target coaches were rated as significantly more competent than female coaches in terms of their game-strategy competency and technique competency. Hypothesis two was therefore partially supported, reflecting findings from previous research (e.g., Brackenridge, 1991; Kontos, 2003) that reported a tendency for male and female athletes to show a preference for male coaches.

The fact that athletes perceived the male coach to be more competent than the female coach in terms of game-strategy and technique, but not so for motivation and character-building, might be explained by considering the specific sporting context within which target coaches were evaluated by participants. Prior to providing competency ratings, participants were asked to imagine that the target coach has just been appointed as the new head coach for their team. Consequently, almost one third of participants placed the target coach in the context of coaching their soccer team. Previous studies (Csizma et al., 1988; Koivula, 1995) have reported that soccer is perceived by both men and women as masculine or male-oriented. Thus, within such a context, it is feasible that athletes would expect a male coach to be more competent than a female coach when it comes to teaching soccer-specific skills (i.e., technique competency) and understanding competitive strategies specific to soccer (i.e., game-strategy competency). However, abilities such as the capacity to instil good moral attitudes (i.e., character-building competency) and enhance athletes' self-confidence (i.e., motivation competency) are examples of coaching attributes that are not exclusive to soccer and may be applied to a range of situations and contexts. As a result, the male-oriented context of soccer may not be as salient to athletes when they are developing expectancies of a coach's motivation and character-building competency compared with when technique and game-strategy competency judgments are being made. However, given that other sports in addition to soccer were represented by participants in the present study (e.g., rugby union, basketball, cricket, field hockey), the findings indicate that soccer may not be the only sport perceived by male and female athletes to be masculine and male-oriented. Further research is warranted in order to provide evidence that either supports or refutes this contention.

Hypothesis three predicted that both male and female athletes would perceive the influence of reputation on their expectancies of the coach would be greater than that of coach gender. The results obtained from athletes' ratings of the perceived influence of each of the dependent variables on the development of their expectancies showed that reputation information was perceived to be significantly more influential than the static cue of coach gender. Thus, hypothesis three was supported. The results reinforce the findings of study one, which suggested that athletes believe that they use third-party reports (e.g., reputation) more often than static cues (e.g., gender) as a basis for their expectancies of a coach. However, the results of study one also indicated that there were no gender differences in terms of the cues that athletes deem to be most influential during the expectancy formation process. This is counter to the results of the present study, which revealed that while both male and female athletes deemed reputation to be significantly more influential than coach gender when forming initial expectancies of a coach, the degree to which gender was perceived as influential differed significantly as a function of athlete gender. Male participants perceived coach gender to have more of an impact on their expectancies of a coach than did female athletes. One possible explanation is that female athletes, through their own experiences and involvement in sport, are encouraged to challenge the traditional stigmas associated with female sport participation more readily than male athletes, thus perceiving informational cues such as coach gender to be less indicative of coaching competency. As a result, this finding might only be applicable to coach gender rather than static cues in general.

The findings of the present study provide a unique contribution to the expectancy effect literature. This is the first time that a study has investigated the impact of coach reputation and coach gender on the expectancies that athletes form of a coach's competency and ability. Moreover, the findings have important implications for coaching practise and the development of positive coach-athlete relationships. Building on the suggestions highlighted following the explorative findings of study one, the present study highlights some important implications for coaches, particularly in relation to the expectancies formed by athletes when they are evaluating a new coach. Since reputation seems to have an effect on athletes' cognitive responses to a coach they are expected to work with, it is suggested that coaches and their employers utilise this fact to their advantage.

By maximising the positive reputation information that athletes receive about a coach, the chances of developing positive coach-athlete relationships may be enhanced as a result of the initial positive expectancies that athletes are more likely to form about the coach in response to such information. Hence, reputation information may help to ensure that coaches are better equipped to overcome the barriers to forging a good working relationship with his or her new team. However, the present study only examined the impact of successful and unsuccessful reputation information on athlete expectancies of coaching ability. Future research should investigate the effects of the presence and absence of reputation information, as well as examining the effects of other forms of reputation information (e.g., coaching experience, playing experience). Such investigation would provide a greater understanding of the extent to which reputation information influences athletes' expectancies of coaches, and also reveal whether or not there are differences in the strength of the effect on athletes' expectancies between the various types of reputation information. Furthermore, research of this kind would indicate the degree to which coaches and their employers should be aware of the amount of reputation information they disclose to athletes.

According to the results of the present study, female coaches are at a disadvantage compared with male coaches in terms of their ability to elicit positive responses from the athletes they are asked to work with. This is not a surprising finding, given previous work that has highlighted the consensus between male and female athletes concerning their preference for being coached by men rather than women (e.g., Brackenridge, 1991; Kontos, 2003). However, the athletes' perception that coach gender is not as influential a factor as reputation in the development of their expectancies of coaches does not conceal the fact that coach gender still had an influence on athletes' expectancies of coaching competency. This could mean one of two things: either that participants were motivated by social desirability in their responses to the perceived influence questions (Guyll & Madon, 2003), or that they were simply unaware of their cue usage during expectancy formation (Chen & Bargh, 1997). Any attempt to suggest which of these effects has occurred within the present study would be purely speculative. Thus, future research using experimental techniques designed to account for unconscious information processing (e.g., Implicit Association Test; Greenwald, McGhee, & Schwartz, 1998) would be a worthwhile extension of the present study.

The reported effects of reputation information on athletes' predictions of coaching competency imply that the impressions and expectancies a coach wishes to instil in his or her athletes are influenced by factors that can, to a certain extent, be controlled by the target. Female coaches and their employers should ensure that positive information such as a successful reputation is made available to athletes early in the coach-athlete relationship in order to try and harness the positive expectancy effects that may override the impact of negative expectancies that might be developed based on coach gender. Future research should aim to identify the reasons why athletes form less positive expectancies of female coaches as opposed to male coaches. If such expectancies are based on traditional sex-role stereotypes regarding female participation in sport (e.g., Csizma et al., 1988; Koivula, 1995), then possible changes in public opinion regarding these stereotypes and a greater acceptance of females in sport (e.g., Riemer & Visio, 2003; Sherman et al., 2000) may lead to changes in athletes' expectancies of female coaches. Longitudinal studies in this area should monitor and address this issue.

The main aim of the present study was to investigate the extent to which the three-factor model extracted in study one would be reflected by the findings of an experimental study. The reputation and gender of a target coach were manipulated in order to examine their effect on the expectancies athletes developed with regard to the competency of the target coach. The results showed that coach reputation and coach gender influenced athletes' expectancies. It was also revealed that athletes perceived reputation to be a more influential source of information than gender, thus providing support for the previously extracted model. Further research in this area should address some of the limitations of the present study, notably the omission of an experimental condition where reputation information is not included. The integration of a "no reputation" condition would further highlight the exact nature of the reputation bias regarding athletes' expectancies of coaches. Moreover, in displaying the target coach, future research should use dynamic stimuli (e.g., video footage) rather than static photographs in order to ensure that the wide range and volume of information presented to athlete participants is as close as possible to that witnessed during naturalistic situations. The first two studies have examined how athletes form expectancies of coaches, and identified some informational cues that influence the expectancy formation process. Subsequent research now needs to investigate the impacts of these expectancies. Specifically, the cognitive, affective, and behavioural consequences of athletes' expectancies of coaches require direct examination.

CHAPTER 5

STUDY 3: THE INFLUENCE OF COACH REPUTATION ON ATHLETES' COGNITIVE AND AFFECTIVE RESPONSES

INTRODUCTION

Study one revealed that athletes perceive reputation to be a major source of information they use when forming initial expectancies of a coach. This finding was in agreement with Olson et al.'s (1996) model of expectancy processes, which suggests that the views and opinions of others are a type of informational cue that can influence the expectancies a perceiver forms regarding a target individual. Study two provided further support for the results of study one by showing that a coach's previous record of success in terms of the number of honours won throughout their career significantly influenced athletes' expectancies of that coach's competency. However, the extent to which these expectancies influence athletes' cognitions and affective states is still unknown.

Previous research has shown that reputation information has the power to influence students' expectancies of an instructor's teaching ability (Towler & Dipboye, 2006), judges' ratings of figure skaters (Findlay & Ste-Marie, 2004) and referees' decisions regarding disciplinary action (Jones et al., 2002). Jowett and Timson-Katchis (2005) reported that the coach's ability to maintain an effective bond with his or her athletes was perceived by athletes to be an important coaching skill. Moreover, Jowett and Poczwardowski (2007) argued that antecedent variables such as coach experience might impact on the level of closeness an athlete feels toward his or her coach. Thus, athletes' affective responses towards coaches may be influenced in part by the coach's reputation. However, no research has investigated athletes' reputation-based expectancies of a coach in terms of their potential to elicit expectancy effects within the coach-athlete relationship. As a result, the main aim of this study was to examine the extent to which reputation information may lead to expectancy effects that impact on athletes' evaluation of, and affective responses towards, a coach following the delivery of a coaching session.

By expanding on the findings of studies one and two, it is expected that the findings of this study will provide further evidence for the role of third-party reports as an influence on athletes' expectancies and ensuing evaluations of coaches. Based on proposals from expectancy theory (e.g., Olson et al., 1996), the findings of previous research (Findlay & Ste-Marie, 2004; Jones et al., 2002; Jowett & Timson-Katchis, 2005; Towler & Dipboye, 2006) and the results of studies one and two, the hypotheses of the present study are as follows:

Hypothesis 4: When presented with a reportedly successful coach, athletes will exhibit significantly more favourable evaluations of a coaching session than when presented with a reportedly unsuccessful coach.

Hypothesis 5: A coach with no reputation information will elicit significantly less favourable evaluations of a coaching session than a reportedly successful coach.

Hypothesis 6: A coach with no reputation information will elicit significantly more favourable evaluations of a coaching session than a reportedly unsuccessful coach.

Hypothesis 7: When presented with a reportedly successful coach, athletes will report significantly more favourable affect towards the target than when presented with a reportedly unsuccessful coach.

Hypothesis 8: A coach with no reputation information will elicit significantly less favourable affect towards the target than a reportedly successful coach.

Hypothesis 9: A coach with no reputation information will elicit significantly more favourable affect towards the target than a reportedly unsuccessful coach.

METHOD

Participants

A total of 150 male football players, recruited from British high school, university, and amateur football teams, volunteered to take part in the present study. However, 14 volunteers did not fully complete the questionnaires and their data were excluded from the analysis. The remaining 136 participants (Mean age = 18.51 years, SD = 4.67; Mean playing experience = 9.40 years, SD = 5.50) were predominantly White Caucasian (97.8%), with the remainder made up of Black (0.7%), Asian (0.7%), and Mixed Race (0.7%) participants. The majority of athletes reported their highest level of participation to be at either university/club level (71.4%), or while representing their region or county (22.8%). One participant (0.7%) stated that they had competed at the national/professional level, while 5.1% of the sample did not specify their highest level of participation.

Materials

Coach profiles.

Participants viewed one of three experimental coach profiles, which consisted of a brief written description similar to that used in study two. However, there were some minor differences. First, the name, age, and experience of the experimental coach were changed in order to establish consistency with the video footage presented later in the study. Second, mention was made of the specific football coaching qualifications that the target coach had achieved. As in study two, the only difference between the coach profiles in each condition was the nature of the reputation information. However, as well as a successful and an unsuccessful condition, the present study also included a no reputation condition, where the penultimate sentence of the coach description was omitted. The profile of the successful coach was as follows:

> *"John is a 44-year-old coach from London. He has been a full-time coach for 17 years. John holds a number of recognised coaching qualifications including the FA Level 3 Certificate in Coaching Football and the FA Youth Coaches' Certificate. He has worked with athletes of varying age and ability, ranging from novice children to elite-level adults. During his coaching career, John has won a number of honours with both amateur and semi-professional teams, and the team he coached last season won their regional cup competition. John is enthusiastic about his sport and enjoys his job."*

The description of the unsuccessful coach was the same as above, except that the penultimate sentence was altered to read: "During his coaching career, John has not won any honours with the teams he has worked with, and the team he coached last season was ultimately relegated." In addition to the experimental coach profile, participants also viewed a control profile of a female coach (named "Sue"). The use of a female coach does not represent a methodological flaw of the study, since the control target was intended primarily as a means of familiarising participants with the process of evaluating a coach from the available stimuli. Moreover, the control coach was consistent across all experimental conditions and, therefore, has no impact on the hypotheses that are being tested within the present study. The profile of the control target was similar to the experimental profiles in terms of content, but reputation information was not included.

Video footage of coach behaviour.

Participants viewed approximately nine minutes of video footage for each coach profile they were presented with (control and experimental). The footage consisted of clips taken from a video recording of the BBC2 series "Sportsbank", which was aired on British television in 1994. The original television series was made up of five separate programmes, each of which included a regular 15-minute slot devoted to the teaching and development of football skills and techniques. This element of the programme showed the male and female coach delivering specific football coaching drills to a group of 24 school children aged between 10 and 12 years old. Clips of the original footage were selected for inclusion based on the clarity of the segment (whether it was clear what was being taught/demonstrated), the focus on the coach (whether the coach was the primary focus of the clip), and the coaching behaviour exhibited (e.g., verbal instruction, demonstration, corrective feedback). A total of 11 segments displaying the control coach met the criteria for selection, with five clips consisting of verbal instruction and demonstration, five categorised as examples of corrective feedback, and one classed as an opportunity for athletes to demonstrate what they had learned. Similarly, 12 clips of the experimental coach were selected for inclusion in the present study, with six displaying examples of verbal instruction and demonstration, five displaying instances of corrective feedback, and one clip categorised as an opportunity for athletes to demonstrate what they had learned. The stimuli were edited on an Apple Macintosh computer using the i-Movie package and burned onto a Sony DVD-R disc. A summary of the information that participants viewed is provided in Table 5.1.

Clip	Control Coach	Experimental Coach
1	D/V: Ball familiarity (0:58)	D/V: Ball familiarity (1:09)
2	CF: Stop-turn technique (0:30)	D/V: Stop-turn technique (0:19)
3	CF: Passing/receiving the ball using the instep (0:43)	CF: Drag-back technique (0:36)
4	D/V: Passing/receiving the ball in a game situation (1:05)	OPP: Q & A session with the coach (0:50)
5	CF: Passing/receiving the ball in a game situation (0:48)	D/V: Passing/receiving the ball using the instep (0:41)
6	OPP: Q & A session with the coach (1:08)	CF: Lob pass/shot (0:40)
7	D/V: Drag-back technique (0:26)	D/V: Heading the ball (1:07)
8	CF: Drag-back technique (0:30)	CF: Heading the ball (0:57)
9	D/V: Passing/shooting using the top of the foot/laces (0:56)	CF: Goalkeeping skills/catching the ball (0:39)
10	CF: Passing/shooting using the top of the foot/laces (1:21)	D/V: Goalkeeping skills/catching and movement (0:38)
11	D/V: Lob pass/shot (0:55)	D/V: Goalkeeping skills/diving (1:06)
12	-----------------	CF: Goalkeeping skills/diving (0:24)
D/V Duration	4:20	5:00
CF Duration	3:52	3:18
OPP Duration	1:08	0:50
Total Duration	9:20	9:06

Note. D/V = Demonstration/Verbal Instruction; CF = Corrective Feedback; OPP = Opportunity for Athlete Feedback. Durations of each clip are in parentheses.

Table 5.1. Summary of video footage presented to athletes.

By using more dynamic stimuli in the form of video clips of the target, the study is more in line with the methods used by previous researchers (e.g., Findlay & Ste-Marie, 2004; Jones et al., 2002) who have demonstrated expectancy effects as a function of reputation.

Measures

Athlete demographic questionnaire.

Background information of athletes was obtained via athlete demographic questionnaires (see Appendix 3.1). Athletes' age, gender, race, number of years experience in football, team(s) they currently represent, and highest level of participation were obtained.

Evaluation of coach competence.

In order to examine the effects of reputation on athletes' evaluation of information (i.e., cognitive response), the original 24-item version of the Coaching Competency Scale (CCS; Myers et al., 2006) was used. Participants were asked to use each item to complete the following sentence: "How competent is the coach in his or her ability to ___________?" Participants then rated the extent to which they agreed with each statement using a 5-point Likert scale (0 = *Complete incompetence* to 4 = *Complete competence*). The CCS is shown in Appendix 3.2.

Affective response to the coach.

In order to examine the effects of reputation on athletes' affective response towards the coach, the Positive Affect Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used. Given the recommendation that "affect should be conceptualised at least as a two-dimensional construct...involving two independent dimensions for positive and negative feelings" (Betsch, 2005, p.41), the Positive Affect Negative Affect Schedule (PANAS; Watson et al., 1988) was selected as a suitable measure of affective states. Moreover, the PANAS has been validated for use in sport and exercise settings (Crocker, 1997; Crocker & Graham, 1995) and is therefore appropriate for use in the context of the present study. The PANAS consists of two 10-item scales, and is a global measure of pleasurable engagement (Positive Affect or PA scale) and subjective distress (Negative Affect or NA scale). The PA scale measures four main constructs (i.e., attentive, excited, proud, strong), while the

NA scale is designed to measure five categories (i.e., distressed, angry, fearful, guilty, jittery). After presentation of the stimuli, participants were asked to imagine that the coach presented had been appointed as the new head coach for their team. Participants then rated the degree to which they would experience each of the listed feelings and emotions in response to working with the coach for the first time. Again, items were rated using a 5-point Likert scale (1 = *Very slightly or not at all* to 5 = *Extremely*). The PANAS is shown in Appendix 3.3.

Post-experiment questions.

In order to account for the possibility that participants held pre-conceived expectancies and impressions regarding either of the coaches presented in the video footage, athletes were asked to respond yes or no to the question: "Did you recognise either of the coaches shown in the video clips?" In addition, a second question was designed to examine whether athletes were aware of the true purpose of the study. Participants were asked to provide their thoughts and ideas in response to the following question: "What do you think was the main purpose of the study (i.e., what do you think we were testing)?"

Procedure

Participants were approached and recruited at various amateur and university football clubs over a period of approximately three months. Participants were provided with the test battery, which consisted of the athlete demographic questionnaire, control coach profile, one of the three experimental coach profiles (i.e., successful reputation, unsuccessful reputation, no reputation), two copies of the CCS and PANAS (one for the control profile and one for the experimental profile), and the two post-experiment questions. Athletes were asked to carefully read the first (control) coach profile, which was simultaneously read aloud by the first author. This was done not only to ensure that it was fully acknowledged by participants (Jones et al., 2002), but also as a means of standardising the amount of time each participant spent attending to the written information. Participants were then presented with video clips, which displayed the first coach. Prior to viewing the footage, athletes were informed that the coaching session was conducted and filmed as part of a recent coaching training course. Once the video footage for the first coach had finished, a message appeared on the screen prompting the participants to begin making their ratings for the coach using the two relevant instruments (i.e., CCS and PANAS).

The questionnaires were completed in the presence of the author so that any queries from participants could be answered. Each set of three questionnaires took around five minutes to complete (i.e., approximately 10 minutes in total for each participant. Once athletes had completed their ratings for the first coach, the procedure was repeated for the stimuli related to the second (experimental) coach. Once ratings had been provided for the second coach, athletes were prompted to answer the two post-experiment questions. Following completion of the test battery, the athletes were fully debriefed and thanked for their participation. The study was carried out in line with University of Chichester's ethics procedures.

Data Analysis

Responses to the post-experiment questions were examined to ensure that participants were not suspicious of the true purpose of the study, and did not recognise either of the coaches portrayed in the video footage. In order to assess the dependent variables for multicollinearity, Pearson product-moment correlations were conducted. Multicollinearity (i.e., an indication that two dependent variables are measuring the same construct) was assumed for correlations greater than .80 (Stevens, 1996). In the event of multicollinearity, the two dependent variables would be combined to form a single variable, again following the recommendation of Stevens (1996). Multivariate analyses of variance (MANOVA) and, where appropriate, follow-up univariate analyses of variance (ANOVA) tests were performed on data obtained from the CCS and PANAS with the aim of identifying any differences in ratings that may have occurred as a result of manipulation of the independent variable (i.e., reputation). Eta squared (η^2) effect sizes were also computed. In line with the recommendations of Clark-Carter (1997), effect sizes of between .001 and .058 were classified as small, effect sizes of between .059 and .137 classified as medium, and effect sizes of .138 and over were classified as large. Where follow-up ANOVAs were significant, post-hoc Tukey HSD tests were conducted to identify the exact nature of the significant differences between experimental conditions.

RESULTS

Responses to Post-Experiment Questions

Participants' responses to the two post-experiment questions showed that none of the athletes recognised either of the coaches shown in the video footage, and that participants were unaware of the true nature of the study.

Descriptive Statistics

Analysis of Pearson product-moment correlations revealed that no relationships exceeded Stevens' (1996) multicollinearity criterion value of .80. As a result, all items were included in the subsequent analyses. Since Box's M tests did not indicate significant differences in the covariance matrices of the dependent variables ($p > .05$), Wilks' Lambda was used as the criterion value in the analyses that followed. Mean scores and standard deviations for all analyses are displayed in Table 5.2.

Ratings of Coaching Competency

Two separate one way MANOVAs were conducted to see whether there were any significant differences in athletes' ratings of coaching competency between the three experimental conditions in response to both the control coach and the experimental coach. For the control coach, no significant main effect of reputation was found (Wilks' Lambda $_{8, 260} = 0.92$, $F = 1.34$, $p > .05$, $\eta^2 = .04$, observed power = 0.61). However, for ratings of coaching competency in response to the experimental coach, a significant main effect of reputation was found (Wilks' Lambda $_{8, 260} = 0.82$, $F = 3.32$, $p < .001$, $\eta^2 = .09$, observed power = 0.97). Follow-up ANOVAs revealed significant differences in ratings of game-strategy competency ($F = 7.18$, $p < .001$, $\eta^2 = .10$, observed power = 0.93), motivation competency ($F = 3.42$, $p < .05$, $\eta^2 = .05$, observed power = 0.64), and technique competency ($F = 8.65$, $p < .001$, $\eta^2 = .12$, observed power = 0.97) between reputation conditions. Post-hoc Tukey HSD tests revealed that the successful coach was rated higher on game-strategy competency ($p < .001$), motivation competency ($p = .05$), and technique competency ($p < .001$) than the unsuccessful coach. In addition, the analysis revealed that for technique competency, the unsuccessful coach received significantly lower ratings than the coach with no reputation ($p = .05$). No other significant differences were found as a function of reputation.

	Target Coach					
	Control ($n = 136$)			Experimental ($n = 136$)		
	Reputation Condition					
Dependent Variable	Successful ($n=45$)	Unsuccessful ($n=46$)	No Reputation ($n=45$)	Successful ($n=45$)	Unsuccessful ($n=46$)	No Reputation ($n=45$)
Character-building Competency (CBC)	9.56 (2.70)	9.85 (2.92)	9.36 (2.59)	11.02 (2.64)	10.00 (2.52)	10.11 (2.28)
Game Strategy Competency (GSC)	14.33 (4.41)	13.80 (4.46)	15.27 (3.88)	18.56 (4.35)[a]	15.30 (4.14)[b]	16.98 (3.77)
Motivation Competency (MC)	14.53 (4.93)	14.93 (4.81)	14.31 (5.13)	19.22 (4.36)[a]	17.24 (4.07)[b]	19.07 (3.61)
Technique Competency (TC)	17.64 (3.95)	17.13 (3.69)	18.53 (3.06)	19.67 (3.10)[a]	16.91 (3.28)[b]	18.49 (3.12)[a]
Positive Affect (PA)	25.38 (7.42)	23.87 (7.68)	25.56 (8.25)	34.22 (7.96)[a]	28.67 (8.65)[b]	31.56 (7.24)
Negative Affect (NA)	18.11 (5.82)	16.43 (6.63)	18.29 (7.18)	13.09 (4.69)	14.07 (5.97)	13.11 (5.04)

Note. Standard deviations are in parentheses. Values not sharing a common letter are significantly different.
Maximum(minimum) possible scores: CBC = 16(0); GSC = 28(0); MC = 28(0); TC = 24(0); PA = 50(10); NA = 50(10).

Table 5.2. Mean scores and standard deviations for athletes' ratings in response to the control and experimental coaches.

Ratings of Positive and Negative Affect

One way MANOVAs were conducted to detect whether the manipulated variables had an impact on the impressions athletes formed of the target coaches (i.e., control and experimental). As with ratings of coaching competency, no significant main effect of reputation was found for affective ratings of the control coach (Wilks' Lambda $_{4,264}$ = 0.97, $F = 0.99, p > .05, \eta^2 = .02$, observed power = 0.31). However, for affective ratings in response to the experimental coach, a significant main effect of reputation was found (Wilk's Lambda $_{4,264}$ = 0.92, $F = 2.86, p < .05, \eta^2 = .04$, observed power = 0.77). Follow-up ANOVAs revealed a significant difference in ratings of positive affect ($F = 5.51, p < .01, \eta^2 = .08$, observed power = 0.85) between reputation conditions. Post-hoc Tukey HSD tests revealed that the successful coach elicited higher ratings of positive affect compared with the unsuccessful coach ($p < .01$). No other significant differences were found as a function of reputation.

DISCUSSION

The purpose of the present study was to examine the effect of reputation information on the cognitive and affective responses of athletes towards a coach. Hypothesis four predicted that athletes would exhibit more favourable cognitive responses to the coach when he was described as having a successful reputation as opposed to an unsuccessful reputation. For cognitive responses, which were measured by athletes' evaluation of the session run by the coach, the results revealed significant differences for three of the four variables. The successful coach's performance was rated as significantly more competent than the unsuccessful coach in terms of game-strategy, motivation, and technique competencies. Thus, with regard to athletes' cognitive responses towards the coach, hypothesis four was supported. However, it is interesting that ratings of the coach's character-building competency did not differ between the successful and unsuccessful reputation conditions. This finding may be linked to the coaching context depicted in the video footage, which displayed the coach delivering a coaching session to novice children aged 10-12 years old. It is generally accepted that the protection of child athletes' welfare and psychosocial development is a key role for youth sport coaches to fulfil (Lee, 2004). Thus, it is possible that in witnessing the age of the athlete group presented in the video clips, participants assumed that regardless of reputation information, the coach would need to possess a certain level of character-building competency (e.g., instil attitudes of respect for others, promote good sportsmanship) in order to be employed to work with children of such an age. This may explain the athletes' favourable ratings of the coach's character-building competency across all reputation conditions. However, given the lack of conclusive evidence in support of this explanation, further research is required to examine this tentative suggestion in greater detail.

The fifth hypotheses stated that athletes' evaluations of the coach with no reputation information would be significantly less favourable than those in the successful coach condition. No significant differences were found to support this hypothesis. Hypothesis six proposed that athletes' evaluations of the coach with no reputation information would be significantly more favourable than those in the successful coach condition. This hypothesis was partially supported since only ratings of technique competency were found to be significantly better for the no reputation coach compared with the unsuccessful coach. Hypothesis seven predicted that athletes' affective responses towards the target coach, which were measured by the PANAS, would be significantly more favourable in the successful condition than in the unsuccessful condition. This hypothesis was partially supported, as participants in the successful condition reported higher ratings of positive affect in response to the coach compared with participants in the unsuccessful condition. However, no significant main effects were found for global measures of negative affect as a function of coach reputation. The eighth and ninth hypotheses stated that ratings of athletes' affect in response to the coach with no reputation would be more favourable than those reported in the unsuccessful condition, but less favourable than those obtained in the successful condition, respectively. These were not supported.

The present study provides further evidence in support of the notion that reports from third-parties (e.g., details regarding a target's reputation) represent a source of information that athletes appear to use as a basis for their expectancies of a coach. In turn, the results show that these expectancies have the potential to dictate certain elements of athletes' cognitive and affective responses to coaches. The findings reinforce the implications from studies one and two that coaches need to be mindful of the way in which athletes process available information, as well as the possible impact that athletes' subsequent expectancies can have on the coach-athlete relationship.

With the exception of data related to technique competency (i.e., athletes in the no reputation condition rated the coach more favourably than did participants in the unsuccessful condition), athletes in the no reputation condition did not differ in their ratings of coaching competency and affect towards the coach when compared with athletes' responses obtained in either the successful or unsuccessful reputation conditions. Thus, congruent with recent reviews on the power of expectancy effects (e.g., Jussim & Harber, 2005), the present findings suggest that the effects of coach reputation on athletes' cognitive and affective responses to a coach are small, since exposing athletes to positive and negative reputation information regarding the coach did not significantly alter ratings of coaching competency or affective experiences compared to instances where athletes did not receive reputation information regarding the coach. However, in interpreting the results of the present study, one particular methodological limitation must be considered. Although video footage was used to try and expose athletes to the kind of information that they would experience in naturalistic situations, the artificial context of the laboratory did not enable sufficient replication of the interpersonal nature of coach-athlete interactions. It has been suggested that expectancy effects tend to be larger when there is a definite possibility of future interaction, compared with no possibility of future meetings (Snyder & Stukas, 1999). Consequently, athletes' awareness of the fact that they were not going to interact with the coach presented in the video may be reflected in the results, leading to an underestimation of the effect of athletes' expectancies on their cognitive and affective responses to a coach. Further investigation of the extent to which expectancy effects within the coach-athlete relationship occur in naturalistic settings is therefore required.

Another finding within the present study concerns the results relating to athletes' affective response towards the coach. Although ratings obtained from the PANAS indicated that athletes experienced greater positive affect in response to the successful coach compared with the unsuccessful coach, this finding was not replicated for ratings of negative affect. It could be argued that these results are reflective of the unique nature of coach-athlete relations. It is possible that athletes' expectancies of coaches only impact on feelings and emotions that are specific to the coach-athlete relationship rather than more global measures of positive and negative affect. Thus, the problem may lie in the way affect itself was measured. While Jowett and Ntoumanis (2004) refer to affect within the coach-athlete relationship in terms of closeness (i.e., liking, trust, and respect), this was not how affect was defined and measured within the present study. By using the PANAS as a measure of positive and negative affect, the results obtained were merely athletes' ratings of the sensations they would expect to experience in response to working with the coach (e.g., nervousness, enthusiasm) rather than an indication of the extent to which athletes believed that a close affective bond would be formed between themselves and the coach. According to Betsch's (2005) definition of affect (i.e., the positive and negative feelings or sensations evoked by a stimulus in the individual), the PANAS appears to fulfil the criteria of an appropriate measure of affect. However, Olson et al. (1996) use the term sensation expectancies in reference to perceivers' predictions of the feelings that will be experienced in response to a given stimulus. Thus, it is possible that the PANAS is inappropriate as a measure of affect when applied within the context of the coach-athlete relationship. In light of this argument, the current findings may be a conservative estimate of the true extent to which reputation information can influence athletes' affective responses towards a coach. Future research is required to address this issue in order to reveal whether or not the development of a more appropriate measure of interpersonal affect is warranted.

This study has provided support for the contention that athletes' expectancies are determined by the nature of information that is conveyed via third-party reports (e.g., reputation). Moreover, the results of the present study indicate that expectancies based on such information have the potential to influence athletes' cognitive and affective responses to a coach. Such findings make a valuable and novel contribution to the existing literature on expectancy effects within sport. Research needs to continue along this line of investigation in order to provide a more detailed understanding of the nature of expectancy formation and the potential impacts on coach-athlete relations. Olson et al.'s (1996) model of expectancy processes states that expectancies have the potential to determine the behaviour exhibited within social interaction, and this effect has been demonstrated in a myriad of classic experimental studies (e.g., Good & Brophy, 1975; Rothbart et al., 1971; Snyder et al., 1977). Thus, future research needs to examine the extent to which athletes' expectancies of coaches influence the behaviour athletes exhibit in response to their coach. Investigation conducted in a more naturalistic setting would achieve this aim, and simultaneously provide an opportunity for a more ecologically valid examination of the cognitive and affective consequences of athletes' expectancies of a coach.

CHAPTER 6

STUDY 4: THE INFLUENCE OF COACH REPUTATION ON ATHLETES' BEHAVIOURAL AND AFFECTIVE RESPONSES

INTRODUCTION

Thus far, the present programme of research has examined the reported sources of information athletes use to shape their initial expectancies of coaches. The previous studies have also demonstrated the impact of such expectancies on athletes' responses. Study one provided evidence to suggest that athletes rely on reputation information when forming initial expectancies of a coach, thus supporting the contention that third-party reports influence the expectancies and impressions formed during interpersonal interaction (Olson et al., 1996). In addition, the findings of studies two and three indicate that expectancies based on a coach's reputation can impact on athletes' cognitive and affective responses. The aim of the current study is to examine the impact of athletes' reputation-based expectancies of a coach on athlete behaviour.

The majority of mainstream psychological research that has investigated expectancy effects during interpersonal interaction has focused on the behavioural consequences of expectancies (Miller & Turnbull, 1986). However, despite the plethora of studies that have examined the link between expectancies and behaviour, investigation of this nature within the sport psychology literature appears to have been neglected to a large extent. Although previous research (e.g., Solomon, DiMarco, et al., 1998; Wilson et al., 2006) has indicated that coaches' expectancies of athletes influence the type of coaching behaviour exhibited, there has not been any examination of the extent to which athletes' expectancies of coaches determine athlete behaviours. Moreover, the studies that have examined the behavioural impacts of expectancies within the coach-athlete relationship have either been conducted within physical education classes (e.g., Martinek & Karper, 1986) or have involved the observation and analysis of interactions between previously-acquainted coach-athlete groups (e.g., Wilson et al., 2006). As a result, the primary aim of this study was to examine the extent to which reputation information may lead to expectancy effects that impact on athletes' behavioural responses towards an unknown coach, both during and following the delivery of a field-based coaching session. The second aim of the study was to address certain discussion points raised in study three (i.e., affective consequences of athletes' expectancies may be dependent on the specific measure of affect and the probability of direct coach-athlete interaction). Thus, athletes' affective responses to the coach following the session will be measured and analysed.

It has been proposed that expectancies have the potential to elicit a range of behavioural consequences (e.g., Olson et al., 1996). Previous research (e.g., Weinberg, Gould, & Jackson, 1979) has demonstrated that this expectancy-behaviour link can have a significant impact on athletic performance. Thus, performance-based consequences of expectancies may be linked to a number of mediating behaviours. It has been proposed that the effective performance of tasks ranging from judging in gymnastics (Plessner, 1999) to the skills involved in externally-paced sports such as tennis and football (Abernethy, 1993; Singer, 2000) are associated with engagement in cognitive processes such as attentional focus. According to McPherson (1994), the semantic (or declarative) knowledge (i.e., knowing *what* has to be done in order to perform a task successfully), which athletes learn from attention to coach instruction, precludes the procedural knowledge (i.e., knowing *how* to execute a specific task) essential for successful athletic performance. In other words, before an athlete can become competent at performing a given skill, it is vital that he/she pays close attention to any instructions or demonstrations offered by the coach. If the athlete is unable or unwilling to concentrate on such information, learning and development are likely to be impeded. In terms of assessing whether or not a person's attention is focused on appropriate stimuli, previous research provides evidence to suggest that gaze behaviours such as fixation direction (Poole & Ball, 2006) and fixation frequency (Jacob & Karn, 2003) are valid, albeit imperfect, indicators of attention. Thus, it could be argued that change in an athlete's gaze behaviour as a result of his or her expectancies could have implications for the athlete's attention, and therefore his or her learning and development.

In addition to attentional focus, variance in effort and persistence has been cited as a direct behavioural consequence of interpersonal expectancies (e.g., Weinberg et al., 1979). Experimental studies have indicated that instructor reputation has the potential to impact not only on a person's motivation to engage in specific activities, but also the degree of effort displayed by the individual. For example, Leventhal, Abrami, Perry, and Breen (1975) reported that teacher reputation was one of the primary determinants of college students' course selection. In addition, Wild et al. (1992) demonstrated that students' free-practice behaviour was influenced by expectancies based on third-party reports of their teacher's motivational orientation. Hence, it follows that athletes' reputation-based expectancies of a coach may influence not only their willingness to participate in training activities designed to help them improve and develop (e.g., coaching demonstrations and exercises), but also the degree to which they persist with such activities.

The present study aims to provide the first field-based examination of athlete-induced expectancy effects within the coach-athlete relationship by examining the expectancy-behaviour link and the associated implications. Specifically, the study will investigate the extent to which the reputation of the coach impacts on athletes' attention, effort and persistence, and technical ability. It is expected that the findings of the study will provide further evidence for the role of third-party reports as an influence on athletes' expectancies and ensuing evaluations of coaches. A further aim of the present study is to conduct a pilot survey involving a range of coaches with a view to identifying valid indicators of athlete attention, effort, and persistence that could be used as suitable dependent variables within the context of a football coaching session. Based on the findings of the above-mentioned research and the results of studies one to three, the hypotheses of the present study are as follows:

Hypothesis 10: When coached by a reportedly experienced coach, athletes will exhibit significantly greater levels of attention than when coached by a reportedly inexperienced coach.

Hypothesis 11: Athletes coached by a reportedly experienced coach will exhibit significantly greater willingness to participate in coaching activities than athletes coached by a reportedly inexperienced coach.

Hypothesis 12: Athletes coached by a reportedly experienced coach will exhibit significantly greater effort and persistence than athletes coached by a reportedly inexperienced coach.

Hypothesis 13: Athletes coached by a reportedly experienced coach will exhibit significantly greater improvements in technical ability than athletes coached by a reportedly inexperienced coach.

Hypothesis 14: Athletes presented with a reportedly experienced coach will report significantly more favourable affect in response to the coaching session than athletes presented with a reportedly inexperienced coach.

METHOD

Experimental Setting

A sample of amateur football players agreed to take part in one of three coaching sessions delivered over the course of three months. A visiting coach (i.e., the experimenter), who was unknown to the athletes, was given the task of delivering a two-hour football coaching session designed to improve players' passing and shooting ability. As well as following the coach's instructions during the coaching session, participants were required to complete pre- and post-session tests of technical ability. Participants were told that the reason for the coaching session was to allow for the assessment of the visiting coach, who was ostensibly working towards a national coaching qualification. The only other information that participants received about the coach prior to the coaching session was in respect of his previous experience and qualifications. Athletes received one of three types of information about the coach depending on the experimental condition to which they were randomly assigned (i.e., experienced reputation, inexperienced reputation, no reputation). Certain elements of the coaching session were video recorded so that athletes' behavioural responses to the coach across the three experimental conditions could be captured and assessed. The video footage also doubled as a means of monitoring the consistency of the coach's behaviour between sessions. Participants also provided retrospective ratings of the affective reactions they experienced during the coaching session.

Participants

A total of 35 male football players (Mean age = 18.20 years, SD = 2.19; Mean playing experience = 11.47 years, SD = 2.57), recruited from three British college and university football teams, volunteered to take part in the present study. The participants were predominantly White Caucasian (94.3%), with the remainder of the sample made up of Mixed Race (5.7%) participants. The athletes reported their highest level of participation to be at either university/club level (48.6%) or regional/county level (48.6%). The remaining 2.8% of the sample did not specify their highest level of participation. All participants provided informed consent before taking part in the study.

Materials

Cover story.

Since the author (holder of four coaching qualifications developed and endorsed by the Football Association of Wales) was to act as the target coach during the present study, participants were recruited by research assistants to ensure that the target coach remained unknown to participants until formally introduced at the start of the training session. Given the nature of the study (e.g., overt use of video cameras; sizable time commitment), it was important to guard against arousing athletes' suspicions as to the true nature of the coaching session. Thus, participants were informed that by agreeing to take part in the session, they would be helping a coach fulfil the assessment requirements associated with a coaching qualification that he was attempting to achieve. This cover story was conveyed to participants via e-mail during the initial recruitment period, as well as verbally and in writing on arrival at the training venue (see Appendix 4.1).

Reputation script.

In order to manipulate the reputation of the coach, participants were randomly split into three experimental conditions: *experienced reputation, inexperienced reputation,* and *no reputation.* Participants in each condition received reputation information about the target coach, which was verbally conveyed by a confederate research assistant during a pre-session warm-up prior to the arrival and introduction of the target coach. The confederate who provided the reputation information was a member of teaching staff who was well known to the athletes and had been personally involved in participant recruitment. This was done to ensure that the reputation information had originated from a respected and credible source (White, Jones, &

Sherman, 1998). The information received by athletes in the experienced reputation condition was as follows:

> *"As you know, we have a visiting coach coming here today who will be taking you through a few drills as part of a coaching assessment he is participating in. The drills will focus on passing and shooting techniques with the aim of improving your ability on each of these aspects of the game. He has already completed a number of coaching qualifications and worked with a few semi-professional teams so he's pretty experienced at running this kind of session. He will be arriving shortly so carry on with your warm-up exercises and I'll call you in when he arrives."*

The information received by those in the inexperienced reputation condition was the same as above, except that the penultimate sentence was altered to read: "He's currently working towards completing his first coaching qualification and has not coached any teams as yet so he's pretty inexperienced at running this kind of session." Likewise, participants within the no reputation condition received the same information as above, except that the penultimate sentence was omitted, meaning that athletes in this condition received no information regarding the coach's previous experience or qualifications.

Measures

Athlete demographic questionnaire.

Background information of athletes was obtained via athlete demographic questionnaires (see Appendix 4.2). Athletes' age, gender, race, number of years experience in football, team(s) currently represented, and highest level of participation were obtained.

Evaluation of technical ability.

According to Balsom (1994), analysis of a football player's physical profile, which includes technical ability, might help the coach to evaluate the effects of a specific training programme. Therefore, pre- and post-training measures of participants' technical abilities (i.e., passing and shooting) were taken to assess whether athletes' expectancies of the coach had any significant impact on athletes' technical development following the training session. Baseline and post-training measures of athletes' passing and shooting accuracy were obtained as part of the present study. This measurement of athletes' technical ability took place on an indoor basketball court, with heavy duty masking tape used to indicate important markers and test targets. Passing accuracy was measured using a variation of McDonald's Wall Volley Test (Chell, Graydon, Crowley, & Child, 2003; McMorris, Gibbs, Palmer, Payne, & Torpey, 1994), which is described in Appendix 4.3. McMorris et al. (1994) suggested that the test should be accepted as a valid measure of passing accuracy in soccer. Shooting accuracy was assessed using a specific shooting element of the F-MARC test battery (Rosch, Hodgson, Peterson, Graf-Baumann, Junge, Chomiak, & Dvorak, 2000), which is outlined in Appendix 4.4.

Indicators of athlete attention to coach instruction.

One of the aims of the present study was to examine the effects of coach reputation on athletes' attention as indicated by specific observable behaviours exhibited when directly addressed by the coach. In order to achieve this, certain instructional elements of the coaching session were designed so that indicators of athlete attention could be clearly captured and analysed via notational analysis of video footage. The first step was to identify valid indicators of attention that could be easily measured through the use of basic video recording equipment. A sample of 25 sports coaches (Male = 19, Female = 6) agreed to take part in a pilot survey designed to identify such indicators. The coaches ranged in age from 21 to 51 years old (Mean = 28.00 years, SD = 6.91) and had experience of coaching which ranged from 1 to 17 years (Mean = 5.68 years, SD = 4.40). They were asked to view a list of observable behaviours (e.g., looking in the direction of the coach, talking to other athletes) that a coach may use to assess whether or not an athlete is paying attention during a coaching demonstration. The list was generated from examination of previous literature that had suggested valid indicators of attention (e.g., Eccles, Walsh, & Ingledew, 2006; Emery, 2000; Haley & Fessler, 2005; Langton, Watt, & Bruce, 2000), as well as the author's reflections on his own experiences and perceptions of coaching in football. For each item, the coaches were asked to indicate: (a) whether or not they agreed that the behaviour was a suitable indicator of athlete attention; and (b) whether the behaviour would reflect an athlete who was being attentive or inattentive (coaches were also able to respond to this second question with "not sure"). In addition, the coaches were given the opportunity to suggest any items that were not included on the list that they believed may be suitable indicators of athlete attention (or inattention). The questionnaire that was used in this pilot survey is displayed in Appendix 4.5. The results of the survey are displayed in Table 6.1, which shows the frequency with which items were identified as valid/invalid indicators of attention, and whether the item was deemed to reflect an attentive/inattentive athlete. As a result of these findings, two specific behaviours were identified as suitable indicators of athletes' attention to coach instruction that could be measured within the context of the present study: gaze toward the coach and gaze away from the coach. While gaze toward the coach was identified as an observable behaviour that would be exhibited by an attentive athlete, gaze away from the coach was believed to represent behaviour reflective of an inattentive athlete.

Behaviour	Valid-Att	Valid-Inatt	Valid-Unsure	Invalid
Looking in the direction of the coach	96%	-	4%	-
Talking to other athletes	-	76%	12%	12%
Laughing	4%	32%	28%	36%
Looking away from the coach	-	72%	16%	12%
Nodding	12%	-	-	88%
Fidgeting/playing with equipment	-	32%	8%	60%
Mimicking coach's actions	4%	4%	-	92%
Asking questions	48%	-	-	52%
Standing still	4%	-	-	96%

Note. Valid-Att = Item rated as a valid indicator of an attentive athlete; Valid-Inatt = Item rated as a valid indicator of an inattentive athlete; Valid-Unsure = Item rated as a valid indicator of athlete attention, but coach is unsure whether item reflects attention or inattention; Invalid = Item rated as an invalid indicator of athlete attention.

Table 6.1. Frequencies of coach responses to pilot survey (indicators of attention).

As shown by the results in Table 6.1, talking to other athletes was also identified by the majority of the sample of coaches as a valid indicator of athlete inattention. However, it was considered that the content of athletes' conversations would be just as important an indicator of attention levels as the verbal behaviour *per se*. For example, it could be argued that an athlete who is talking about an issue relevant to the coach's behaviour (e.g., "He/she has explained that point really well") would reflect a greater level of attention to the coach compared to an athlete who is talking about something that is unrelated to the coaching session (e.g., "Did you watch the match last night?"). Due to the difficulty inherent in monitoring – both covertly and accurately – the content of athletes' conversations, it was decided not to use athletes' verbal behaviours as a dependent variable within the present study.

The identification of gaze behaviour as a key measure of athletes' attention to coach instruction concurs with much of the eye-tracking literature, which states that the analysis of eye movements and gaze behaviour are a useful and valid measure of perceiver attention (e.g., Jacob & Karn, 2003; Just & Carpenter, 1976; Poole & Ball, 2006). According to Just and Carpenter (1976), the focus of a person's gaze indicates the primary thought in a given list of cognitive processes. This "eye-mind" hypothesis, the underpinning principle of most eye-tracking research (Poole & Ball, 2006), suggests that by recording the nature of a perceiver's eye movements, researchers can determine where a person's attention is being directed in relation to a visual display. Fixations (i.e., moments when the eyes are relatively stationary) represent one of the main measurements employed within eye-tracking research. As well as providing an indication of the direction of a perceiver's attention, fixations can reveal the amount of processing or encoding of information being applied to a particular object (Poole & Ball, 2006).

Research investigating the relationship between eye movements and cognitive processes has reported that in an encoding task (e.g., browsing a web page), higher fixation *frequency* (i.e., greater number of fixations) on a particular area is indicative of greater interest in the target, such as a photograph in a news report (Jacob & Karn, 2003). The above research was concerned with human-computer interaction and was conducted with the use of specific eye-tracking equipment, which allowed for the highly accurate identification and measurement of minute eye movements. Despite having a different context (i.e., the examination of athlete-coach interaction) and employing a more crude method of analysis (due to practical considerations) than the previously mentioned research, it was decided that the principles outlined above remained applicable to the present study. Thus, in addition to the two measures identified from the pilot coach survey, athletes' fixation frequency was employed as an additional indicator of athlete attention to coach instruction.

Athletes' willingness to participate in training activities.

A further aim of the present study was to examine the extent to which coach reputation impacts on athletes' willingness to participate in training activities. Following brief interviews with the coaches who helped to identify valid indicators of athlete attention, all agreed that it was common practice within their coaching sessions to request the help of athletes when demonstrating specific techniques or exercises. This is in line with recommendations taken from the coaching literature (e.g., Cassidy, Jones, & Potrac, 2009; Kirk, Nauright, Hanrahan, Macdonald, & Jobling, 1996), where athletes' active involvement in coaching demonstrations is advocated as an example of appropriate coaching style. Thus, it was decided that throughout the coaching session, participants would be provided with numerous opportunities to volunteer to participate in coaching demonstrations during the introduction of each new coaching drill. The frequency with which athletes' volunteered to help with demonstrations over the course of the session would act as a measure of athletes' willingness to participate in training activities.

Measurement of athletes' attention and willingness to participate in demonstrations.

In order to facilitate the measurement of athletes' gaze behaviour and willingness to participate in coaching demonstrations, the entire coaching session was designed in such a way as to allow for breaks in physical training when the athletes could be called in by the coach and addressed as a group. It was important that when summoned by the coach, participants congregated in a position that was conducive to capturing clear video footage of the behaviours that had been identified. Therefore, prior to being introduced to the coach for the first time, the athletes were gathered around a horseshoe-shaped area that was marked out by cones 2.5m from the edge of the training area (Figure 6.1). The horseshoe area was situated directly in front of three Sony Handycam digital video cameras that were erected on tripods at a distance of between 11.5m and 14m away.

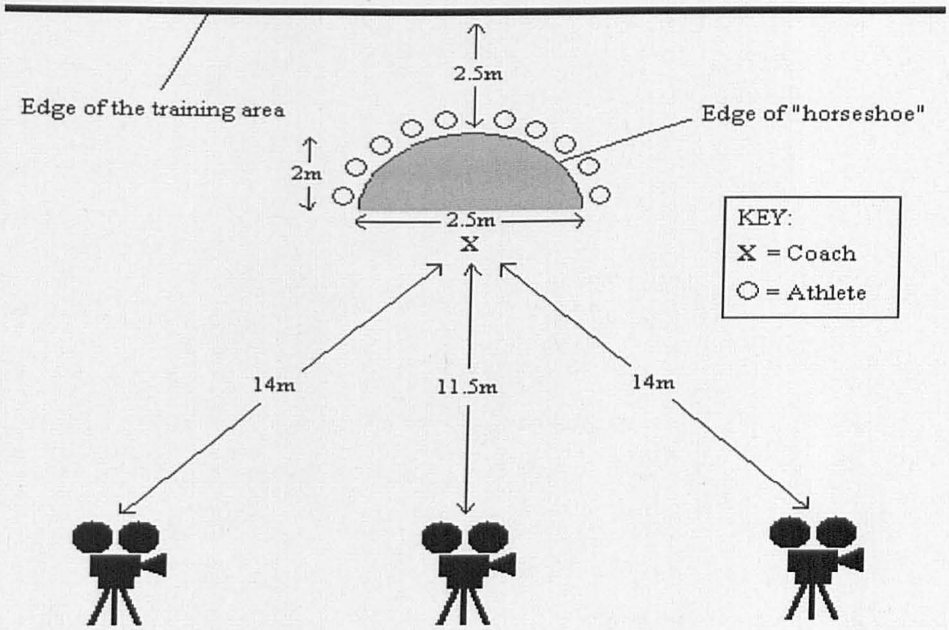


Figure 6.1. Schematic diagram showing layout of the coaching "horseshoe" and video camera equipment.

Following the coach's introduction, participants were told that whenever they heard the sound of the coach's whistle, they should gather around the edge of the horseshoe so that they could be addressed by the coach and given a verbal summary of the next part of the session. The coach's whistle also doubled as the signal for three research assistants to begin video recording the athletes' behaviours on each of the cameras. Participants were told that the reason for gathering around the horseshoe was two-fold: (a) so that the coach could be clearly seen and heard by all the athletes; and (b) so that the coach's behaviour could be accurately captured on video for the purposes of "assessment by the qualification awards panel". This information was designed to ensure not only that the participants adhered to these instructions, but also that this process did not arouse athletes' suspicions as to the true nature of the coaching session.

Participant behaviours that were captured on video during the verbal summaries were coded by the author (twice) and a second independent coder (i.e., a research assistant employed by the University of the author). An Apple Macintosh laptop and the *Sportscode Elite* software package were used to code the data. Both coders were fully trained in the use of the equipment and notational analysis software. In addition, both coders were blind to the experimental conditions during the coding of data. Scores related to athletes' gaze to/away from the coach were calculated as a percentage of the total duration of the verbal summaries, while fixation frequency was recorded based on the number of separate times athletes fixed their gaze on the coach during the verbal summaries. Willingness to participate in demonstrations was measured by calculating the percentage of time participants volunteered to take part in the coaching demonstrations. During coding, video footage was played at 30% of normal speed to minimise the risk of coding errors. To ensure inter-rater reliability for measures where there was a possibility of high variability between codings, intraclass correlation coefficients (ICC) between coders were conducted. According to Vincent (1999), ICCs of .70 or above represent acceptable levels of test-retest reliability. Sufficient levels of inter-rater reliability were reported for gaze to/away from coach (ICC = .85), fixation frequency (ICC = .79), and willingness to participate in demonstrations (ICC = 1.00). In addition, ICCs were conducted between the two sets of coded data produced by the author to ensure intra-rater reliability. Again, ICCs computed for gaze to/away from coach (ICC = .99), fixation frequency (ICC = .98), and willingness to participate in demonstrations (ICC = 1.00) met Vincent's criterion for inclusion.

Behavioural measures of athletes' effort and persistence.

Following the coach's delivery of the penultimate verbal summary (i.e., description of the final exercise), the coach and his assistants excused themselves from the practice area for a period of approximately 10 minutes (using the cover story of having to prepare for the post-training ability tests). This allowed participants the opportunity for some free practice. During this time, participants' behaviour was videotaped and later coded and assessed in terms of the percentage of total time participants spent engaging in each of six behaviours: running; walking; standing still; running to retrieve the ball from out of play; walking to retrieve the ball from out of play; not retrieving the ball from out of play. In addition, the total number of attempted shots, passes, and tackles made by participants during the free practice period were recorded. Based on the methods used by Wild et al. (1992), the analysis of free practice was intended to represent a behavioural measure of effort and persistence. Any behaviours that were exhibited when the ball was out of play or when the participant was taking his turn in goal were not included in the analyses.

Participant behaviours that were captured on video during the "free practice" period were coded in the same way as those behaviours that were exhibited during the verbal summaries. In addition, intraclass correlation coefficients were computed to ensure inter-rater and intra-rater reliability. Again, Vincent's (1999) criterion for acceptable levels of test-retest reliability (i.e., ICC > .70) was adhered to. ICCs computed for measures of athletes' "free practice" behaviour were all 1.00 (i.e., absolute agreement), except for the following measures: percentage of time spent running (intra-rater = .99; inter-rater = .99); percentage of time spent walking (intra-rater = .98; inter-rater = .93); and percentage of time spent standing still (intra-rater = .99; inter-rater = .97).

Athletes' affective response to the coaching session.

Following the conclusion of the coaching session, athletes were required to complete a session evaluation form (Appendix 4.6) in order to assess their affective responses to the training session. Specifically, the session evaluation form was designed to measure the extent to which athletes enjoyed the coaching session. The link between affect and enjoyment is clear from the definitions of enjoyment found in the literature. Scanlan and Simons (1992) define enjoyment as a "positive affective response to the sport experience that reflects generalised feelings such as pleasure, liking, and fun (pp.202-203), while Kimiecik and Harris (1996) state that enjoyment is "an optimal psychological state that leads to performing an activity primarily for its own sake and is associated with positive feeling states" (p.259). Enjoyment has been shown to be a valid predictor of athlete participation (e.g., Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993; Scanlan & Simons, 1992) leading to its identification as "an important sport participation motivational variable" (Kimiecik & Harris, 1996). Thus, enjoyment was deemed an important affective response to examine within the context of the present study. The session evaluation form contained ten items; six of these items were adapted from Scanlan, Carpenter, Lobel, and Simons' (1993) list of sources of enjoyment (e.g., "I had fun during the session"), while the remaining four items were adapted from Jackson and Eklund's (2002) Flow State Scale-2 (e.g., "I really enjoyed the session"). In light of the reported relationship between enjoyment and sport participation (Scanlan, Carpenter et al., 1993; Scanlan & Simons, 1992), the session evaluation form also included one item to assess athletes' intention to participate in similar training sessions in the future (i.e., "Given the opportunity, I would take part in this kind of session again").

Manipulation check.

The session evaluation form also contained a manipulation check designed to verify that participants had heard and understood the coach reputation information provided to them during the warm-up. Athletes were asked to try and recall as accurately as possible the information about the coach that had been relayed to them during the warm-up. A space was provided at the end of the session evaluation form so that participants could write down the information as they remembered it.

Checks for consistency of coaching behaviours.

It has been acknowledged within the coaching literature (e.g., Giacobbi, Jr. et al., 2003; Jones, Armour, & Potrac, 2004; Potrac, Jones, & Armour, 2002) that coaches are often perceived by athletes to hold a position of power, and that such power may be used (intentionally or unintentionally) to influence athletes' behaviours. Since the researcher was acting as the coach in the present study, it was imperative that certain steps were taken to guard against the potential for experimenter bias given the privileged role being adopted by the experimenter in this study. The coach/experimenter remained blind to all experimental conditions, during both the delivery of the coaching sessions and data analysis period.

There were also a number of procedures and checks adhered to as a means of ensuring consistency/neutrality of coaching behaviours not only across coaching sessions, but also between experimental conditions. First, a pilot coaching session was conducted prior to the initial experimental session. This was done so that the coach/experimenter and research assistants could familiarise themselves with the session protocol, thus helping to ensure the three experimental sessions were delivered consistently in terms of the duration of each phase, the content of each phase, and the provision of feedback/behaviours exhibited towards participants. Second, in addition to capturing the behaviours of athletes, the video footage obtained during verbal summaries also captured the behaviours of the coach/experimenter, allowing for monitoring and cross-session comparison of coach behaviours by the experimenter and research assistants in order to check for consistency. Furthermore, the research assistants were instructed to pay close attention to the instructional feedback provided by the coach to ensure that it was distributed evenly between participants in the three experimental conditions. In the event that discrepancies in feedback were identified, the research assistants were permitted to highlight this to the coach/experimenter during breaks in the session. However, research assistants reported that instructional feedback to participants was equitable across the three experimental conditions and that coach did not require further prompting.

Procedure

Participants were approached and recruited from three college and university football clubs over a period of approximately four months. Participants were sent an initial e-mail containing details of the study and a copy of the consent form (Appendix 4.7), which they were told they would be expected to sign should they agree to participate. Athletes who agreed to take part were arranged into groups of between 10 and 15 participants before being given a date for attending the session. This strict limit of 10-15 participants per testing session was enforced for two reasons: (a) to ensure there were enough participants to conduct the experiment; (b) to ensure there weren't too many athletes participating in each session, which would have compromised the quality of the video footage and subsequent notational analysis.

On arrival at the venue, participants were welcomed by the confederate research assistant and provided with the cover story, consent form, and athlete demographic questionnaire. Athletes were asked to carefully read and complete the forms as indicated. Participants were then randomly assigned to one of the three experimental conditions by being given a coloured bib (red, green, or yellow). The bibs were used so that participants could be clearly identified from the video footage according to their experimental group. As previously mentioned, the coach/experimenter remained blind to which colour related to which condition, not only throughout the experimental sessions, but also during the coding of data. Participants were explicitly informed that they were not to remove their bib until told they could do so by the confederate research assistant. Once assigned to their conditions, participants were required to complete the baseline ability tests. Two research assistants (also blind to the experimental conditions) were present at each of the test stations not only to ensure that the tests were conducted and scored correctly, but also so that more than one athlete could be assessed simultaneously. The scoring sheet used for the ability tests can be seen in Appendices 4.8. An equal number of participants from each experimental group started at the same test station to rule out the potential for order effects. The baseline tests for all participants were completed within approximately 45 minutes.

Following the completion of the baseline ability tests, participants were led out to the training area to complete a brief warm-up, during which they received the reputation information about the visiting coach. The warm-up was conducted in three separate groups according to experimental condition. Each group (led by a research assistant) warmed-up in a cone-marked grid (10m x 15m), with each grid separated by at least 20m. As a result of initial pilot testing, this was considered ample distance to ensure that participants could not overhear conflicting reputation information. Once all three groups had been given the reputation information and completed the warm-up, the coach arrived and called the participants over to the horseshoe area for the first time, thus marking the start of the coaching session. The coach (i.e., the author) was 28 years old, had a total of five years experience of coaching amateur football, and had completed all four of the Football Association of Wales (FAW) Foundation Coaching Awards (i.e., Football Leader's Award; Goalkeepers' Award; Emergency Aid Award; Child Protection Award).

The session was divided up into two halves, with each half consisting of three football drills designed to improve participants' passing and shooting ability. The drills (see Appendices 4.9 and 4.10) were adapted from the FAW Football Leader's Resource Guide. Before each drill, the coach provided a brief verbal summary and demonstration in terms of what the specific drill would entail. Each verbal summary, which was delivered to athletes when gathered around the horseshoe area, served as a way of recapping on the previous drills (where applicable), describing the content and relevance of the upcoming drill, and provided an opportunity to observe the specific behaviours exhibited by the athletes when directly addressed by the coach. While athletes' gaze behaviour was recorded during each of the eight verbal summaries, only five provided the athletes with the opportunity to volunteer for participation in a coaching demonstration. These opportunities consisted of the coach explicitly asking for volunteers to help him demonstrate the next activity. Athletes were asked to clearly raise their hand if they were willing to participate in the demonstration. The coach ensured that all athletes were given plenty of opportunity to volunteer by leaving a pause of a few seconds between asking the question and selecting the athletes. The coach also made sure (where possible) that the same athletes were not used for more than one demonstration. Table 6.2 provides further details regarding the order, duration, and content of each of the verbal summaries that were delivered by the coach (eight in total).

Order	Duration (secs)	Content
1	169.32 (10.09)	Introductions; overview of session and key instructions; summary of passing drill #1; opportunity to volunteer #1
2	61.26 (1.53)	Recap of passing drill #1; summary of passing drill #2; opportunity to volunteer #2
3	59.82 (6.38)	Recap of passing drill #2; summary of passing drill #3; opportunity to volunteer #3
4	77.58 (4.37)	Recap of passing drills #1 to #3
		----- 15 MINUTE BREAK -----
5	72.57 (0.43)	Welcome back; summary of shooting drill #1; opportunity to volunteer #4
6	98.87 (7.62)	Recap of shooting drill #1; summary of shooting drill #2; opportunity to volunteer #5
7	77.84 (18.84)	Recap of shooting drill #2; summary of small-sided game exercise (i.e., "free practice" period)
8	84.40 (1.94)	Recap of entire session; comments invited; thank participants and direct them to sports hall for post-session ability tests
Overall	**701.65 (5.64)**	

Note. Duration of each verbal summary is the mean duration across all three coaching sessions. Standard deviations shown in parentheses.

Table 6.2. Order, mean duration, and content of verbal summaries.

The end of the two-hour coaching session was marked by the completion of the final verbal summary. At this point, the coach thanked the athletes for their participation before leaving. The confederate research assistant then led the participants back to the indoor basketball court for the post-session ability tests, which followed the same protocol as the baseline measures and took around 45 minutes to complete. Once all participants had been through the two post-session tests, they were each presented with the session evaluation form and asked to complete it. The coach then returned to fully debrief the participants and thank them again for their participation. The study was carried out in line with University of Chichester's ethics procedures.

Data Analysis

In order to assess the items included in the session evaluation form for multicollinearity, Pearson product-moment correlations were conducted. Multicollinearity (i.e., an indication that two dependent variables are measuring the same construct) was assumed for correlations greater than .80 (Stevens, 1996). In the event of multicollinearity, the two dependent variables would be combined to form a single variable, again following the recommendation of Stevens (1996). A series of one way univariate analyses of variance (ANOVA) were performed to examine changes in athletes' technical ability; athletes' behavioural responses during verbal summaries; and athletes' behavioural responses during free practice. A one way multivariate analysis of variance (MANOVA) and follow-up ANOVA were performed on data obtained from the session evaluation form. Eta squared (η^2) effect sizes were also computed. In line with the recommendations of Clark-Carter (1997), effect sizes of between .001 and .058 were classified as small, effect sizes of between .059 and .137 classified as medium, and effect sizes of .138 and over were classified as large. Where the follow-up ANOVA was significant, post-hoc Tukey HSD tests were conducted to identify the exact nature of the significant differences between experimental conditions. In addition, responses to the manipulation check question were examined to ensure that participants were able to accurately recall the reputation information they had been provided with.

RESULTS

Manipulation Check

Examination of athletes' responses to the manipulation check question revealed that all participants were able to accurately recall the reputation information that had been conveyed to them during the pre-session warm-up. Thus, data for all participants were included in the subsequent analyses.

Effect of Reputation on Indicators of Athletes' Attention to Coach Instruction

A series of one way ANOVAs were conducted to see whether there were any significant between-group differences in the levels of attention to coach instruction exhibited by athletes during the verbal summaries that were delivered throughout the coaching session. Mean values are displayed in Table 6.3.

Gaze to/away from coach.

Athletes' total time spent gazing toward or away from the coach was calculated as a percentage of the total duration of the verbal summary (VS). Consequently, a significant result for one measure will be matched by a significant result in relation to the other. Thus, the figures reported here relate to results for between-group differences in both gaze toward the coach and gaze away from the coach. Data analysis following the combination of data obtained during all VSs revealed a significant between-group difference in athletes' overall gaze to/away from the coach ($F = 9.28, p = .001, \eta^2 = .37$, observed power = 0.97). A post-hoc Tukey HSD test revealed that athletes in the experienced reputation condition gazed toward the coach significantly more/gazed away from the coach significantly less than did athletes in the inexperienced condition ($p < .001$). In addition, the analyses revealed that athletes in the experienced reputation condition exhibited significantly greater levels of gaze toward the coach and significantly less gaze away from the coach than athletes within the no reputation condition ($p < .05$). No significant differences in gaze to/away from the coach were found between the inexperienced reputation coach and the no reputation coach.

	Reputation Condition				
Dependent Variable	**Experienced** ($n = 11$)	**Inexperienced** ($n = 12$)	**No Reputation** ($n = 12$)	***F***	***p***
Gaze To Coach (%)	43.62 (9.91)[a]	26.68 (11.24)[b]	32.46 (7.02)[b]	9.28	.001
Gaze Away From Coach (%)	56.38 (9.91)[a]	73.32 (11.24)[b]	67.54 (7.02)[b]	9.28	.001
Fixation Frequency	14.95 (3.10)[a]	12.00 (3.01)[b]	15.02 (2.32)[a]	4.42	.02
WTP (%)	18.18 (18.88)	33.33 (31.14)	25.00 (21.11)	1.11	.34

Note. Standard deviations are in parentheses. Values not sharing a common letter are significantly different.

Table 6.3. Mean values and standard deviations for athletes' gaze towards/away from the coach, fixation frequency, and willingness to participate in demonstrations (WTP) as exhibited during the coach's delivery of verbal summaries.

Fixation frequency.

Data analysis following the combination of data obtained during all VSs revealed a significant between-group difference in athletes' overall fixation frequency ($F = 4.42$, $p = .02$, $\eta^2 = .28$, observed power = 0.72). The post-hoc Tukey HSD test revealed that athletes in the experienced reputation condition exhibited significantly greater fixation frequency than did athletes in the inexperienced condition ($p < .05$). Moreover, athletes in the inexperienced reputation condition displayed significantly less fixation frequency than athletes in the no reputation condition ($p < .05$). There was no significant difference between the experienced reputation and no reputation conditions.

<u>Effect of Reputation on Athletes' Willingness to Participate in Demonstrations</u>

Analyses of the data obtained during the eight VSs regarding athletes' willingness to participate in demonstrations failed to yield any significant between-group differences ($F = 1.11, p = .34$, $\eta^2 = .07$, observed power = 0.23). Again, mean values are displayed in Table 6.3.

Effect of Reputation on Athletes' Effort and Persistence

A series of one way ANOVAs were conducted in order to identify any significant between-group differences in the behaviours exhibited by athletes during the "free practice" period. Mean values are displayed in Table 6.4. Significant main effects were found for the following behaviours: walking to retrieve the ball from out of play ($F = 4.92, p = .018, \eta^2 = .40$, observed power = 0.75) and total tackles/blocks made ($F = 3.50, p < .05, \eta^2 = .25$, observed power = 0.59). In addition, since the results were approaching significance for total time standing still ($F = 3.27, p = .058, \eta^2 = .24$, observed power = 0.56), post-hoc tests for data related to this measure were conducted.

	Reputation Condition				
Dependent Variable	**Experienced** ($n = 8$)*	**Inexperienced** ($n = 9$)*	**No Reputation** ($n = 7$)*	*F*	*p*
Total Shots	1.75 (1.28)	1.44 (1.42)	0.71 (0.95)	1.33	.29
Total Passes	4.25 (2.05)	4.56 (2.07)	4.43 (5.09)	.019	.98
Total Tackles/Blocks	4.13 (2.17)[a]	1.67 (1.50)[b]	2.14 (2.34)	3.50	.05
Total Time Running (%)	13.81 (6.46)	13.23 (9.17)	14.33 (11.71)	.028	.97
Total Time Walking (%)	47.77 (8.94)	38.39 (7.02)	41.63 (9.92)	2.58	.10
Total Time Standing Still (%)	6.20 (4.36)[a]	16.63 (10.88)[b]	11.73 (8.18)	3.27	.06
Ran to Retrieve Ball (%)	8.06 (7.96)	3.21 (7.46)	4.76 (7.42)	.88	.43
Walked to Retrieve Ball (%)	6.95 (4.96)[a]	1.98 (4.07)[b]	0.95 (2.52)[b]	4.92	.02
Did Not Retrieve Ball (%)	85.00 (10.20)	94.81 (7.62)	94.28 (9.76)	2.92	.08

Note. Standard deviations are in parentheses. Values not sharing a common letter are significantly different. * Participants who spent time in goal during the free practice period were excluded from the analysis in order to guard against the possible effects of a recovery period on measures of effort.

Table 6.4. Mean scores and standard deviations for athletes' behaviours exhibited during the "free practice" period.

Post-hoc Tukey HSD tests revealed that athletes in the experienced reputation condition made significantly more tackles/blocks ($p < .05$), spent significantly less time standing still ($p < .05$), and walked to retrieve the ball from out of play on significantly more occasions ($p < .05$) compared to athletes within the inexperienced reputation condition. In addition, the analysis revealed that athletes walked to retrieve the ball from out of play significantly more if they were in the experienced reputation condition as opposed to the no reputation condition ($p < .05$). No other significant differences were found regarding the data obtained from the "free practice" period.

Effect of Reputation on Athletes' Technical Ability

One way ANOVAs were conducted to identify any significant between-group differences in the extent to which athletes showed improvement on post-session measures of technical ability when compared with baseline measures obtained prior to the coaching session. Mean values are shown in Table 6.5. The analyses did not reveal any significant main effects as a function of reputation (passing improvement: $F = 1.09, p = .35, \eta^2 = .06$, observed power = 0.22; shooting improvement: $F = 0.39, p = .68, \eta^2 = .02$, observed power = 0.11).

		Reputation Condition		
Dependent Variable		**Experienced** ($n = 11$)	**Inexperienced** ($n = 12$)	**No Reputation** ($n = 12$)
Passing	**Pre-Session Mean Score**	158.82 (31.98)	164.00 (16.94)	152.92 (37.13)
	Post-Session Mean Score	168.45 (31.84)	186.83 (28.99)	161.17 (46.45)
	Improvement (%)	6.93 (11.75)	14.50 (17.69)	5.45 (17.65)
Shooting	**Pre-Session Mean Score**	4.55 (3.47)	5.67 (2.02)	6.75 (4.20)
	Post-Session Mean Score	5.45 (3.72)	6.58 (4.50)	5.92 (3.68)
	Improvement (%)	43.24 (90.01)	67.37 (185.49)	-19.52 (98.51)

Table 6.5. Mean scores, standard deviations, and athletes' percentage improvement in relation to pre- and post-session ability tests

Effect of Reputation on Athletes' Affective Responses

Analysis of Pearson product-moment correlations revealed that no relationships exceeded Stevens' (1996) multicollinearity criterion value of .80. As a result, all items were included in the subsequent analyses. Since Box's M test indicated significant differences in the covariance matrices of the dependent variables ($p < .05$), Pillai's Trace was used as the criterion value in the analyses that followed. Mean scores and standard deviations for all analyses are displayed in Table 6.6. A one way MANOVA was conducted to see whether there were any significant differences in athletes' affective response (i.e., enjoyment of the coaching session) between the three experimental conditions. No significant differences were found as a function of reputation ($F = 0.29, p = .88, \eta^2 = .02$, observed power = 0.11).

	Reputation Condition		
Dependent Variable	**Experienced** ($n = 11$)	**Inexperienced** ($n = 12$)	**No Reputation** ($n = 12$)
Enjoyment	52.82 (6.13)	49.33 (8.98)	50.33 (8.31)
Intention to Participate in Future	5.64 (1.80)	5.42 (0.90)	5.50 (0.80)

Table 6.6. Mean ratings and standard deviations obtained from the Session Evaluation Form.

DISCUSSION

The primary aim of the present study was to examine the effect of reputation information on the behavioural responses of athletes towards a coach. The reported findings reveal that reputation-based expectancies have the potential to influence athletes' behavioural responses to coaches within a field-based setting. The findings also reinforce the implications from studies one, two, and three: awareness of the way in which athletes process available information when forming expectancies of coaches may help coaching staff to harness and/or prevent some of the potential effects that have been demonstrated within this investigation.

Hypothesis 10 predicted that athletes would exhibit significantly greater levels of attention in response to a coach who was described as experienced rather than inexperienced. The results for all data obtained during the verbal summaries revealed significant differences for all three measures of athletes' gaze behaviour (i.e., gaze to the coach; gaze away from the coach; fixation frequency). According to results for these three indicators of athlete attention, the participants in the experienced reputation condition attended to the coach's verbal summaries significantly more than those athletes in the inexperienced reputation condition. Thus, with regard to athletes' attention in response to the coach's verbal summaries, hypothesis 10 was supported.

The results obtained for overall values of gaze to the coach and gaze away from the coach revealed that participants in the no reputation condition paid less attention to the verbal summaries of the coach than did athletes in the experienced reputation condition. In contrast, there were no significant differences between the inexperienced reputation and no reputation groups regarding athletes' gaze to the coach and gaze away from the coach during verbal summaries. Such results appear to run counter to the implication (e.g., Darley & Fazio, 1980; Fiske & Taylor, 1991; Jones, 1986) that negative expectancy effects are more potent than expectancy effects based on positive information. In fact, the results seem to be in line with more recent literature (e.g., Jussim & Harber, 2005; Madon et al., 1997), where results have been reported to suggest that positive expectancy effects are more powerful than negative ones. Consequently, the present findings suggest that in terms of maximising athletes' attention to instruction, coaches should concentrate on trying to harness the beneficial aspects of expectancies by placing emphasis on positive informational cues.

The results related to fixation frequency indicated that athletes who believed the coach was inexperienced paid significantly less attention to the coach during the delivery of verbal summaries compared with athletes who received no reputation information. It is also worth noting that, although not significant, athletes in the no reputation condition displayed greater fixation frequency than those in the experienced reputation condition. According to Poole and Ball (2006), the level of attention given to a particular object is represented by the number of fixations on that object. However, Poole and Ball also suggest that fixation frequency is indicative of the amount of processing or encoding of information that is taking place in respect of the object in question. In line with previous literature (e.g., Fiske & Taylor, 1991), the absence of reputation information may have led athletes in the no reputation condition to engage in a data-driven search strategy in order to collect relevant information on which to base their expectancies of the coach. Implementation of such a strategy would have resulted in a high level of information processing and encoding, and could explain why these athletes displayed greater fixation frequency compared with those in the experienced and inexperienced reputation conditions.

Hypothesis 11 predicted that the reputation of the coach would influence athletes' willingness to participate in coaching activities (i.e., demonstrations). Specifically, participants in the experienced reputation condition were expected to show significantly greater willingness to participate in demonstrations than athletes in the inexperienced reputation condition. Athletes' willingness to participate in demonstrations was measured by recording the percentage of time athletes volunteered to help the coach when given the opportunity. The overall results showed no significant differences between any of the three experimental conditions, meaning that hypothesis 11 was not supported. However, the data obtained suggested a trend that was counter to the original hypothesis. Although not significant, athletes in the inexperienced reputation condition showed greater willingness to participate in demonstrations than those in the other two experimental conditions. Moreover, athletes who thought the coach was experienced volunteered less than those who received no reputation information in relation to the coach.

Although in the opposite direction to that which was predicted, the results reported in relation to athletes' willingness to participate in demonstrations could still be a reflection of the impact of coach reputation on athlete behaviour. For example, it is possible that athletes faced with a reportedly experienced coach who has worked with highly skilled players would be more reluctant to volunteer for involvement in demonstrations for fear of humiliation or not being able to meet the standard that the coach would be used to. This is in line with Towler and Dipboye's (2006) suggestion that when instructed by a highly competent trainer, individuals may feel intimidated resulting in lower self-efficacy and decrements in performance. In turn, it could be argued that a fairly inexperienced coach is unlikely to elicit the same level of self-presentational anxiety in athletes, leading to greater willingness to participate in demonstrations. It is also possible that the high frequency with which athletes in the inexperienced reputation condition volunteered to help with demonstrations was motivated by a desire to get involved in doing something active rather than standing around listening to someone whose reputation implied that they were not really worth listening to. Given the lack of any significant findings regarding athletes' voluntary behaviour as a function of coach reputation, the above are suggested as tentative explanations for the results obtained in the present study. Similar research conducted over a longer timeframe and involving a greater number of participants is warranted to obtain a clear understanding of the extent to which athletes' expectancies and subsequent actions (e.g., willingness to volunteer for/engage in coaching demonstrations) is influenced by the reputation of the coach.

Hypothesis 12 stated that athletes' effort and persistence during the "free practice" period would be greater when the coach was described as experienced as opposed to inexperienced. Of the nine behavioural indicators of athlete effort and persistence, three showed a significant difference in the hypothesised direction. Athletes in the experienced reputation made more tackles/blocks, spent less time standing still, and walked to retrieve the ball from out of play on more occasions compared with participants in the inexperienced reputation condition. Moreover, with the exception of total passes made, all behavioural measures recorded during the "free practice" period were in the hypothesised direction. These results suggest that athletes in the experienced reputation condition exerted more effort and showed greater persistence during "free practice" than did athletes who were told that the coach was inexperienced. In addition, athletes coached by a reportedly experienced coach exhibited significantly greater desire to continue with "free practice" than participants in the no reputation condition, as indicated by the percentage of time athletes walked to retrieve the ball from out of play. As with the findings related to athletes' attentive gaze behaviour, these results add further credence to the suggestion (e.g., Jussim & Harber, 2005; Madon et al., 1997) that positive expectancy effects are more powerful than expectancy effects elicited by negative information.

Hypothesis 13 stated that the extent to which athletes showed improvement in their technical ability following the coaching session would be determined by the experimental condition to which they were assigned. Specifically, participants in the experienced reputation condition were expected to show significantly greater technical improvement than athletes in the inexperienced reputation condition. Mean scores and percentage improvement in athletes' passing and shooting ability showed no significant differences between the three experimental conditions. Thus, hypothesis 13 was not supported. The lack of significant findings in relation to hypothesis 13 may be due to a couple of factors. First, given the short duration of the single coaching session that participants were exposed to, it may simply be the case that athletes in all experimental conditions did not have an adequate amount of time to practice the skills that were intended to elicit improvements in technical ability. Hence, it is important that future research attempts to examine the effect of coach reputation on improvements in technical ability over an extended period. An alternative explanation is that the environment in which the tests of technical ability were conducted impacted on the results. Since participants were required to complete the pre- and post-session ability tests whilst in the presence of the other athletes (for practical reasons), it could be argued that participants' self-presentation concerns may have impacted on their performance of the ability tests. For example, previous literature (e.g., Leary, 1992) has demonstrated that anxiety related to self-presentational concerns (e.g., worry that performance on a task will be evaluated by others) can cause inferior athletic performance. It is possible, therefore, that social influences on performance may have had an effect on the results obtained from the tests of passing and shooting ability. It is important that future research examining the impact of reputation-based expectancies on technical improvement accounts for confounding variables such as the presence of others.

A secondary aim of the present study was to examine athletes' affective responses to the coach within a field-based setting. According to hypothesis 14, athletes' affective responses to the coaching session, as indicated by the Session Evaluation Form, would be influenced by the reputation of the coach. Participants in the experienced reputation condition were expected to provide significantly higher ratings than athletes in the inexperienced reputation condition. However, athletes' mean ratings of enjoyment showed no significant differences between the experimental groups. As a result, hypothesis 14 was not supported.

At this point, it is worth highlighting a limitation of the study as a whole. Due to some essential practical considerations (e.g., the need to capture clear video footage of athletes' eye movements, time required to get all participants through the pre- and post-session ability tests), the experiment was limited to the examination of athletes' behavioural and affective responses over the course of a single coaching session. It is reasonable to assume that the measures of technical ability and affective response would have been more likely to provide results in line with the original hypotheses had they been recorded over the course of a greater number of sessions. By conducting the experiment over a longer duration (e.g., a 10-week programme), athletes and the coach would have experienced higher levels of interpersonal contact with each other. As mentioned in study three, greater likelihood of future interactions is associated with greater likelihood of the occurrence of expectancy effects (Snyder & Stukas, 1999). Thus, athletes' responses may have been influenced by their knowledge that their interaction with the coach was part of a one-off event that they were unlikely to experience again. A worthy avenue for future research, therefore, would be to conduct a similar investigation over the course of multiple coaching sessions.

A further limitation of the present study is related to the measures of athlete attention employed (i.e., gaze to/away from the coach, fixation frequency). Fleming, Robson, and Smith (2005) highlighted that athletes may adhere to a range of learning styles or preferences (i.e., visual, auditory, reading/writing, kinaesthetic) that can impact on the degree to which athletes attend to and encode information presented by the coach. For example, while one athlete may respond best to pictures, mental images, or visual stimuli (i.e., a visual learner), another athlete may be more likely to engage with and attend to verbal stimuli at the expense concentrating on visual cues (i.e., an auditory learner). By examining athletes' gaze behaviour as the sole measure of athletes' attention to coach instruction, the study does not account for the possibility of different learning styles/preferences between participants, which may have impacted on the reported findings. However, from a practical coaching and research perspective, the difficulty in controlling for individual differences in learning styles has been proposed to be at best problematic and time-consuming, at worst unrealistic (Morgan, 2007). However, a fruitful avenue for future research in this area would be to develop a more robust measure of athlete attention to coach instruction, particularly one that represents the variety of attentional modalities available (e.g., visual, auditory, reading/writing, kinaesthetic).

Study four has provided additional support to that offered by studies one, two, and three. It offers further evidence to suggest that athletes' expectancies are shaped by information that is conveyed via third-party reports (e.g., reputation). Furthermore, the results of the present study reveal that expectancies have the potential to influence athletes' behavioural responses to a coach within a field-based setting. Such findings make a unique and valuable contribution to the existing literature on expectancy effects within sport, and show consensus with Olson et al.'s (1996) model of expectancy processes. The results have implications for coaches, suggesting that athletes' expectancies may influence athletes' behaviour and attention to coach instruction. Such effects could impact on the performance of the coach, the performance of the athlete, and the quality of the coach-athlete relationship. However, given that this is the first study of its kind to examine the behavioural effects of athletes' reputation-based expectancies of a coach, further investigation along this avenue of research is required. The next step for research in this area is to examine the extent to which expectancies based on reputation influence behavioural responses over long-term coach-athlete interaction. Investigations similar to that of the present study should be conducted over a more extensive period of time (e.g., several weeks, months) in order to further increase the ecological validity of the findings and the extent to which they may be used to inform the practice of coaches, athletes, and other professionals involved in sport.

CHAPTER 7

GENERAL DISCUSSION AND CONCLUSIONS

The aim of this thesis was to examine the impact of athletes' expectancies on their evaluations of and responses to coaches. Olson et al. (1996), among others (e.g., Argyle, 1994; Cook, 1971; Horn et al., 2001; Jussim, 1993), proposed that a perceiver's attention to specific sources of information will determine the type of expectancy that is created. Olson et al. also suggested that perceivers' expectancies of targets have the power to influence the cognitive, affective, and behavioural consequences of interpersonal interaction. Expectancy effect research, which has been conducted primarily within educational settings, has demonstrated that expectancies can determine the nature and outcome of subsequent social interactions (e.g., Rist, 1970; Snyder et al., 1977; Wild et al., 1992). In addition, initial research in sport has shown that expectancies can also impact on coach-athlete relations (e.g., Rejeski et al., 1979; Solomon, Golden, et al., 1998; Wilson et al., 2006). Despite this initial examination of expectancy effects within the coach-athlete relationship, no research in this area had previously investigated expectancy effects from the perspective of the athlete. Thus, the specific aims of this thesis were to identify the informational cues that athletes deem influential when forming initial expectancies of coaches, the impact of these sources of information on the subsequent expectancies that athletes form, and the extent to which these expectancies determine athletes' responses (i.e., cognitive, affective, and behavioural) towards the coach.

SUMMARY OF FINDINGS

The initial finding of the research presented in this thesis is that the sources of information deemed by athletes to be influential when forming initial expectancies of a coach can be classified according to three main categories: static cues (e.g., gender, race/ethnicity), dynamic cues (e.g., body language, facial expressions), and third-party reports (e.g., reputation, qualifications). The distinction between static and dynamic cues fits with the literature found within social and sport psychology (Cook, 1971; Horn et al., 2001; Jussim, 1993), while the identification of third-party reports as a category of information in its own right supports the view of Olson et al. (1996), whose model of expectancy processes states that expectancies are often formed using the information gleaned from other people.

Participants in studies one and two showed a preference for third-party reports (i.e., reputation) over static cues (i.e., gender) as a source of information on which to base their expectancies of coaches. The significant main effects for coach reputation (study two $\eta^2 = 0.43$) and coach gender (study two $\eta^2 = 0.04$) on athletes' expectancies of coaching competency support previous findings (e.g., Brackenridge, 1991; Findlay & Ste-Marie, 2004) indicating the impact of such cues on expectancies in sport. However, the larger effect size for reputation, accompanied by the fact that gender was only shown to effect expectancies related to two of the four elements of coaching competency (study two) imply that reputation information exerts more power over athletes' expectancies than does knowledge of coaches' gender. In addition, given that coach gender was only shown to impact on athletes' ratings of game-strategy and technique competency, the findings of study two indicate that the previously reported male-oriented perception of sports such as soccer (e.g., Csizma et al., 1988; Koivula, 1995) may extend to other team sports. The results of studies one and two also demonstrated that athletes' expectancies of coaches are formed in similar ways regardless of differences in athletes' gender, sport type, and level of participation.

Study three demonstrated that athletes' cognition in terms of their evaluation of a coach's game strategy competency ($\eta^2 = 0.14$) and teaching competency ($\eta^2 = 0.15$) was strongly influenced by reputation information. This is in agreement with previous research conducted by Findlay and Ste-Marie (2004) and Jones et al. (2002). In addition, it supports Olson et al.'s (1996) model of expectancy processes, which states that expectancies can have certain cognitive consequences on interpersonal interaction. It was suggested that the lack of significant findings in relation to character-building competency may be an artefact of the discrepancy between the athlete group depicted in the video stimuli (i.e., children aged 10-12 years old) and the population sample recruited as participants (mainly University athletes; mean age = 18.51, SD = 4.67). Study three also provided support for Olson et al.'s contention that expectancies may impact on the affective responses of the perceiver toward the target. Within this study, reputation of the coach was shown to influence athletes' ratings of positive affect ($\eta^2 = 0.08$). However, similar affective consequences were not observed in study four, where coach reputation did not appear to influence athletes' affective responses (as assessed using the Session Evaluation Form).

Finally, study four demonstrated that within a field-based setting, coach reputation significantly influenced specific athlete behaviours. Significant main effects for athletes' gaze behaviour (i.e., gaze to/away from coach: $\eta^2 = 0.37$; fixation frequency: $\eta^2 = 0.28$) revealed that coach reputation had a large influence on indicators of athlete attention. Moreover, significant main effects for data obtained during the "free practice" period showed that the reputation of the coach impacted on behaviours indicative of motivation (i.e., walking to retrieve the ball from out of play: $\eta^2 = 0.40$) and effort (i.e., total number of tackles/blocks: $\eta^2 = 0.25$). Again, these findings are consistent with Olson et al.'s model of expectancy processes, which holds that behavioural consequences may occur as a result of expectancies that are formed during interpersonal interaction.

The results of the four studies described in the thesis are important, as no other sport-specific research has examined the nature and impact of athletes' expectancies on their expectancies, evaluations, and responses to coaches. Hence, the research and subsequent findings provide a novel contribution to the literature, and identify an important yet neglected area that is ripe for investigation regarding the nature of expectancy effects in sport.

LIMITATIONS AND FUTURE DIRECTIONS

Examination of the impact of initial expectancies over the course of long-term coach-athlete relationships is something that future research should focus on. Such investigation would make a valuable contribution to the expectancy effect literature. Within this thesis, participants were exposed to single, short-term bouts of indirect (i.e., viewing photos/video footage of the coach) and direct (i.e., two-hour coaching session) interaction with the coach. If the present investigation has one distinct limitation, it is the fact that it did not examine coach-athlete interactions over a longer timescale. Like many interpersonal relationships, the bond between coach and athlete is one that is shaped and developed over the course of many interactions (Jowett & Poczwardowski, 2007; Snyder & Stukas, 1999). Thus, studies conducted over a longer time period would provide an opportunity to examine the extent to which expectancy effects that occur within naturalistic coach-athlete relationships accumulate, dissipate, or remain stable. According to Jussim and Harber (2005), previous research findings suggest that expectancy effects such as self-fulfilling prophecies do not accumulate over time. In fact, Jussim and Harber argue that dissipation of such effects is more likely, although this may occur gradually over a prolonged period. In line with the findings from other studies that were conducted over the course of several weeks (e.g., Madon et al., 1997; Trouilloud et al., 2002), it is expected that longer term studies examining the effect of coach reputation on athletes' cognitive, affective, and behavioural responses will reveal a slow dissipation in expectancy effects over time as athletes become more familiar with the target coach. It is hypothesised that this familiarity with the target will lead athletes to form more accurate expectancies of the coach, resulting in a decrease in the discrepancy between the responses of athletes from different experimental conditions. This is in line with Jussim's (1991) Reflection-Construction model, which argues that perceivers' expectancies of targets may be based on valid background information provided such information is available (e.g., following multiple episodes of social interaction between perceiver and target). Despite this, it is predicted that the original expectancy will influence athletes' responses over an extended period, although it is difficult to stipulate the exact duration over which the effects of the original expectancies will prevail. In addition, research of this kind would reveal whether the effects of expectancies that were predicted but not observed in the present studies are more readily exhibited within longitudinal experiments.

It is important that the effect of other informational cues on expectancies and their consequences is addressed by future research. The findings of study one outlined a three-factor model of sources of information that may be used by athletes to form expectancies of coaches. However, the research described in this thesis has only examined two of these factors (i.e., third-party reports and static cues). Over 20 years ago, it was proposed (Harris & Rosenthal, 1985) that the role of nonverbal communications in relation to expectancy formation and expectancy effects should be examined in greater detail. However, it is only recently that this avenue of investigation has been reported within the context of sport. For example, athletes' expectancies have been shown to be influenced by nonverbal cues such as body language (Buscombe et al., 2006; Greenlees, Buscombe, et al., 2005). Thus, further research could examine the effect of dynamic, nonverbal cues (e.g., facial expressions, posture, eye contact) on athletes' expectancies and responses to coaches.

The conditions under which expectancy effects are most likely to occur also require further investigation within the context of coach-athlete relations. Jussim (1993; Jussim & Harber, 2005) argued that the strength and nature of expectancy effects is determined by certain characteristics of the perceiver. Thus, it would be pertinent for future research to examine the nature of expectancy effects from the perspective of other athlete populations. The population samples recruited within the present studies consisted of athletes of a similar age and background, all of who were participants in team sports. As a result, the generalisability of the findings is limited to athletes of a similar demography. Future studies involving populations from different backgrounds (e.g., socioeconomic, cultural) and sports (e.g., individual disciplines) should be conducted to test whether the findings from the investigations outlined in this thesis can be extended to other athlete groups. However, it is also possible that within a particular athlete population, there will be a mix of individual characteristics that could impact on the nature of expectancy effects that occur during interpersonal interaction. For example, an individual's need for cognition (i.e., the extent to which the perceiver is motivated to select and process information when making judgments and forming expectancies) has been suggested as a possible moderator of expectancy effects (Cacioppo et al., 1996). Towler and Dipboye (2006) found that individuals who were high in need for cognition were less susceptible to reputation bias than those low in need for cognition. It is feasible, therefore, that individual differences between athletes who participated in the present investigation may have impacted on the findings, whether inflating or diluting the results. With this in mind, it is crucial that future research aims to expand on the present findings by attempting to identify the conditions and participant characteristics that are likely to provoke or prevent the exhibition of expectancy effects in sport.

Another important avenue for future research is the continued examination of the impact of athletes' expectancies of coaches on athletes' cognitive responses. The research described in the thesis demonstrated that expectancies have the ability to affect athletes' evaluation of coaches' ability. However, Olson et al. (1996) suggest that other cognitive functions such as attention and memory may be influenced by the expectancies the perceiver holds of the target. Although study four examined the impact of expectancies on attention through the identification and assessment of several behavioural indicators of athletes' attention to coach instruction, further research is required in order to scrutinise these proposed effects in greater detail. An additional direction for future research would be to further examine athletes' affective responses as a consequence of their expectancies of a coach. The results of studies three and four revealed that athlete expectancies that were based on reputation information had a limited impact on athletes' affective responses toward the coach. However, this may have been reflective of the artificial nature of the way in which athlete affect was assessed (i.e., study three asked for athletes' predicted affect in response to a coach presented on a video, while study four measured affect retrospectively following the completion of a single coaching session) rather than the true extent to which reputation-based expectancies of a coach influence athletes' affective responses during naturalistic coach-athlete interactions. Hence, it is recommended that future research should further examine the nature of athletes' affective responses to coaches as a function of coach reputation.

A point of contention specific to study four is that by striving to conduct a naturalistic study, it was difficult for the researcher to ensure that appropriate levels of control over the experimental conditions were not relinquished. Although specific steps were taken to ensure that the experimental design did not impact negatively on aspects of validity and reliability (e.g., running a pilot study and monitoring video footage to ensure consistency of multiple sessions; conducting inter- and intra-rater reliability checks; making use of existing literature and initial surveys in order to identify appropriate dependent variables), it must be conceded that there is always likely to be a trade-off between the ecological validity of field-based studies and the control that can be wielded in laboratory settings. For instance, it could be argued that the use of video-based stimuli and eye-tracking equipment would have been a more accurate way of monitoring athletes' gaze behaviour in response to coach instruction, as opposed to the notational analysis approach employed within study four. However, it was decided that the value of conducting a field-based experiment to examine the behavioural and affective impacts of reputation-based expectancies was greater than the need for yet another experimental study conducted under highly controlled laboratory settings (e.g., Findlay & Ste-Marie, 2004; Jones et al., 2002; studies two and three of the present thesis). In many ways, the latter approach would have been the easy option, but it was felt that in order to significantly add to the existing literature and advance the knowledge of the impacts of expectancy effects within the coach-athlete relationship, it was important to adopt the former, more novel approach. By doing so, the author concedes that the experimental protocol for study four did not account for certain variables (e.g., individual learning and attentional preferences). Thus, it is important that future research builds on the foundations of this study and attempts to address the issues and imperfections identified.

Finally, the present thesis has reported on the effects of athletes' expectancies of coaches on athletes' own cognitive, affective, and behavioural responses within the coach-athlete relationship. However, a worthy avenue of investigation would be to examine these same responses to athletes' expectancies but from the perspective of the coach. Previous research (e.g., Rejeski et al., 1979; Solomon, Golden, et al., 1998) has documented the impacts of coaches' expectancies of athletes on coach-athlete interactions from the point of view of both members of this relationship. This is yet to be matched where athletes' expectancies of coaches are concerned. Given that the studies within the present investigation have demonstrated the potential for athletes' expectancies of coaches to shape the thoughts, feelings, and observable behaviours of sports performers, it would be interesting to see whether or not a coach's own affect, cognition, and/or behaviour is affected by the athletes' expectancies of them. According to the four-step expectancy cycle (e.g., Becker & Solomon, 2005; Brophy & Good, 1974; Horn et al., 2001; Martinek, 1981; Snyder & Stukas, 1999), it could be hypothesised that athlete behaviour which corresponds to the athlete's initial expectancy of a coach will, in turn, lead the coach in question to behave in line with the expectancy. Findings of such an investigation, which has not been conducted to date, could have important implications for coaching practice and the development of effective strategies in coaching athletes. Hence, research of this nature is lacking and warranted.

IMPLICATIONS

Expectancy effect research in sport is still a fledgling area of investigation. Moreover, the research findings reported in this thesis are the first to examine the effect of athletes' expectancies of coaches, and were obtained using samples of young participants. Thus, any general recommendations for coaches and sport psychologists based on these findings would have to be fairly tentative. Despite this, it is possible to make some provisional suggestions that will hopefully be extended and developed through further investigation in this area. This section aims to identify some key implications related to theory, measurement, and application.

Theoretical implications

In summary, this thesis has justified the use of Olson et al.'s (1996) model of expectancy processes as a theoretical framework that may be applied to the examination of expectancy effects within the coach-athlete relationship. The research has demonstrated that third-party reports such as reputation are a major source of information that athletes use to form expectancies of coaches, and that expectancies based on such cues have the potential to influence the cognitive, affective, and behavioural responses of athletes. Such findings are consistent with previous research conducted in both education (e.g., Towler & Dipboye, 2006; Widmeyer & Loy, 1988) and sport (e.g., Findlay & Ste-Marie, 2004; Jones et al., 2002). Thus, while Olson et al.'s model was initially developed in a retrospective manner through the examination of previous research findings, the present programme of investigation has provided confirmatory evidence for Olson et al.'s contentions in relation to the way in which expectancies are formed and the potential consequences they may have on interpersonal interactions within sport.

There are other theories and frameworks (e.g., social learning theory, self-efficacy theory) in which the impacts of expectancies are limited to behavioural consequences or are framed within specific contexts (e.g., self-expectancies related to performance). In contrast, Olson et al.'s (1996) standpoint is that expectancy is more than a mere component of theories that attempt to explain human behaviour; it represents an important and highly influential stand-alone phenomenon requiring extensive scrutiny and explanation in terms of how it impacts on a range of responses across a myriad of settings. Thus, while the findings of the present thesis support Olson et al.'s model in terms of its relevance to the coach-athlete relationship, the holistic and flexible nature of the model means it would likely be applicable to a variety expectancy types (e.g., interpersonal, impersonal, self-referent) and contexts (e.g., competitive, co-operative). Consequently, the present findings have implications for expectancy-based research in a multitude of contexts, suggesting that Olson et al.'s model of expectancy processes be considered as a theoretical framework appropriate to environments and situations other than interpersonal interaction within sport.

Measurement implications

The results provided within the present thesis highlight some implications related to the application of measurement items within the context of investigating expectancy effects in sport. Specifically, tools employed to measure athletes' affective responses deserve particular mention given the findings outlined in the thesis. In terms of affect, study three employed a global measure of positive and negative affect (i.e., PANAS; Watson, Clark, & Tellegen, 1988), which appeared to be appropriate when considered in relation to an accepted definition of affect (Betsch, 2005) and previous validation of the measurement tool (Crocker, 1997; Crocker & Graham, 1995). However, on reflection, it was conceded that a global measure of affect might not be sufficient for monitoring affective responses within a highly specific interpersonal relationship such as that experienced between coach and athlete. As a result, study four employed a more specific measure of affect designed to assess athletes' enjoyment in response to a coaching session. Again, although the tool was made up of items taken from validated measurement tools, it was conceded that the scale may have been hindered in its ability to identify between-group differences in athletes' affect given the brief exposure to the coaching session and the need for retrospective recall. Thus, the findings have implications for the development of appropriate tools designed to measure athletes' affective responses to coaches. Future researchers should take heed of some of the issues and difficulties identified above in the pursuit of constructing more fitting measures of affect that may be applied within the context of the coach-athlete relationship. This also follows for measurement items related to athlete attention, particularly in field-based settings, where the present findings imply the need for future studies to account for individual variation in attentional preferences (e.g., visual, auditory, kinaesthetic) when evaluating athlete attention to coach instruction.

Applied implications

The findings of the present programme of research have important implications for individuals who work with sports performers. Given that the reputation of the coach appears to be a major source of information on which athletes base their expectancies, people who work with sports performers should be encouraged to harness such informational cues and view them as a potential means of facilitating the development of effective interpersonal relationships. The findings presented in this thesis show that if athletes perceive a coach to have a positive reputation, be it in terms of relative success or experience, then they will see the coach in a more positive light than if they were to perceive the coach to have a reputation for being less successful or inexperienced. Of special note are the findings revealed in study four, where the results suggest that the positive coach reputation had a more powerful effect on athletes' subsequent expectancies and behaviours than did the negative coach reputation. Thus, by placing emphasis on positive elements of reputation (i.e., qualifications/awards obtained, testimonials from others, honours achieved), coaches and sport psychologists may be able to minimise the potential obstacles they face when attempting to develop an effective working relationship with athletes they are meeting for the first time.

In addition, female coaches could use reputation information in order to combat the possibility of negative athlete expectancies that are based on static cues such as gender. Study two provided results in line with previous findings (e.g., Brackenridge, 1991; Kontos, 2003) that suggested athletes view female coaches less favourably than male coaches. However, the results of studies one and two show that athletes view reputation information as more influential than gender during expectancy formation. Thus, by highlighting their successes, qualifications, and achievements to a greater extent, female coaches and sport psychologists may be able to offset the possible negative effects of gender-based athlete expectancies.

CONCLUSIONS

Based on proposals made by expectancy theorists (e.g., Horn et al., 2001; Jussim, 1993; Olson et al., 1996), the findings presented in this thesis are the first to demonstrate the existence of athlete-centred expectancy effects during coach-athlete interaction, and indicate that an athlete's expectancies of a coach may be a significant determinant of the outcomes of interactions between the two parties. Specifically, the findings provide support for Olson et al.'s model of expectancy processes as a theoretical framework for the explanation and further investigation of expectancy effects within the coach athlete relationship. The results of the thesis have shown that athletes perceive third-party reports to have more of an impact on their expectancies of coaches than do static cues (e.g., gender), and that such reputation-based expectancies have the potential to impact on athletes' cognitive, affective, and behavioural responses to a coach. Furthermore, the findings from the present programme of research have highlighted a range of theoretical and applied implications that are important for coaches, athletes, researchers and practitioners, thus identifying expectancy-based research in the context of the coach-athlete relationship as a fruitful avenue of investigation with much scope for further research.

APPENDICES

APPENDIX 1

Study 1 Assessment Instruments and SPSS Output

Appendix 1.1

Athlete Demographic Questionnaire #1

Please fill in your details in the spaces provided.

Full name:____

Age:______ **Gender:** Male/Female (delete as appropriate)

Ethnicity: (Please tick appropriate box) White ☐ Black ☐ Asian ☐

Hispanic ☐ Mixed Race ☐ Other:________________

Nationality:__________________________________

Primary sport:____

Number of years' experience in primary sport:______

Highest level of participation (e.g. Recreational, Club, School, University, Region/County, Country, etc.):______________________

Age during highest level of participation: (Tick appropriate box)

Under 10 years ☐ 10-12 years ☐ 13-15 years ☐ 16-19 years ☐

20-30 years ☐ Over 30 years ☐

Number of years' experience at highest level of participation:

(Tick appropriate box)

Under 6 months ☐ Under 1 year ☐ 1-2 years ☐ 2-5 years ☐

5-10 years ☐ Over 10 years ☐

Appendix 1.2

The Information Sources Scale (ISS)

Directions: Below is a list of cues that may influence an athlete's initial impression of a coach. Thinking about the previous list of factors an athlete may look for in a coach, please complete the sentence highlighted below by filling in each source of information. Please read each sentence carefully and circle the response that reflects how much you attend to each cue when forming an initial impression of a coach.

When forming an initial impression of a coach, ________________ is a major source of information that influences my impressions.

	Very strongly disagree	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree	Very strongly agree
Body Language/Gestures	1	2	3	4	5	6	7
Clarity of Voice	1	2	3	4	5	6	7
Clothing	1	2	3	4	5	6	7
Equipment	1	2	3	4	5	6	7
Race/Ethnicity	1	2	3	4	5	6	7
Nationality	1	2	3	4	5	6	7
Gender	1	2	3	4	5	6	7
Age	1	2	3	4	5	6	7
Reputation	1	2	3	4	5	6	7
Qualifications	1	2	3	4	5	6	7
Coaching Experience	1	2	3	4	5	6	7
Success Rate	1	2	3	4	5	6	7
Playing Experience	1	2	3	4	5	6	7
Physique/Body Type	1	2	3	4	5	6	7
Facial Expressions	1	2	3	4	5	6	7
Hair Style	1	2	3	4	5	6	7
Tone of Voice	1	2	3	4	5	6	7
Attractiveness	1	2	3	4	5	6	7
Skill Level	1	2	3	4	5	6	7
Language (e.g., simple, technical)	1	2	3	4	5	6	7
Eye Contact	1	2	3	4	5	6	7
Posture	1	2	3	4	5	6	7
Odour (body, breath)	1	2	3	4	5	6	7
Accent of Voice	1	2	3	4	5	6	7
Social Status	1	2	3	4	5	6	7
Touching Behaviour	1	2	3	4	5	6	7
Personal Space/Distance	1	2	3	4	5	6	7
Items of Jewellery	1	2	3	4	5	6	7
Wearing of Glasses/Sunglasses	1	2	3	4	5	6	7
Presence/Absence of Assistant	1	2	3	4	5	6	7
Speed of Speech	1	2	3	4	5	6	7

Please give details of any other sources of information not mentioned above that you consider important when forming impressions of a coach:

Appendix 1.3

SPSS Output for Exploratory Factor Analysis on Ratings Obtained Using the ISS

Factor Analysis

Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
BodyLanguageGestures	5.20	1.056	490
ClarityOfVoice	5.43	.948	490
Clothing	4.48	1.330	490
Equipment	5.03	1.199	490
RaceEthnicity	2.487	1.4104	490
GenderOfCoach	2.94	1.617	490
AgeOfCoach	3.26	1.492	490
Reputation	4.89	1.346	490
Qualifications	5.02	1.306	490
CoachingExperience	5.57	1.123	490
SuccessRate	5.32	1.124	490
PlayingExperience	4.91	1.310	490
PhysiqueBodyType	3.73	1.410	490
FacialExpressions	4.13	1.335	490
HairStyle	2.58	1.329	490
ToneOfVoice	4.53	1.385	490
Attractiveness	2.74	1.504	490
SkillLevel	5.14	1.199	490
Language	5.16	1.060	490
EyeContact	5.15	1.154	490
Posture	4.55	1.329	490
Odour	4.19	1.532	490
AccentOfVoice	3.21	1.360	490
SocialStatus	3.24	1.364	490
TouchingBehaviour	3.93	1.335	490
PersonalSpaceDistance	4.27	1.256	490
ItemsOfJewellery	3.02	1.526	490
GlassesSunglasses	2.77	1.329	490
AssistantPresentAbsent	3.79	1.484	490
SpeedOfSpeech	4.51	1.195	490

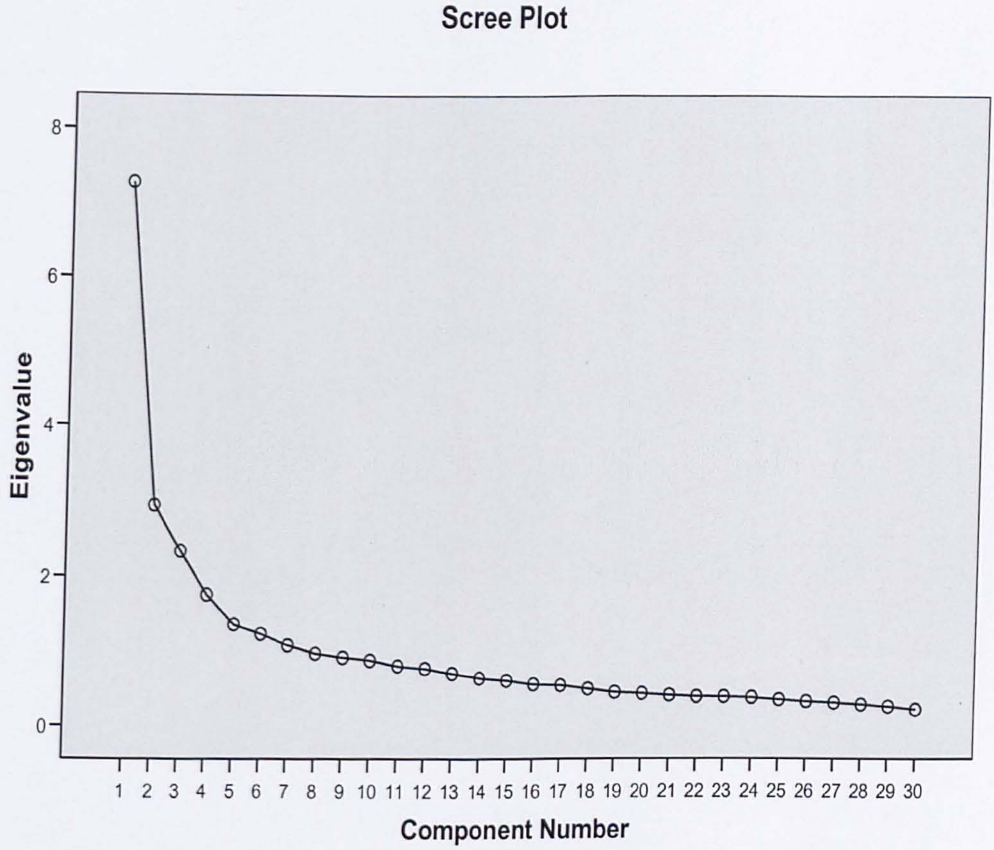
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.851
Bartlett's Test of Sphericity	Approx. Chi-Square	5671.040
	df	435
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.279	24.265	24.265	7.279	24.265	24.265	3.751	12.503	12.503
2	2.939	9.796	34.061	2.939	9.796	34.061	3.130	10.433	22.936
3	2.332	7.774	41.835	2.332	7.774	41.835	2.762	9.205	32.141
4	1.752	5.840	47.675	1.752	5.840	47.675	2.625	8.749	40.890
5	1.359	4.530	52.206	1.359	4.530	52.206	2.041	6.805	47.695
6	1.231	4.103	56.309	1.231	4.103	56.309	2.028	6.760	54.455
7	1.078	3.594	59.903	1.078	3.594	59.903	1.634	5.448	59.903
8	.967	3.224	63.127						
9	.914	3.048	66.175						
10	.875	2.916	69.091						
11	.799	2.665	71.756						
12	.766	2.554	74.310						
13	.701	2.336	76.646						
14	.639	2.129	78.775						
15	.608	2.027	80.802						
16	.558	1.860	82.662						
17	.544	1.814	84.476						
18	.497	1.655	86.132						
19	.448	1.492	87.624						
20	.433	1.442	89.066						
21	.408	1.361	90.427						
22	.390	1.298	91.725						
23	.386	1.288	93.013						
24	.375	1.250	94.263						
25	.347	1.156	95.419						
26	.322	1.074	96.494						
27	.305	1.015	97.509						
28	.280	.934	98.443						
29	.254	.848	99.291						
30	.213	.709	100.000						

Extraction Method: Principal Component Analysis.


Scree Plot
Eigenvalue
8
6
4
2
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Component Number

Rotated Component Matrix

	Component						
	1	2	3	4	5	6	7
BodyLanguageGestu	-.015	.559	.081	.074	-.121	.502	-.050
ClarityOfVoice	-.054	.546	.178	.020	-.135	.484	-.002
Clothing	.191	.196	.052	.058	.143	.783	-.014
Equipment	.033	.058	.186	.087	.123	.733	.258
RaceEthnicity	.803	-.030	.061	.067	.029	.140	.011
GenderOfCoach	.846	.071	.111	-.070	-.095	-.047	.092
AgeOfCoach	.744	.115	.121	-.045	.020	-.060	.178
Reputation	.269	.252	.544	-.012	.142	.044	-.081
Qualifications	.107	.036	.688	.176	.067	.359	.139
CoachingExperience	-.004	.048	.845	.011	.061	.065	.078
SuccessRate	-.030	.072	.797	.000	.088	.046	.057
PlayingExperience	.086	.063	.529	.094	.556	-.078	-.021
PhysiqueBodyType	.369	.253	.114	.114	.534	.104	-.066
FacialExpressions	.139	.661	.097	.210	.111	.115	-.143
HairStyle	.663	.110	-.100	.283	.267	.153	-.115
ToneOfVoice	.162	.664	.099	.161	.005	.078	.071
Attractiveness	.537	.066	.012	.284	.412	.216	-.106
SkillLevel	-.040	.165	.240	.023	.708	.071	.193
Language	.037	.508	.218	.030	.171	-.069	.372
EyeContact	-.007	.690	.059	.097	.172	.022	.169
Posture	.172	.623	-.121	.149	.282	.128	.105
Odour	.118	.187	.018	.597	.228	.133	.161
AccentOfVoice	.560	.179	.015	.351	.281	-.019	.133
SocialStatus	.413	.024	.075	.306	.467	.110	.152
TouchingBehaviour	.019	.118	.078	.799	-.037	-.023	-.017
PersonalSpaceDistan	-.008	.198	.151	.761	.037	.019	.184
ItemsOfJewellery	.313	.086	-.109	.568	.131	.126	.129
GlassesSunglasses	.347	.097	-.167	.304	.249	.187	.400
AssistantPresentAbs	.201	-.049	.108	.123	.083	.103	.714
SpeedOfSpeech	-.071	.366	.059	.241	-.027	.066	.657

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 9 iterations.

Appendix 1.4

SPSS Output for MANOVA Conducted to Examine Differences in Athletes' Ratings as a Function of Gender, Sport Type, and Level of Participation

General Linear Model

Between-Subjects Factors

		Value Label	N
Gender	1	Male	303
	2	Female	168
TeamVsIndiv	1	Team	305
	2	Individual	166
HighestLevel	1	National/ Profession al	84
	2	Regional/ County/ Semi-Pro	211
	3	University/ Club	176

	Gender	TeamVsIndiv	HighestLevel	Mean	Std. Deviation	N
SC	Male	Team	National/Professional	25.76	11.388	21
			Regional/County/Semi-Pro	23.67	7.657	108
			University/Club	22.30	8.213	90
			Total	23.31	8.323	219
		Individual	National/Professional	25.17	10.694	29
			Regional/County/Semi-Pro	20.83	8.611	30
			University/Club	23.00	8.327	25
			Total	22.98	9.374	84
		Total	National/Professional	25.42	10.880	50
			Regional/County/Semi-Pro	23.05	7.929	138
			University/Club	22.45	8.206	115
			Total	23.21	8.613	303
	Female	Team	National/Professional	27.20	8.643	5
			Regional/County/Semi-Pro	20.69	8.191	42
			University/Club	24.00	8.020	39
			Total	22.57	8.281	86
		Individual	National/Professional	20.62	8.170	29
			Regional/County/Semi-Pro	22.23	7.974	31
			University/Club	21.27	6.826	22
			Total	21.40	7.693	82
		Total	National/Professional	21.59	8.443	34
			Regional/County/Semi-Pro	21.34	8.080	73
			University/Club	23.02	7.667	61
			Total	22.00	7.997	168
	Total	Team	National/Professional	26.04	10.772	26
			Regional/County/Semi-Pro	22.83	7.897	150
			University/Club	22.81	8.161	129
			Total	23.10	8.304	305
		Individual	National/Professional	22.90	9.707	58
			Regional/County/Semi-Pro	21.54	8.253	61
			University/Club	22.19	7.629	47
			Total	22.20	8.595	166
		Total	National/Professional	23.87	10.090	84
			Regional/County/Semi-Pro	22.46	8.004	211
			University/Club	22.65	8.006	176
			Total	22.78	8.410	471

DC	Male	Team	National/Professional	36.86	7.364	21
			Regional/County/Semi-Pro	33.95	5.187	108
			University/Club	33.27	5.214	90
			Total	33.95	5.503	219
		Individual	National/Professional	35.00	5.886	29
			Regional/County/Semi-Pro	33.43	6.179	30
			University/Club	34.12	5.380	25
			Total	34.18	5.817	84
		Total	National/Professional	35.78	6.541	50
			Regional/County/Semi-Pro	33.84	5.398	138
			University/Club	33.46	5.239	115
			Total	34.01	5.683	303
	Female	Team	National/Professional	33.60	3.209	5
			Regional/County/Semi-Pro	34.12	5.518	42
			University/Club	33.87	3.570	39
			Total	33.98	4.571	86
		Individual	National/Professional	33.66	6.810	29
			Regional/County/Semi-Pro	36.10	5.793	31
			University/Club	31.23	5.442	22
			Total	33.93	6.320	82
		Total	National/Professional	33.65	6.372	34
			Regional/County/Semi-Pro	34.96	5.682	73
			University/Club	32.92	4.481	61
			Total	33.95	5.478	168
	Total	Team	National/Professional	36.23	6.837	26
			Regional/County/Semi-Pro	34.00	5.264	150
			University/Club	33.46	4.771	129
			Total	33.96	5.250	305
		Individual	National/Professional	34.33	6.346	58
			Regional/County/Semi-Pro	34.79	6.086	61
			University/Club	32.77	5.546	47
			Total	34.05	6.054	166
		Total	National/Professional	34.92	6.520	84
			Regional/County/Semi-Pro	34.23	5.511	211
			University/Club	33.27	4.983	176
			Total	33.99	5.540	471

ThirdParty	Male	Team	National/Professional	26.95	5.305	21
			Regional/County/Semi-Pro	25.76	4.628	108
			University/Club	24.29	5.026	90
			Total	25.17	4.895	219
		Individual	National/Professional	26.55	4.163	29
			Regional/County/Semi-Pro	26.00	4.339	30
			University/Club	25.52	4.094	25
			Total	26.05	4.177	84
		Total	National/Professional	26.30	4.635	50
			Regional/County/Semi-Pro	25.81	4.552	138
			University/Club	24.66	4.840	115
			Total	25.42	4.716	303
	Female	Team	National/Professional	25.20	4.324	5
			Regional/County/Semi-Pro	26.52	3.995	42
			University/Club	26.46	3.597	39
			Total	26.42	3.802	86
		Individual	National/Professional	26.93	4.309	29
			Regional/County/Semi-Pro	26.23	4.326	31
			University/Club	24.50	4.068	22
			Total	26.01	4.310	82
		Total	National/Professional	26.68	4.290	34
			Regional/County/Semi-Pro	26.40	4.112	73
			University/Club	25.75	3.859	61
			Total	26.22	4.051	168
	Total	Team	National/Professional	25.81	5.060	26
			Regional/County/Semi-Pro	25.97	4.460	150
			University/Club	24.95	4.734	129
			Total	25.52	4.641	305
		Individual	National/Professional	26.74	4.203	58
			Regional/County/Semi-Pro	26.11	4.298	61
			University/Club	25.04	4.070	47
			Total	26.03	4.230	166
		Total	National/Professional	26.46	4.476	84
			Regional/County/Semi-Pro	26.01	4.404	211
			University/Club	24.97	4.555	176
			Total	25.70	4.503	471

Box's Test of Equality of Covariance Matrices[a]

Box's M	82.317
F	1.164
df1	66
df2	8550.747
Sig.	.171

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept+Gender+TeamVsIndiv+HighestLevel+Gender * TeamVsIndiv+Gender * HighestLevel+TeamVsIndiv * HighestLevel+Gender * TeamVsIndiv * HighestLevel

Multivariate Tests

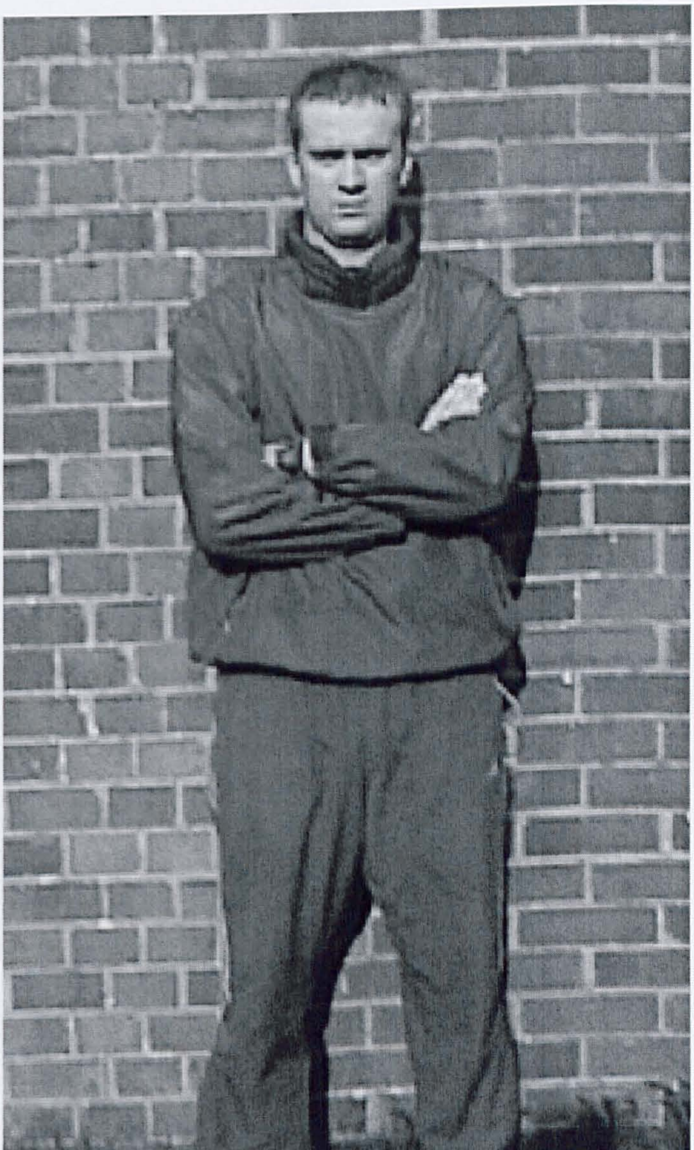
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	Pillai's Trace	.969	4809.223	3.000	457.000	.000	.969	14427.670	1.000
	Wilks' Lambda	.031	4809.223	3.000	457.000	.000	.969	14427.670	1.000
	Hotelling's Trace	31.570	4809.223	3.000	457.000	.000	.969	14427.670	1.000
	Roy's Largest Root	31.570	4809.223	3.000	457.000	.000	.969	14427.670	1.000
Gender	Pillai's Trace	.005	.788	3.000	457.000	.501	.005	2.364	.220
	Wilks' Lambda	.995	.788	3.000	457.000	.501	.005	2.364	.220
	Hotelling's Trace	.005	.788	3.000	457.000	.501	.005	2.364	.220
	Roy's Largest Root	.005	.788	3.000	457.000	.501	.005	2.364	.220
TeamVsIndiv	Pillai's Trace	.009	1.351	3.000	457.000	.257	.009	4.052	.360
	Wilks' Lambda	.991	1.351	3.000	457.000	.257	.009	4.052	.360
	Hotelling's Trace	.009	1.351	3.000	457.000	.257	.009	4.052	.360
	Roy's Largest Root	.009	1.351	3.000	457.000	.257	.009	4.052	.360
HighestLevel	Pillai's Trace	.027	2.097	6.000	916.000	.051	.014	12.581	.758
	Wilks' Lambda	.973	2.094	6.000	914.000	.052	.014	12.564	.758
	Hotelling's Trace	.028	2.091	6.000	912.000	.052	.014	12.547	.757
	Roy's Largest Root	.019	2.838	3.000	458.000	.038	.018	8.513	.680
Gender * TeamVsIndiv	Pillai's Trace	.003	.485	3.000	457.000	.693	.003	1.454	.148
	Wilks' Lambda	.997	.485	3.000	457.000	.693	.003	1.454	.148
	Hotelling's Trace	.003	.485	3.000	457.000	.693	.003	1.454	.148
	Roy's Largest Root	.003	.485	3.000	457.000	.693	.003	1.454	.148
Gender * HighestLevel	Pillai's Trace	.017	1.271	6.000	916.000	.268	.008	7.626	.504
	Wilks' Lambda	.984	1.272	6.000	914.000	.267	.008	7.634	.505
	Hotelling's Trace	.017	1.274	6.000	912.000	.267	.008	7.643	.505
	Roy's Largest Root	.016	2.411	3.000	458.000	.066	.016	7.232	.601
TeamVsIndiv * HighestLevel	Pillai's Trace	.011	.841	6.000	916.000	.538	.005	5.048	.337
	Wilks' Lambda	.989	.840	6.000	914.000	.539	.005	5.039	.336
	Hotelling's Trace	.011	.838	6.000	912.000	.540	.005	5.031	.336
	Roy's Largest Root	.008	1.197	3.000	458.000	.310	.008	3.590	.322
Gender * TeamVsIndiv * HighestLevel	Pillai's Trace	.026	1.974	6.000	916.000	.067	.013	11.847	.728
	Wilks' Lambda	.975	1.971	6.000	914.000	.067	.013	11.825	.727
	Hotelling's Trace	.026	1.967	6.000	912.000	.068	.013	11.803	.726
	Roy's Largest Root	.016	2.433	3.000	458.000	.064	.016	7.299	.606

APPENDIX 2

Study 2 Assessment Instruments and SPSS Output

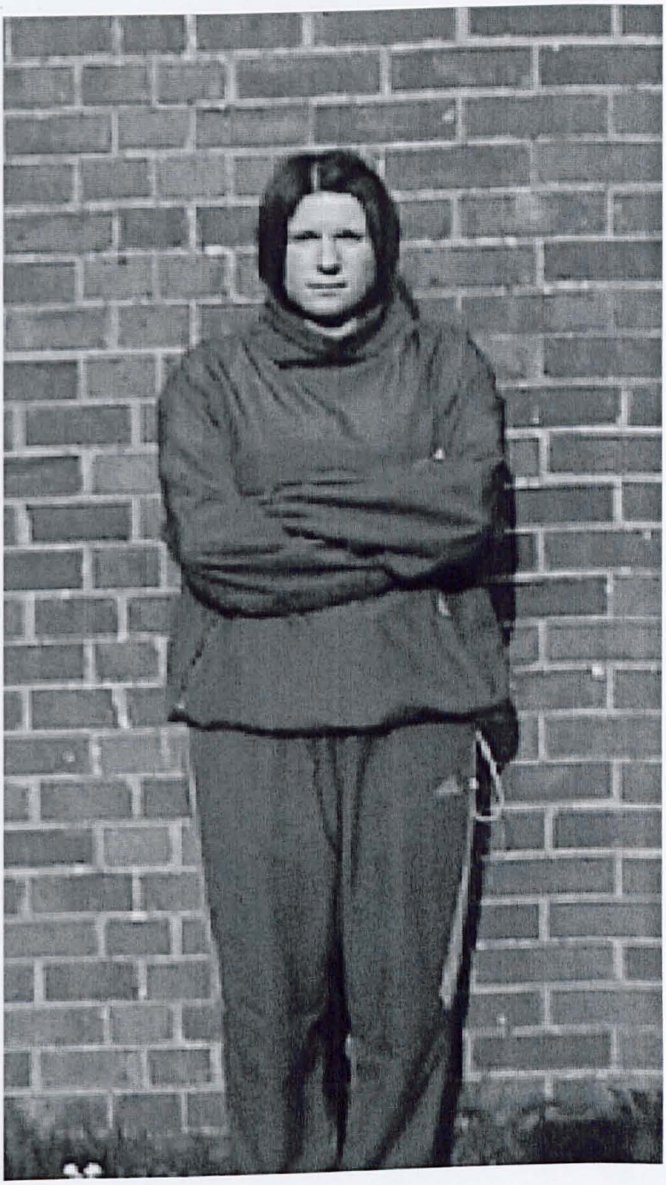
Appendix 2.1

Photograph of Male Experimental Target Coach



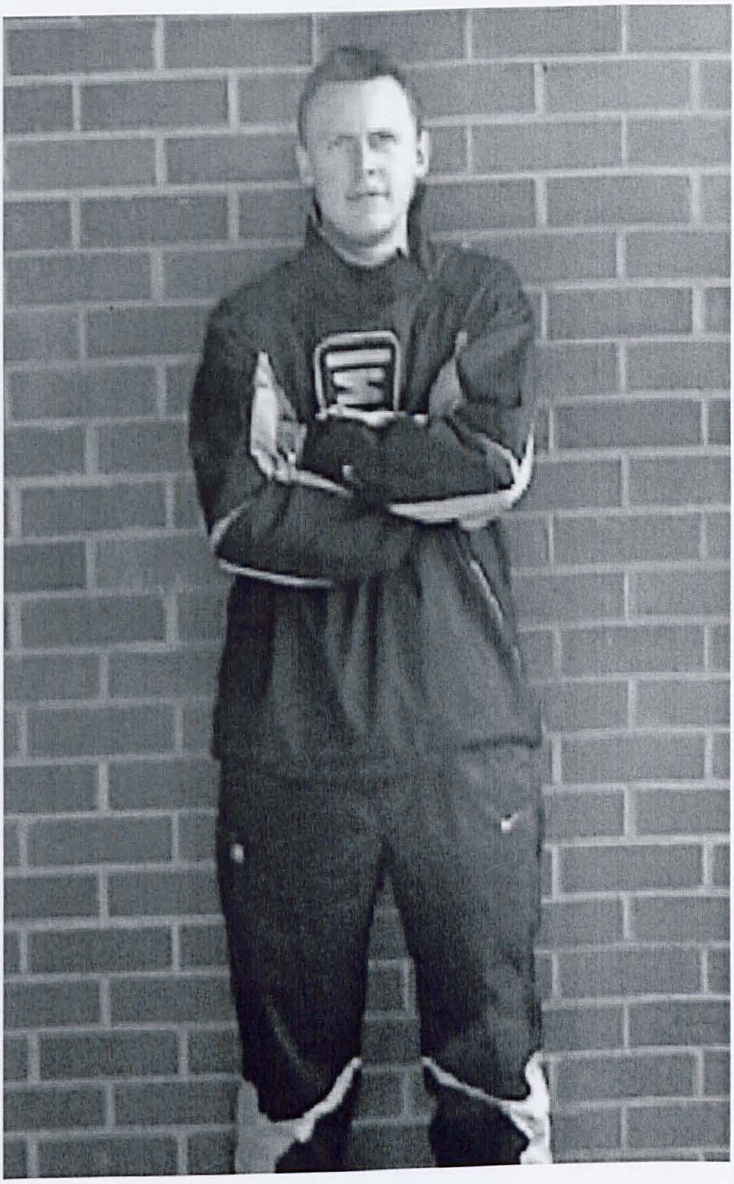
Appendix 2.2

Photograph of Female Experimental Target Coach



Appendix 2.3

Photograph of Control Target Coach



Appendix 2.4

SPSS Output for Pilot Testing of Photographic Stimuli

T-Test

Group Statistics

	Coach rated	N	Mean	Std. Deviation	Std. Error Mean
Attractiveness rating	Coach#1(Male)	28	1.57	.742	.140
	Coach#5(Female)	28	1.96	.744	.141
Age rating	Coach#1(Male)	28	2.50	.638	.121
	Coach#5(Female)	28	2.25	.585	.111
Experience rating	Coach#1(Male)	28	2.68	.548	.104
	Coach#5(Female)	28	2.43	.573	.108
Body Language rating	Coach#1(Male)	28	2.07	.716	.135
	Coach#5(Female)	28	2.00	.770	.145
Build/Physique rating	Coach#1(Male)	28	3.18	.905	.171
	Coach#5(Female)	28	3.18	1.020	.193
Friendliness rating	Coach#1(Male)	28	1.86	.705	.133
	Coach#5(Female)	28	1.89	.832	.157

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Attractiveness rating	Equal variances assumed	.262	.611	-1.978	54	.053	-.393	.199	-.791	.005
	Equal variances not assumed			-1.978	53.999	.053	-.393	.199	-.791	.005
Age rating	Equal variances assumed	1.311	.257	1.528	54	.132	.250	.164	-.078	.578
	Equal variances not assumed			1.528	53.600	.133	.250	.164	-.078	.578
Experience rating	Equal variances assumed	.344	.560	1.669	54	.101	.250	.150	-.050	.550
	Equal variances not assumed			1.669	53.895	.101	.250	.150	-.050	.550
Body Language rating	Equal variances assumed	.068	.795	.359	54	.721	.071	.199	-.327	.470
	Equal variances not assumed			.359	53.723	.721	.071	.199	-.327	.470
Build/Physique rating	Equal variances assumed	.387	.536	.000	54	1.000	.000	.258	-.517	.517
	Equal variances not assumed			.000	53.240	1.000	.000	.258	-.517	.517
Friendliness rating	Equal variances assumed	.466	.498	-.173	54	.863	-.036	.206	-.449	.377
	Equal variances not assumed			-.173	52.594	.863	-.036	.206	-.449	.378

Appendix 2.5

Athlete Demographic Questionnaire #2

Please fill in your details in the spaces provided.

Full name:____

Age:______ **Gender:** Male/Female (delete as appropriate)

Ethnicity: (Please tick appropriate box) White ☐ Black ☐ Asian ☐

Hispanic ☐ Mixed Race ☐ Other:________________

Primary sport:____

Number of years' experience in primary sport:_______

Team(s) you currently represent:________________________________

Highest level of participation (e.g. Recreational, Club, School, University, Region/County, Country, etc.):________________________________

Appendix 2.6

The Adapted Coaching Competency Scale (CCS-A)

Directions: Imagine that the coach represented by the profile that you have just studied has been appointed as the new coach for your team. Please use each of the expectations listed below to complete the following sentence:

I believe that this coach would _______________________________.

Please read each sentence carefully and then circle the response that best reflects how much you agree with each expectation (1 = Very strongly disagree, 7 = Very strongly agree). Please tell the experimenter if you are unclear about these instructions or if you have any questions.

	Very strongly disagree	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree	Very strongly agree
1. Help athletes maintain confidence in themselves	1	2	3	4	5	6	7
2. Recognise opposing team's strengths during competition	1	2	3	4	5	6	7
3. Mentally prepare athletes for game strategies	1	2	3	4	5	6	7
4. Understand competitive strategies	1	2	3	4	5	6	7
5. Instill an attitude of good moral character	1	2	3	4	5	6	7
6. Build athletes' self-esteem	1	2	3	4	5	6	7
7. Competently demonstrate the skills of your sport	1	2	3	4	5	6	7
8. Adapt to different game situations	1	2	3	4	5	6	7
9. Recognise opposing team's weaknesses during competition	1	2	3	4	5	6	7
10. Be able to motivate athletes	1	2	3	4	5	6	7
11. Make critical decisions during competition	1	2	3	4	5	6	7
12. Build team cohesion	1	2	3	4	5	6	7
13. Instil an attitude of fair play among athletes	1	2	3	4	5	6	7
14. Be able to coach individual athletes on technique	1	2	3	4	5	6	7
15. Build athletes' self-confidence	1	2	3	4	5	6	7
16. Develop athletes' abilities	1	2	3	4	5	6	7

	Very strongly disagree	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree	Very strongly agree
17. Maximise the team's strengths during competition	1	2	3	4	5	6	7
18. Recognise talent in athletes	1	2	3	4	5	6	7
19. Promote good sportsmanship	1	2	3	4	5	6	7
20. Detect skill errors	1	2	3	4	5	6	7
21. Adjust game strategies to fit the team's talent	1	2	3	4	5	6	7
22. Be able to teach the skills of your sport	1	2	3	4	5	6	7
23. Build team confidence	1	2	3	4	5	6	7
24. Instil an attitude of respect for others	1	2	3	4	5	6	7

N.B. Items 1, 3, 6, 10, 12, 15, and 23 are related to motivation competency; items 2, 4, 8, 9, 11, 17, and 21 are related to game strategy competency; items 5, 13, 19, and 24 are related to character-building competency; and items 7, 14, 16, 18, 20, and 22 are related to technique competency.

Appendix 2.7

Perceived Influence Questionnaire

This brief questionnaire is concerned with the sources of information athletes use to develop their expectations of a new coach.

Directions: Listed below are three cues that may influence an athlete's expectancy formation regarding their coach. Thinking about the coach profile viewed previously, please rate each of the following sources of information as to how much you believe they influenced your predictions. Please circle the response that best reflects how much each cue shaped your expectancies of the coach (1 = Not at all influential, 5 = Extremely Influential). Again, if anything is unclear or if you have any questions, please tell the experimenter.

	Not At All Influential	Slightly Influential	Quite Influential	Very Influential	Extremely Influential
Gender	1	2	3	4	5
Reputation	1	2	3	4	5

Appendix 2.8

SPSS Output for MANOVA Conducted on Data Obtained for the Control Target Coach

General Linear Model

Between-Subjects Factors

		Value Label	N
Gender of Participant	1	Male	152
	2	Female	152
Gender of Target Coach	1	Male	152
	2	Female	152
Reputation of Target Coach	1	Successful Reputation	152
	2	Unsuccessful Reputation	152

	Gender of Participant	Gender of Target Coach	Reputation of Target	Mean	Std. Deviation	N
CBC.CTotal	Male	Male	Successful Reputation	19.74	2.947	38
			Unsuccessful Reputation	18.61	3.695	38
			Total	19.17	3.368	76
		Female	Successful Reputation	19.65	3.477	38
			Unsuccessful Reputation	18.42	4.024	38
			Total	18.99	3.779	76
		Total	Successful Reputation	19.64	3.203	76
			Unsuccessful Reputation	18.51	3.838	76
			Total	19.08	3.569	152
	Female	Male	Successful Reputation	20.16	3.484	38
			Unsuccessful Reputation	21.24	3.567	38
			Total	20.70	3.544	76
		Female	Successful Reputation	20.26	4.202	38
			Unsuccessful Reputation	20.03	4.396	38
			Total	20.14	4.273	76
		Total	Successful Reputation	20.21	3.834	76
			Unsuccessful Reputation	20.63	4.023	76
			Total	20.42	3.922	152
	Total	Male	Successful Reputation	19.95	3.212	76
			Unsuccessful Reputation	19.92	3.843	76
			Total	19.93	3.530	152
		Female	Successful Reputation	19.91	3.848	76
			Unsuccessful Reputation	19.22	4.263	76
			Total	19.57	4.062	152
		Total	Successful Reputation	19.93	3.532	152
			Unsuccessful Reputation	19.57	4.060	152
			Total	19.75	3.803	304

GSC.CTotal	Male	Male	Successful Reputation	35.68	4.533	38
			Unsuccessful Reputation	35.39	4.722	38
			Total	35.54	4.600	76
		Female	Successful Reputation	36.03	5.325	38
			Unsuccessful Reputation	34.05	4.742	38
			Total	35.04	5.105	76
		Total	Successful Reputation	35.86	4.914	76
			Unsuccessful Reputation	34.72	4.749	76
			Total	35.29	4.850	152
	Female	Male	Successful Reputation	37.29	3.924	38
			Unsuccessful Reputation	37.68	4.048	38
			Total	37.49	3.985	76
		Female	Successful Reputation	35.92	4.135	38
			Unsuccessful Reputation	37.89	5.103	38
			Total	36.91	4.719	76
		Total	Successful Reputation	36.61	4.063	76
			Unsuccessful Reputation	37.79	4.576	76
			Total	37.20	4.354	152
	Total	Male	Successful Reputation	36.49	4.288	76
			Unsuccessful Reputation	36.54	4.518	76
			Total	36.51	4.390	152
		Female	Successful Reputation	35.97	4.736	76
			Unsuccessful Reputation	35.97	5.261	76
			Total	35.97	4.989	152
		Total	Successful Reputation	36.23	4.510	152
			Unsuccessful Reputation	36.26	4.896	152
			Total	36.24	4.699	304

MC.CTotal	Male	Male	Successful Reputation	34.87	5.111	38
			Unsuccessful Reputation	35.21	4.788	38
			Total	35.04	4.922	76
		Female	Successful Reputation	36.05	4.826	38
			Unsuccessful Reputation	34.26	4.476	38
			Total	35.16	4.710	76
		Total	Successful Reputation	35.46	4.973	76
			Unsuccessful Reputation	34.74	4.629	76
			Total	35.10	4.802	152
	Female	Male	Successful Reputation	35.84	4.835	38
			Unsuccessful Reputation	37.58	5.049	38
			Total	36.71	4.987	76
		Female	Successful Reputation	35.34	5.267	38
			Unsuccessful Reputation	36.39	5.852	38
			Total	35.87	5.555	76
		Total	Successful Reputation	35.59	5.028	76
			Unsuccessful Reputation	36.99	5.461	76
			Total	36.29	5.279	152
	Total	Male	Successful Reputation	35.36	4.966	76
			Unsuccessful Reputation	36.39	5.031	76
			Total	35.87	5.009	152
		Female	Successful Reputation	35.70	5.031	76
			Unsuccessful Reputation	35.33	5.285	76
			Total	35.51	5.146	152
		Total	Successful Reputation	35.53	4.985	152
			Unsuccessful Reputation	35.86	5.170	152
			Total	35.69	5.073	304

TC.CTotal	Male	Male	Successful Reputation	31.37	4.220	38
			Unsuccessful Reputation	31.16	3.373	38
			Total	31.26	3.796	76
		Female	Successful Reputation	32.26	4.607	38
			Unsuccessful Reputation	30.00	5.167	38
			Total	31.13	4.994	76
		Total	Successful Reputation	31.82	4.411	76
			Unsuccessful Reputation	30.58	4.373	76
			Total	31.20	4.422	152
	Female	Male	Successful Reputation	31.37	3.907	38
			Unsuccessful Reputation	33.18	3.965	38
			Total	32.28	4.015	76
		Female	Successful Reputation	32.13	3.721	38
			Unsuccessful Reputation	32.79	3.947	38
			Total	32.46	3.824	76
		Total	Successful Reputation	31.75	3.809	76
			Unsuccessful Reputation	32.99	3.934	76
			Total	32.37	3.909	152
	Total	Male	Successful Reputation	31.37	4.039	76
			Unsuccessful Reputation	32.17	3.796	76
			Total	31.77	3.927	152
		Female	Successful Reputation	32.20	4.160	76
			Unsuccessful Reputation	31.39	4.778	76
			Total	31.80	4.483	152
		Total	Successful Reputation	31.78	4.108	152
			Unsuccessful Reputation	31.78	4.318	152
			Total	31.78	4.207	304

Box's Test of Equality of Covariance Matrices[a]

Box's M	104.115
F	1.422
df1	70
df2	119953.5
Sig.	.012

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept+PGender+TGender+Reputation+PGender * TGender+PGender * Reputation+TGender * Reputation+PGender * TGender * Reputation

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	Pillai's Trace	.989	6647.442	4.000	293.000	.000	.989	26589.770	1.000
	Wilks' Lambda	.011	6647.442	4.000	293.000	.000	.989	26589.770	1.000
	Hotelling's Trace	90.750	6647.442	4.000	293.000	.000	.989	26589.770	1.000
	Roy's Largest Root	90.750	6647.442	4.000	293.000	.000	.989	26589.770	1.000
PGender	Pillai's Trace	.073	5.796	4.000	293.000	.000	.073	23.185	.982
	Wilks' Lambda	.927	5.796	4.000	293.000	.000	.073	23.185	.982
	Hotelling's Trace	.079	5.796	4.000	293.000	.000	.073	23.185	.982
	Roy's Largest Root	.079	5.796	4.000	293.000	.000	.073	23.185	.982
TGender	Pillai's Trace	.010	.759	4.000	293.000	.552	.010	3.037	.243
	Wilks' Lambda	.990	.759	4.000	293.000	.552	.010	3.037	.243
	Hotelling's Trace	.010	.759	4.000	293.000	.552	.010	3.037	.243
	Roy's Largest Root	.010	.759	4.000	293.000	.552	.010	3.037	.243
Reputation	Pillai's Trace	.013	.980	4.000	293.000	.419	.013	3.919	.309
	Wilks' Lambda	.987	.980	4.000	293.000	.419	.013	3.919	.309
	Hotelling's Trace	.013	.980	4.000	293.000	.419	.013	3.919	.309
	Roy's Largest Root	.013	.980	4.000	293.000	.419	.013	3.919	.309
PGender * TGender	Pillai's Trace	.004	.328	4.000	293.000	.859	.004	1.311	.124
	Wilks' Lambda	.996	.328	4.000	293.000	.859	.004	1.311	.124
	Hotelling's Trace	.004	.328	4.000	293.000	.859	.004	1.311	.124
	Roy's Largest Root	.004	.328	4.000	293.000	.859	.004	1.311	.124
PGender * Reputation	Pillai's Trace	.028	2.110	4.000	293.000	.080	.028	8.439	.623
	Wilks' Lambda	.972	2.110	4.000	293.000	.080	.028	8.439	.623
	Hotelling's Trace	.029	2.110	4.000	293.000	.080	.028	8.439	.623
	Roy's Largest Root	.029	2.110	4.000	293.000	.080	.028	8.439	.623
TGender * Reputation	Pillai's Trace	.019	1.419	4.000	293.000	.228	.019	5.676	.440
	Wilks' Lambda	.981	1.419	4.000	293.000	.228	.019	5.676	.440
	Hotelling's Trace	.019	1.419	4.000	293.000	.228	.019	5.676	.440
	Roy's Largest Root	.019	1.419	4.000	293.000	.228	.019	5.676	.440
PGender * TGender * Reputation	Pillai's Trace	.016	1.215	4.000	293.000	.304	.016	4.862	.380
	Wilks' Lambda	.984	1.215	4.000	293.000	.304	.016	4.862	.380
	Hotelling's Trace	.017	1.215	4.000	293.000	.304	.016	4.862	.380
	Roy's Largest Root	.017	1.215	4.000	293.000	.304	.016	4.862	.380

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
CBC.CTotal	1.493	7	296	.169
GSC.CTotal	.844	7	296	.551
MC.CTotal	.356	7	296	.927
TC.CTotal	.820	7	296	.571

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+PGender+TGender+Reputation+PGender * TGender+PGender * Reputation+TGender * Reputation+PGender * TGender * Reputation

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Corrected Model	CBC.CTotal	221.632	7	31.662	2.252	.030	.051	15.765	.832
	GSC.CTotal	451.461	7	64.494	3.060	.004	.067	21.420	.940
	MC.CTotal	276.681	7	39.526	1.556	.148	.035	10.891	.647
	TC.CTotal	275.197	7	39.314	2.287	.028	.051	16.008	.839
Intercept	CBC.CTotal	118579.000	1	118579.000	8434.577	.000	.966	8434.577	1.000
	GSC.CTotal	399330.013	1	399330.013	18947.052	.000	.985	18947.052	1.000
	MC.CTotal	387316.461	1	387316.461	15245.702	.000	.981	15245.702	1.000
	TC.CTotal	307086.329	1	307086.329	17863.422	.000	.984	17863.422	1.000
PGender	CBC.CTotal	136.895	1	136.895	9.737	.002	.032	9.737	.875
	GSC.CTotal	276.645	1	276.645	13.126	.000	.042	13.126	.951
	MC.CTotal	107.766	1	107.766	4.242	.040	.014	4.242	.537
	TC.CTotal	104.224	1	104.224	6.063	.014	.020	6.063	.689
TGender	CBC.CTotal	10.316	1	10.316	.734	.392	.002	.734	.137
	GSC.CTotal	22.118	1	22.118	1.049	.306	.004	1.049	.175
	MC.CTotal	9.951	1	9.951	.392	.532	.001	.392	.096
	TC.CTotal	.053	1	.053	.003	.956	.000	.003	.050
Reputation	CBC.CTotal	9.592	1	9.592	.682	.409	.002	.682	.131
	GSC.CTotal	.053	1	.053	.002	.960	.000	.002	.050
	MC.CTotal	8.556	1	8.556	.337	.562	.001	.337	.089
	TC.CTotal	.000	1	.000	.000	1.000	.000	.000	.050
PGender * TGender	CBC.CTotal	2.579	1	2.579	.183	.669	.001	.183	.071
	GSC.CTotal	.118	1	.118	.006	.940	.000	.006	.051
	MC.CTotal	17.530	1	17.530	.690	.407	.002	.690	.131
	TC.CTotal	1.895	1	1.895	.110	.740	.000	.110	.063
PGender * Reputation	CBC.CTotal	45.803	1	45.803	3.258	.072	.011	3.258	.436
	GSC.CTotal	101.895	1	101.895	4.835	.029	.016	4.835	.592
	MC.CTotal	85.266	1	85.266	3.356	.068	.011	3.356	.447
	TC.CTotal	116.263	1	116.263	6.763	.010	.022	6.763	.736
TGender * Reputation	CBC.CTotal	8.224	1	8.224	.585	.445	.002	.585	.119
	GSC.CTotal	.053	1	.053	.002	.960	.000	.002	.050
	MC.CTotal	37.661	1	37.661	1.482	.224	.005	1.482	.228
	TC.CTotal	48.961	1	48.961	2.848	.093	.010	2.848	.391
PGender * TGender * Reputation	CBC.CTotal	8.224	1	8.224	.585	.445	.002	.585	.119
	GSC.CTotal	50.579	1	50.579	2.400	.122	.008	2.400	.339
	MC.CTotal	9.951	1	9.951	.392	.532	.001	.392	.096
	TC.CTotal	3.803	1	3.803	.221	.638	.001	.221	.076

Appendix 2.9

SPSS Output for MANOVA Conducted on Data Obtained for the Experimental Target Coach

General Linear Model

Between-Subjects Factors

		Value Label	N
Gender of Participant	1	Male	152
	2	Female	152
Gender of Target Coach	1	Male	152
	2	Female	152
Reputation of Target Coach	1	Successful Reputation	152
	2	Unsuccessful Reputation	152

	Gender of Participant	Gender of Target Coach	Reputation of Target Coach	Mean	Std. Deviation	N
CBC.ETotal	Male	Male	Successful Reputation	21.68	3.313	38
			Unsuccessful Reputation	19.76	3.234	38
			Total	20.72	3.393	76
		Female	Successful Reputation	21.16	3.132	38
			Unsuccessful Reputation	19.79	3.068	38
			Total	20.47	3.158	76
		Total	Successful Reputation	21.42	3.214	76
			Unsuccessful Reputation	19.78	3.131	76
			Total	20.60	3.268	152
	Female	Male	Successful Reputation	21.74	3.252	38
			Unsuccessful Reputation	19.84	3.970	38
			Total	20.79	3.729	76
		Female	Successful Reputation	21.53	3.478	38
			Unsuccessful Reputation	20.68	3.370	38
			Total	21.11	3.428	76
		Total	Successful Reputation	21.63	3.346	76
			Unsuccessful Reputation	20.26	3.682	76
			Total	20.95	3.573	152
	Total	Male	Successful Reputation	21.71	3.261	76
			Unsuccessful Reputation	19.80	3.596	76
			Total	20.76	3.553	152
		Female	Successful Reputation	21.34	3.293	76
			Unsuccessful Reputation	20.24	3.233	76
			Total	20.79	3.299	152
		Total	Successful Reputation	21.53	3.271	152
			Unsuccessful Reputation	20.02	3.415	152
			Total	20.77	3.423	304

GSC.ETotal	Male	Male	Successful Reputation	41.18	3.616	38
			Unsuccessful Reputation	30.79	6.909	38
			Total	35.99	7.575	76
		Female	Successful Reputation	39.37	6.463	38
			Unsuccessful Reputation	30.16	5.626	38
			Total	34.76	7.593	76
		Total	Successful Reputation	40.28	5.275	76
			Unsuccessful Reputation	30.47	6.266	76
			Total	35.37	7.583	152
	Female	Male	Successful Reputation	40.53	4.914	38
			Unsuccessful Reputation	31.97	6.279	38
			Total	36.25	7.064	76
		Female	Successful Reputation	38.82	5.618	38
			Unsuccessful Reputation	29.47	5.606	38
			Total	34.14	7.265	76
		Total	Successful Reputation	39.67	5.313	76
			Unsuccessful Reputation	30.72	5.999	76
			Total	35.20	7.214	152
	Total	Male	Successful Reputation	40.86	4.298	76
			Unsuccessful Reputation	31.38	6.585	76
			Total	36.12	7.300	152
		Female	Successful Reputation	39.09	6.016	76
			Unsuccessful Reputation	29.82	5.539	76
			Total	34.46	7.408	152
		Total	Successful Reputation	39.97	5.286	152
			Unsuccessful Reputation	30.60	6.115	152
			Total	35.29	7.389	304

MC.ETotal	Male	Male	Successful Reputation	39.53	3.957	38
			Unsuccessful Reputation	31.18	5.742	38
			Total	35.36	6.461	76
		Female	Successful Reputation	37.32	6.527	38
			Unsuccessful Reputation	30.55	5.376	38
			Total	33.93	6.846	76
		Total	Successful Reputation	38.42	5.475	76
			Unsuccessful Reputation	30.87	5.534	76
			Total	34.64	6.668	152
	Female	Male	Successful Reputation	39.24	4.576	38
			Unsuccessful Reputation	32.79	6.103	38
			Total	36.01	6.264	76
		Female	Successful Reputation	37.45	4.903	38
			Unsuccessful Reputation	33.08	5.247	38
			Total	35.26	5.502	76
		Total	Successful Reputation	38.34	4.796	76
			Unsuccessful Reputation	32.93	5.655	76
			Total	35.64	5.888	152
	Total	Male	Successful Reputation	39.38	4.252	76
			Unsuccessful Reputation	31.99	5.941	76
			Total	35.68	6.346	152
		Female	Successful Reputation	37.38	5.734	76
			Unsuccessful Reputation	31.82	5.428	76
			Total	34.60	6.226	152
		Total	Successful Reputation	38.38	5.130	152
			Unsuccessful Reputation	31.90	5.672	152
			Total	35.14	6.299	304

TC.ETotal	Male	Male	Successful Reputation	34.97	3.687	38
			Unsuccessful Reputation	29.95	5.900	38
			Total	32.46	5.503	76
		Female	Successful Reputation	33.92	5.283	38
			Unsuccessful Reputation	26.37	4.309	38
			Total	30.14	6.114	76
		Total	Successful Reputation	34.45	4.556	76
			Unsuccessful Reputation	28.16	5.438	76
			Total	31.30	5.912	152
	Female	Male	Successful Reputation	34.55	4.677	38
			Unsuccessful Reputation	29.42	5.573	38
			Total	31.99	5.726	76
		Female	Successful Reputation	33.39	4.653	38
			Unsuccessful Reputation	27.74	5.505	38
			Total	30.57	5.809	76
		Total	Successful Reputation	33.97	4.670	76
			Unsuccessful Reputation	28.58	5.587	76
			Total	31.28	5.792	152
	Total	Male	Successful Reputation	34.76	4.188	76
			Unsuccessful Reputation	29.68	5.707	76
			Total	32.22	5.602	152
		Female	Successful Reputation	33.66	4.952	76
			Unsuccessful Reputation	27.05	4.958	76
			Total	30.36	5.947	152
		Total	Successful Reputation	34.21	4.604	152
			Unsuccessful Reputation	28.37	5.489	152
			Total	31.29	5.843	304

Box's Test of Equality of Covariance Matrices[a]

Box's M	123.861
F	1.691
df1	70
df2	119953.5
Sig.	.000

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept+PGender+TGender+Reputation+PGender * TGender+PGender * Reputation+TGender * Reputation+PGender * TGender * Reputation

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	Pillai's Trace	.985	4836.082	4.000	293.000	.000	.985	19344.330	1.000
	Wilks' Lambda	.015	4836.082	4.000	293.000	.000	.985	19344.330	1.000
	Hotelling's Trace	66.022	4836.082	4.000	293.000	.000	.985	19344.330	1.000
	Roy's Largest Root	66.022	4836.082	4.000	293.000	.000	.985	19344.330	1.000
PGender	Pillai's Trace	.018	1.336	4.000	293.000	.257	.018	5.343	.415
	Wilks' Lambda	.982	1.336	4.000	293.000	.257	.018	5.343	.415
	Hotelling's Trace	.018	1.336	4.000	293.000	.257	.018	5.343	.415
	Roy's Largest Root	.018	1.336	4.000	293.000	.257	.018	5.343	.415
TGender	Pillai's Trace	.041	3.149	4.000	293.000	.015	.041	12.598	.817
	Wilks' Lambda	.959	3.149	4.000	293.000	.015	.041	12.598	.817
	Hotelling's Trace	.043	3.149	4.000	293.000	.015	.041	12.598	.817
	Roy's Largest Root	.043	3.149	4.000	293.000	.015	.041	12.598	.817
Reputation	Pillai's Trace	.427	54.607	4.000	293.000	.000	.427	218.427	1.000
	Wilks' Lambda	.573	54.607	4.000	293.000	.000	.427	218.427	1.000
	Hotelling's Trace	.745	54.607	4.000	293.000	.000	.427	218.427	1.000
	Roy's Largest Root	.745	54.607	4.000	293.000	.000	.427	218.427	1.000
PGender * TGender	Pillai's Trace	.015	1.108	4.000	293.000	.353	.015	4.434	.348
	Wilks' Lambda	.985	1.108	4.000	293.000	.353	.015	4.434	.348
	Hotelling's Trace	.015	1.108	4.000	293.000	.353	.015	4.434	.348
	Roy's Largest Root	.015	1.108	4.000	293.000	.353	.015	4.434	.348
PGender * Reputation	Pillai's Trace	.017	1.258	4.000	293.000	.287	.017	5.033	.393
	Wilks' Lambda	.983	1.258	4.000	293.000	.287	.017	5.033	.393
	Hotelling's Trace	.017	1.258	4.000	293.000	.287	.017	5.033	.393
	Roy's Largest Root	.017	1.258	4.000	293.000	.287	.017	5.033	.393
TGender * Reputation	Pillai's Trace	.034	2.578	4.000	293.000	.038	.034	10.312	.723
	Wilks' Lambda	.966	2.578	4.000	293.000	.038	.034	10.312	.723
	Hotelling's Trace	.035	2.578	4.000	293.000	.038	.034	10.312	.723
	Roy's Largest Root	.035	2.578	4.000	293.000	.038	.034	10.312	.723
PGender * TGender * Reputation	Pillai's Trace	.017	1.272	4.000	293.000	.281	.017	5.088	.397
	Wilks' Lambda	.983	1.272	4.000	293.000	.281	.017	5.088	.397
	Hotelling's Trace	.017	1.272	4.000	293.000	.281	.017	5.088	.397
	Roy's Largest Root	.017	1.272	4.000	293.000	.281	.017	5.088	.397

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
CBC.ETotal	.508	7	296	.828
GSC.ETotal	2.360	7	296	.023
MC.ETotal	1.673	7	296	.115
TC.ETotal	.718	7	296	.656

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+PGender+TGender+Reputation+PGender * TGender+PGender * Reputation+TGender * Reputation+PGender * TGender * Reputation

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	CBC.ETotal	202.786[b]	7	28.969	2.562	.014	.057	17.936	.885
	GSC.ETotal	6940.549[c]	7	991.507	30.560	.000	.420	213.921	1.000
	MC.ETotal	3516.786[d]	7	502.398	17.483	.000	.293	122.379	1.000
	TC.ETotal	2952.947[e]	7	421.850	16.893	.000	.285	118.252	1.000
Intercept	CBC.ETotal	131181.661	1	131181.661	11602.917	.000	.975	11602.917	1.000
	GSC.ETotal	378514.898	1	378514.898	11666.559	.000	.975	11666.559	1.000
	MC.ETotal	375416.082	1	375416.082	13063.889	.000	.978	13063.889	1.000
	TC.ETotal	297625.474	1	297625.474	11918.582	.000	.976	11918.582	1.000
PGender	CBC.ETotal	9.240	1	9.240	.817	.367	.003	.817	.147
	GSC.ETotal	2.398	1	2.398	.074	.786	.000	.074	.058
	MC.ETotal	75.003	1	75.003	2.610	.107	.009	2.610	.363
	TC.ETotal	.053	1	.053	.002	.963	.000	.002	.050
TGender	CBC.ETotal	.082	1	.082	.007	.932	.000	.007	.051
	GSC.ETotal	210.556	1	210.556	6.490	.011	.021	6.490	.719
	MC.ETotal	89.556	1	89.556	3.116	.079	.010	3.116	.421
	TC.ETotal	265.316	1	265.316	10.625	.001	.035	10.625	.901
Reputation	CBC.ETotal	172.503	1	172.503	15.258	.000	.049	15.258	.973
	GSC.ETotal	6679.687	1	6679.687	205.881	.000	.410	205.881	1.000
	MC.ETotal	3191.530	1	3191.530	111.060	.000	.273	111.060	1.000
	TC.ETotal	2593.895	1	2593.895	103.874	.000	.260	103.874	1.000
PGender * TGender	CBC.ETotal	6.082	1	6.082	.538	.464	.002	.538	.113
	GSC.ETotal	14.766	1	14.766	.455	.500	.002	.455	.103
	MC.ETotal	8.556	1	8.556	.298	.586	.001	.298	.085
	TC.ETotal	15.211	1	15.211	.609	.436	.002	.609	.122
PGender * Reputation	CBC.ETotal	1.451	1	1.451	.128	.720	.000	.128	.065
	GSC.ETotal	13.898	1	13.898	.428	.513	.001	.428	.100
	MC.ETotal	87.398	1	87.398	3.041	.082	.010	3.041	.412
	TC.ETotal	15.211	1	15.211	.609	.436	.002	.609	.122
TGender * Reputation	CBC.ETotal	12.240	1	12.240	1.083	.299	.004	1.083	.179
	GSC.ETotal	.740	1	.740	.023	.880	.000	.023	.053
	MC.ETotal	63.556	1	63.556	2.212	.138	.007	2.212	.317
	TC.ETotal	44.263	1	44.263	1.773	.184	.006	1.773	.264
PGender * TGender * Reputation	CBC.ETotal	1.188	1	1.188	.105	.746	.000	.105	.062
	GSC.ETotal	18.503	1	18.503	.570	.451	.002	.570	.117
	MC.ETotal	1.188	1	1.188	.041	.839	.000	.041	.055
	TC.ETotal	19.000	1	19.000	.761	.384	.003	.761	.140

Appendix 2.10

SPSS Output for t-test Conducted on Data Obtained Using the Perceived Influence Questionnaire.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Influence of Gender Information on Expectancies	2.20	304	1.099	.063
	Influence of Reputation Information on Expectancies	3.81	304	.914	.052

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Influence of Gender Information on Expectancies - Influence of Reputation Information on Expectancies	-1.612	1.323	.076	-1.761	-1.463	-21.245	303	.000

Appendix 2.11

SPSS Output for MANOVA Conducted on Data Obtained Using the Perceived Influence Questionnaire.

General Linear Model

Between-Subjects Factors

		Value Label	N
Gender of Participant	1	Male	152
	2	Female	152

Descriptive Statistics

	Gender of Participant	Mean	Std. Deviation	N
Influence of Gender Information on Expectancies	Male	2.43	1.160	152
	Female	1.97	.986	152
	Total	2.20	1.099	304
Influence of Reputation Information on Expectancies	Male	3.89	.839	152
	Female	3.72	.978	152
	Total	3.81	.914	304

Box's Test of Equality of Covariance Matrices[a]

Box's M	7.652
F	2.532
df1	3
df2	2E+007
Sig.	.055

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept+PGender

Multivariate Tests[c]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Intercept	Pillai's Trace	.952	2993.836[b]	2.000	301.000	.000	.952	5987.673	1.000
	Wilks' Lambda	.048	2993.836[b]	2.000	301.000	.000	.952	5987.673	1.000
	Hotelling's Trace	19.893	2993.836[b]	2.000	301.000	.000	.952	5987.673	1.000
	Roy's Largest Root	19.893	2993.836[b]	2.000	301.000	.000	.952	5987.673	1.000
PGender	Pillai's Trace	.048	7.603[b]	2.000	301.000	.001	.048	15.207	.945
	Wilks' Lambda	.952	7.603[b]	2.000	301.000	.001	.048	15.207	.945
	Hotelling's Trace	.051	7.603[b]	2.000	301.000	.001	.048	15.207	.945
	Roy's Largest Root	.051	7.603[b]	2.000	301.000	.001	.048	15.207	.945

a. Computed using alpha = .05

b. Exact statistic

c. Design: Intercept+PGender

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Influence of Gender Information on Expectancies	12.547	1	302	.000
Influence of Reputation Information on Expectancies	9.084	1	302	.003

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+PGender

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Corrected Model	Influence of Gender Information on Expectancies	16.118	1	16.118	13.906	.000	.044	13.906	.961
	Influence of Reputation Information on Expectancies	2.224	1	2.224	2.679	.103	.009	2.679	.371
Intercept	Influence of Gender Information on Expectancies	1467.842	1	1467.842	1266.395	.000	.807	1266.395	1.000
	Influence of Reputation Information on Expectancies	4411.066	1	4411.066	5313.466	.000	.946	5313.466	1.000
PGender	Influence of Gender Information on Expectancies	16.118	1	16.118	13.906	.000	.044	13.906	.961
	Influence of Reputation Information on Expectancies	2.224	1	2.224	2.679	.103	.009	2.679	.371
Error	Influence of Gender Information on Expectancies	350.039	302	1.159					
	Influence of Reputation Information on Expectancies	250.711	302	.830					
Total	Influence of Gender Information on Expectancies	1834.000	304						
	Influence of Reputation Information on Expectancies	4664.000	304						
Corrected Total	Influence of Gender Information on Expectancies	366.158	303						
	Influence of Reputation Information on Expectancies	252.934	303						

APPENDIX 3

Study 3 Assessment Instruments and SPSS Output

Appendix 3.1

Athlete Demographic Questionnaire #3

Please fill in your details in the spaces provided.

Full name:____

Age:______ **Gender:** Male/Female (delete as appropriate)

Ethnicity: (Please tick appropriate box) White ☐ Black ☐ Asian ☐

Hispanic ☐ Mixed Race ☐ Other:________________

Number of years' experience in football:_______

Team(s) you currently represent:________________________________

Highest level of participation (e.g. Recreational, Club, School, University, Region/County, Country, etc.):__________________________________

Appendix 3.2

The Coaching Competency Scale (CCS; Myers et al., 2006)

Coaching confidence refers to the extent to which coaches believe that they have the capacity to affect the learning and performance of their athletes. Thinking about the coaching session you have just witnessed, please rate the competence of the coach in the video in terms of each of the qualities listed below. Read each item carefully and circle the appropriate number for each one. Please ask the experimenter if you have any questions or are unsure about anything.

(Circle the most appropriate category)

How competent is the coach in his or her ability to -	Complete Incompetence	Low Competence	Moderate Competence	High Competence	Complete Competence
1. help athletes maintain confidence in themselves?	0	1	2	3	4
2. recognize opposing team's strengths during competition?	0	1	2	3	4
3. mentally prepare his/her athletes for game strategies?	0	1	2	3	4
4. understand competitive strategies?	0	1	2	3	4
5. instil an attitude of good moral character?	0	1	2	3	4
6. build the self-esteem of his/her athletes?	0	1	2	3	4
7. demonstrate the skills of his/her sport?	0	1	2	3	4
8. adapt to different game situations?	0	1	2	3	4
9. recognize opposing team's weakness during competition?	0	1	2	3	4
10. motivate his/her athletes?	0	1	2	3	4
11. make critical decisions during competition?	0	1	2	3	4
12. build team cohesion?	0	1	2	3	4
13. instil an attitude of fair play among his/her athletes?	0	1	2	3	4
14. coach individual athletes on technique?	0	1	2	3	4
15. build the self-confidence of his/her athletes?	0	1	2	3	4
16. develop athletes' abilities?	0	1	2	3	4
17. maximize his/her team's strengths during competition?	0	1	2	3	4
18. recognize talent in athletes?	0	1	2	3	4
19. promote good sportsmanship?	0	1	2	3	4
20. detect skill errors?	0	1	2	3	4
21. adjust his/her game strategy to fit his/her team's talent?	0	1	2	3	4
22. teach the skills of his/her sport?	0	1	2	3	4
23. build team confidence?	0	1	2	3	4
24. instil an attitude of respect for others?	0	1	2	3	4

N.B. Items 1, 3, 6, 10, 12, 15, and 23 are related to motivation competency; items 2, 4, 8, 9, 11, 17, and 21 are related to game strategy competency; items 5, 13, 19, and 24 are related to character-building competency; and items 7, 14, 16, 18, 20, and 22 are related to technique competency.

Appendix 3.3

The Positive Affect Negative Affect Schedule (PANAS; Watson et al., 1988)

The following scale consists of a number of words that describe different feelings and emotions. Imagine that the coach you just witnessed in the video has been appointed as the new head coach for your team. Please indicate the feelings and emotions you would experience towards the coach if you were to be coached by them for the first time. Read each item carefully and circle the appropriate number for each one. Again, please ask the experimenter if you have any questions or are unsure about anything.

Use the following scale to record your answers:

(1) = Very slightly or not at all (2) = A little (3) = Moderately (4) = Quite a bit (5) = Extremely

	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
1. Interested	1	2	3	4	5
2. Distressed	1	2	3	4	5
3. Excited	1	2	3	4	5
4. Upset	1	2	3	4	5
5. Strong	1	2	3	4	5
6. Guilty	1	2	3	4	5
7. Scared	1	2	3	4	5
8. Hostile	1	2	3	4	5
9. Enthusiastic	1	2	3	4	5
10. Proud	1	2	3	4	5
11. Irritable	1	2	3	4	5
12. Alert	1	2	3	4	5
13. Ashamed	1	2	3	4	5
14. Inspired	1	2	3	4	5
15. Nervous	1	2	3	4	5
16. Determined	1	2	3	4	5
17. Attentive	1	2	3	4	5
18. Jittery	1	2	3	4	5
19. Active	1	2	3	4	5
20. Afraid	1	2	3	4	5

N.B. Items 1, 3, 5, 9, 10, 12, 14, 16, 17, and 19 are related to positive affect; items 2, 4, 6, 7, 8, 11, 13, 15, 18, and 20 are related to negative affect.

Appendix 3.4

SPSS Output for MANOVA Conducted on Data Obtained Using the CCS for the Control Target Coach

General Linear Model

Between-Subjects Factors

		Value Label	N
Experimental Condition	1	Successful Reputation	45
	2	Unsuccessful Reputation	46
	3	No Reputation	45

Descriptive Statistics

	Experimental Condition	Mean	Std. Deviation	N
CBC.CTotal	Successful Reputation	9.56	2.701	45
	Unsuccessful Reputation	9.85	2.921	46
	No Reputation	9.36	2.586	45
	Total	9.59	2.728	136
GSC.CTotal	Successful Reputation	14.33	4.411	45
	Unsuccessful Reputation	13.80	4.460	46
	No Reputation	15.27	3.875	45
	Total	14.46	4.270	136
MC.CTotal	Successful Reputation	14.53	4.934	45
	Unsuccessful Reputation	14.93	4.809	46
	No Reputation	14.31	5.125	45
	Total	14.60	4.927	136
TC.CTotal	Successful Reputation	17.64	3.949	45
	Unsuccessful Reputation	17.13	3.691	46
	No Reputation	18.53	3.064	45
	Total	17.76	3.609	136

Box's Test of Equality of Covariance Matrices [a]

Box's M	21.199
F	1.014
df1	20
df2	63440.802
Sig.	.441

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept+Condition

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	Pillai's Trace	.966	910.312	4.000	130.000	.000	.966	3641.246	1.000
	Wilks' Lambda	.034	910.312	4.000	130.000	.000	.966	3641.246	1.000
	Hotelling's Trace	28.010	910.312	4.000	130.000	.000	.966	3641.246	1.000
	Roy's Largest Root	28.010	910.312	4.000	130.000	.000	.966	3641.246	1.000
Condition	Pillai's Trace	.078	1.325	8.000	262.000	.231	.039	10.597	.603
	Wilks' Lambda	.922	1.342	8.000	260.000	.223	.040	10.734	.609
	Hotelling's Trace	.084	1.359	8.000	258.000	.215	.040	10.869	.616
	Roy's Largest Root	.084	2.751	4.000	131.000	.031	.077	11.003	.745

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
CBC.CTotal	.645	2	133	.526
GSC.CTotal	.463	2	133	.630
MC.CTotal	.752	2	133	.473
TC.CTotal	.688	2	133	.504

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Condition

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Corrected Model	CBC.CTotal	5.584	2	2.792	.372	.690	.006	.743	.109
	GSC.CTotal	49.777	2	24.889	1.372	.257	.020	2.745	.291
	MC.CTotal	9.109	2	4.554	.185	.831	.003	.371	.078
	TC.CTotal	45.742	2	22.871	1.776	.173	.026	3.552	.366
Intercept	CBC.CTotal	12496.703	1	12496.703	1663.131	.000	.926	1663.131	1.000
	GSC.CTotal	28465.332	1	28465.332	1569.580	.000	.922	1569.580	1.000
	MC.CTotal	28959.160	1	28959.160	1178.697	.000	.899	1178.697	1.000
	TC.CTotal	42937.625	1	42937.625	3334.273	.000	.962	3334.273	1.000
Condition	CBC.CTotal	5.584	2	2.792	.372	.690	.006	.743	.109
	GSC.CTotal	49.777	2	24.889	1.372	.257	.020	2.745	.291
	MC.CTotal	9.109	2	4.554	.185	.831	.003	.371	.078
	TC.CTotal	45.742	2	22.871	1.776	.173	.026	3.552	.366
Error	CBC.CTotal	999.357	133	7.514					
	GSC.CTotal	2412.039	133	18.136					
	MC.CTotal	3267.649	133	24.569					
	TC.CTotal	1712.729	133	12.878					
Total	CBC.CTotal	13508.000	136						
	GSC.CTotal	30911.000	136						
	MC.CTotal	32249.000	136						
	TC.CTotal	44678.000	136						
Corrected Total	CBC.CTotal	1004.941	135						
	GSC.CTotal	2461.816	135						
	MC.CTotal	3276.757	135						
	TC.CTotal	1758.471	135						

Appendix 3.5

SPSS Output for MANOVA Conducted on Data Obtained Using the PANAS for the Control Target Coach

General Linear Model

Between-Subjects Factors

		Value Label	N
Experimental Condition	1	Successful Reputation	45
	2	Unsuccessful Reputation	46
	3	No Reputation	45

Descriptive Statistics

	Experimental Condition	Mean	Std. Deviation	N
PAFF.CTotal	Successful Reputation	25.38	7.420	45
	Unsuccessful Reputation	23.87	7.676	46
	No Reputation	25.56	8.248	45
	Total	24.93	7.768	136
NAFF.CTotal	Successful Reputation	18.11	5.824	45
	Unsuccessful Reputation	16.43	6.629	46
	No Reputation	18.29	7.175	45
	Total	17.60	6.572	136

Box's Test of Equality of Covariance Matrices[a]

Box's M	4.740
F	.773
df1	6
df2	439610.7
Sig.	.591

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept+Condition

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	Pillai's Trace	.953	1345.703	2.000	132.000	.000	.953	2691.406	1.000
	Wilks' Lambda	.047	1345.703	2.000	132.000	.000	.953	2691.406	1.000
	Hotelling's Trace	20.389	1345.703	2.000	132.000	.000	.953	2691.406	1.000
	Roy's Largest Root	20.389	1345.703	2.000	132.000	.000	.953	2691.406	1.000
Condition	Pillai's Trace	.029	.986	4.000	266.000	.416	.015	3.942	.310
	Wilks' Lambda	.971	.986	4.000	264.000	.416	.015	3.942	.310
	Hotelling's Trace	.030	.985	4.000	262.000	.416	.015	3.941	.310
	Roy's Largest Root	.030	2.001	2.000	133.000	.139	.029	4.002	.407

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
PAFF.CTotal	.106	2	133	.899
NAFF.CTotal	1.234	2	133	.294

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Condition

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Corrected Model	PAFF.CTotal	78.358	2	39.179	.646	.526	.010	1.292	.156
	NAFF.CTotal	95.566	2	47.783	1.108	.333	.016	2.216	.242
Intercept	PAFF.CTotal	84544.748	1	84544.748	1393.899	.000	.913	1393.899	1.000
	NAFF.CTotal	42178.354	1	42178.354	978.157	.000	.880	978.157	1.000
Condition	PAFF.CTotal	78.358	2	39.179	.646	.526	.010	1.292	.156
	NAFF.CTotal	95.566	2	47.783	1.108	.333	.016	2.216	.242
Error	PAFF.CTotal	8066.906	133	60.653					
	NAFF.CTotal	5734.993	133	43.120					
Total	PAFF.CTotal	92646.000	136						
	NAFF.CTotal	47972.000	136						
Corrected Total	PAFF.CTotal	8145.265	135						
	NAFF.CTotal	5830.559	135						

Appendix 3.6

SPSS Output for MANOVA Conducted on Data Obtained Using the CCS for the Experimental Target Coach

General Linear Model

Between-Subjects Factors

		Value Label	N
Experimental Condition	1	Successful Reputation	45
	2	Unsuccessful Reputation	46
	3	No Reputation	45

Descriptive Statistics

	Experimental Condition	Mean	Std. Deviation	N
CBC.ETotal	Successful Reputation	11.02	2.641	45
	Unsuccessful Reputation	10.00	2.521	46
	No Reputation	10.11	2.279	45
	Total	10.38	2.509	136
GSC.ETotal	Successful Reputation	18.56	4.351	45
	Unsuccessful Reputation	15.30	4.141	46
	No Reputation	16.98	3.769	45
	Total	16.93	4.278	136
MC.ETotal	Successful Reputation	19.22	4.364	45
	Unsuccessful Reputation	17.24	4.067	46
	No Reputation	19.07	3.614	45
	Total	18.50	4.099	136
TC.ETotal	Successful Reputation	19.67	3.104	45
	Unsuccessful Reputation	16.91	3.278	46
	No Reputation	18.49	3.123	45
	Total	18.35	3.345	136

Box's Test of Equality of Covariance Matrices[a]

Box's M	30.175
F	1.443
df1	20
df2	63440.802
Sig.	.091

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept+Condition

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	Pillai's Trace	.974	1238.939	4.000	130.000	.000	.974	4955.756	1.000
	Wilks' Lambda	.026	1238.939	4.000	130.000	.000	.974	4955.756	1.000
	Hotelling's Trace	38.121	1238.939	4.000	130.000	.000	.974	4955.756	1.000
	Roy's Largest Root	38.121	1238.939	4.000	130.000	.000	.974	4955.756	1.000
Condition	Pillai's Trace	.182	3.284	8.000	262.000	.001	.091	26.272	.971
	Wilks' Lambda	.823	3.321	8.000	260.000	.001	.093	26.565	.973
	Hotelling's Trace	.208	3.356	8.000	258.000	.001	.094	26.850	.975
	Roy's Largest Root	.169	5.528	4.000	131.000	.000	.144	22.112	.974

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
CBC.ETotal	.549	2	133	.579
GSC.ETotal	.293	2	133	.746
MC.ETotal	.430	2	133	.651
TC.ETotal	.038	2	133	.963

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Condition

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Corrected Model	CBC.ETotal	28.453	2	14.226	2.303	.104	.033	4.607	.461
	GSC.ETotal	240.576	2	120.288	7.175	.001	.097	14.349	.929
	MC.ETotal	111.053	2	55.526	3.424	.035	.049	6.848	.635
	TC.ETotal	173.861	2	86.930	8.648	.000	.115	17.296	.966
Intercept	CBC.ETotal	14645.393	1	14645.393	2371.298	.000	.947	2371.298	1.000
	GSC.ETotal	39050.019	1	39050.019	2329.172	.000	.946	2329.172	1.000
	MC.ETotal	46588.008	1	46588.008	2872.673	.000	.956	2872.673	1.000
	TC.ETotal	45820.290	1	45820.290	4558.392	.000	.972	4558.392	1.000
Condition	CBC.ETotal	28.453	2	14.226	2.303	.104	.033	4.607	.461
	GSC.ETotal	240.576	2	120.288	7.175	.001	.097	14.349	.929
	MC.ETotal	111.053	2	55.526	3.424	.035	.049	6.848	.635
	TC.ETotal	173.861	2	86.930	8.648	.000	.115	17.296	.966
Error	CBC.ETotal	821.422	133	6.176					
	GSC.ETotal	2229.828	133	16.766					
	MC.ETotal	2156.947	133	16.218					
	TC.ETotal	1336.897	133	10.052					
Total	CBC.ETotal	15489.000	136						
	GSC.ETotal	41469.000	136						
	MC.ETotal	48814.000	136						
	TC.ETotal	47283.000	136						
Corrected Total	CBC.ETotal	849.875	135						
	GSC.ETotal	2470.404	135						
	MC.ETotal	2268.000	135						
	TC.ETotal	1510.757	135						

Appendix 3.7

SPSS Output for MANOVA Conducted on Data Obtained Using the PANAS for the Experimental Target Coach

General Linear Model

Between-Subjects Factors

		Value Label	N
Experimental Condition	1	Successful Reputation	45
	2	Unsuccessful Reputation	46
	3	No Reputation	45

Descriptive Statistics

	Experimental Condition	Mean	Std. Deviation	N
PAFF.ETotal	Successful Reputation	34.22	7.960	45
	Unsuccessful Reputation	28.67	8.646	46
	No Reputation	31.56	7.241	45
	Total	31.46	8.237	136
NAFF.ETotal	Successful Reputation	13.09	4.694	45
	Unsuccessful Reputation	14.07	5.968	46
	No Reputation	13.11	5.042	45
	Total	13.43	5.249	136

Box's Test of Equality of Covariance Matrices[a]

Box's M	4.814
F	.785
df1	6
df2	439610.7
Sig.	.582

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept+Condition

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	Pillai's Trace	.959	1561.345	2.000	132.000	.000	.959	3122.691	1.000
	Wilks' Lambda	.041	1561.345	2.000	132.000	.000	.959	3122.691	1.000
	Hotelling's Trace	23.657	1561.345	2.000	132.000	.000	.959	3122.691	1.000
	Roy's Largest Root	23.657	1561.345	2.000	132.000	.000	.959	3122.691	1.000
Condition	Pillai's Trace	.082	2.827	4.000	266.000	.025	.041	11.309	.767
	Wilks' Lambda	.919	2.864	4.000	264.000	.024	.042	11.454	.773
	Hotelling's Trace	.089	2.899	4.000	262.000	.023	.042	11.596	.779
	Roy's Largest Root	.087	5.783	2.000	133.000	.004	.080	11.566	.863

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
PAFF.ETotal	1.620	2	133	.202
NAFF.ETotal	1.837	2	133	.163

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Condition

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Corrected Model	PAFF.ETotal	700.819	2	350.409	5.509	.005	.077	11.019	.845
	NAFF.ETotal	28.371	2	14.186	.511	.601	.008	1.022	.133
Intercept	PAFF.ETotal	134793.594	1	134793.594	2119.347	.000	.941	2119.347	1.000
	NAFF.ETotal	24496.829	1	24496.829	882.734	.000	.869	882.734	1.000
Condition	PAFF.ETotal	700.819	2	350.409	5.509	.005	.077	11.019	.845
	NAFF.ETotal	28.371	2	14.186	.511	.601	.008	1.022	.133
Error	PAFF.ETotal	8458.998	133	63.601					
	NAFF.ETotal	3690.893	133	27.751					
Total	PAFF.ETotal	143791.000	136						
	NAFF.ETotal	28236.000	136						
Corrected Total	PAFF.ETotal	9159.816	135						
	NAFF.ETotal	3719.265	135						

APPENDIX 4

Study 4 Assessment Instruments and SPSS Output

Appendix 4.1

Cover Story Given to Participants on Arrival at the Training Venue

Thank you for agreeing to take part in this session.

The coaching session is part of an assessment strategy designed by a national coaching governing body as a way of monitoring and accrediting coaches. The coach who will be running the session is aiming to achieve a specific coaching qualification as part of his coach development. In addition to the drills and exercises within the main coaching session, you will be required to take part in a series of pre- and post-session tests so that the ability of the group can be identified.

The coaching drills will be video recorded to ensure that the measures are accurately administered and so that the assessors are able to evaluate the coach's delivery of the session at a later date. However, no-one other than the assessors will have access to the recordings, which will be destroyed as soon as they have been used for the purposes of assessment. The entire session (including pre- and post-session tests) is expected to last approximately four hours. You will also be required to complete a brief Session Evaluation Form at the end of the session.

All information you provide will be treated in the strictest of confidence.

Appendix 4.2

Athlete Demographic Questionnaire #4

Demographic Information

Please fill in your details in the spaces provided.

Full name:____

Age:____ **Gender:** Male/Female (delete as appropriate) **Nationality:**_______

Ethnicity: (Please tick appropriate box) White ☐ Black ☐ Asian ☐

Hispanic ☐ Mixed Race ☐ Other:_______________

Number of years football experience:______

Team(s) you currently represent:____________________________

Highest level of participation in football (e.g. Recreational, Club, School, University, Regional, National):______________________________

Do you have any coaching experience?: Yes/No (delete as appropriate)

If so, in what sport have you coached?:________________________

Number of years coaching experience:______

Highest level of coaching (e.g. Recreational, Club, School, University, Regional, National):______________________________________

Appendix 4.3

Test of Passing Accuracy (Adapted from Chell et al., 2003)

The test requires participants (marked X in Figure 1) to kick a soccer ball continuously at a target that is 7.6 metres away. The target is comprised of nine zones, each 30cm in width (see Figure 1 below). The ball striking the centre zone scores 10 points, the next zone along scores 8 points, the next zone 6 points, the next zone 4 points, and the last zone 2 points. Any ball striking outside the target zone scores zero. For each individual score to count, the ball must hit the target and then rebound back over the 7.6m line. Participants are also required to make each pass from within a boundary of 1.5m. Passes where the whole of the ball does not start from behind the 7.6m line and/or within the 1.5m boundary will be scored as zero. The objective is for participants to score as many points as possible in 90 seconds. Two assessors will score the passes, while a third assessor will time the test and call non-scoring passes.

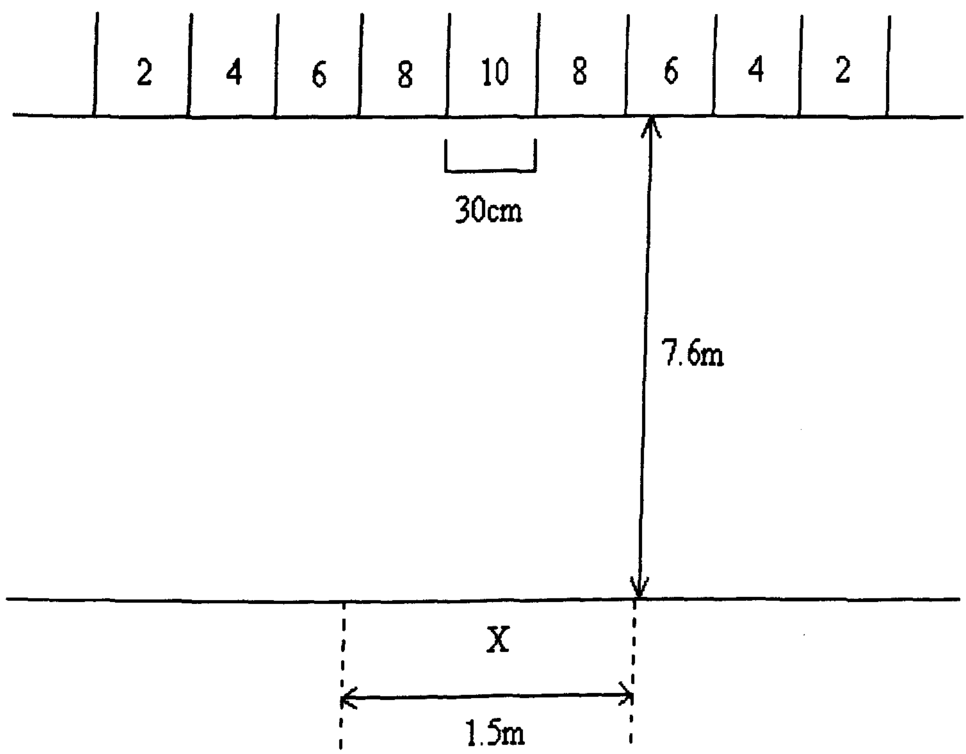


Figure 1. Test of passing accuracy

Appendix 4.4

Test of Shooting Accuracy (Adapted from Rosch et al., 2000)

This test allows assessment of accuracy and coordination in shooting from a ground pass. A research assistant (marked Y in Figure 2) stands level with the six-yard box and plays a 20-metre ground pass from the edge of the penalty area to the penalty spot. After a short run-up, the player shoots into the goal, which is divided into six segments (see Figure 2). If the pass is not accurate enough then the attempt is repeated. The participant is given a total of five attempts, scoring 6 points for shooting into the top right or left segments, 1 point for hitting the post or crossbar of these segments, 2 points for shooting into the top middle segment, and 1 point for shooting into the lower segments.

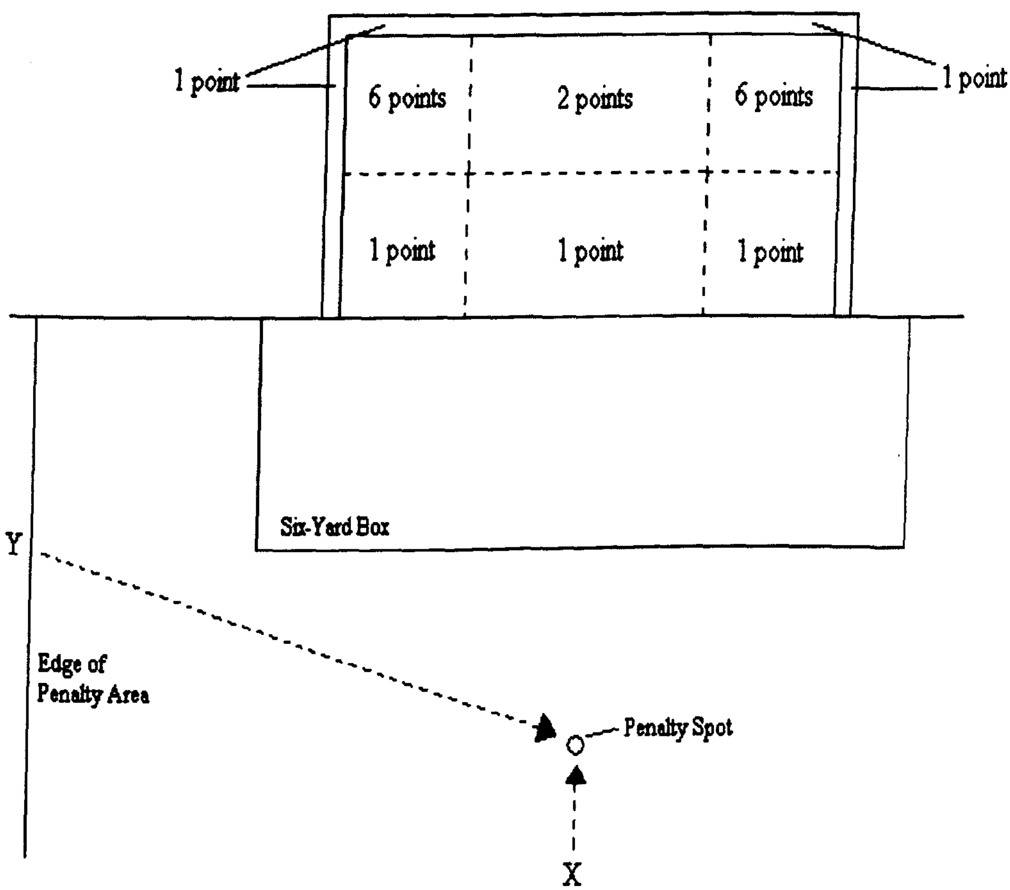


Figure 2. Test of shooting accuracy from a pass

Appendix 4.5

Pilot Survey Administered to a Sample of Coaches in Order to Identify Valid Indicators of Athlete Attention

UNIVERSITY OF
Chichester

Thank you for agreeing to take part in this study.

Introduction and Rationale

In the current study, we are interested in coaches' perceptions of athlete behaviour during demonstrations within a coaching session. Specifically, we would like to find out what kind of athlete behaviour coaches look for in order to help them assess whether or not their athletes are paying attention to demonstrations. The following questionnaire consists of a list of observable behaviours that coaches may use when evaluating athlete attention. You will be asked to rate each factor in terms of its suitability within this context.

All information you provide will be treated in the strictest of confidence.

Demographic Information

Please fill in your details in the spaces provided.

Full Name:____

Age:______ **Gender:** Male/Female (delete as appropriate)

Primary Sport:______________________________________

Number of Years Experience Coaching Primary Sport:_______

Highest Level of Coaching (e.g. Recreational, Club, School, University, Regional, National, etc.):______________________________

Number of Years Coaching at Highest Level (circle as appropriate):

Under 6 months   Under 1 year   1-2 years   2-5 years

5-10 years   Over 10 years

Sources of Evaluating Athletes' Attention to Demonstrations

Directions: Below is a list of behaviours that coaches may use to assess whether or not athletes are paying attention during demonstrations within a coaching session. For each behaviour, please circle "yes" or "no" depending on whether or not you think the behaviour is a suitable indicator of athlete attention during demonstrations. Please also indicate whether you feel the behaviour in question would suggest that the athlete is being "Attentive" or "Inattentive". Circle "Not Sure" if you are uncertain. Use the blank spaces to suggest any other behaviours that may inform you of whether an athlete is being attentive or inattentive to demonstrations.

	Is this behaviour a suitable indicator of athlete attention?		**Would this behaviour reflect that an athlete was being attentive or inattentive?**		
Looking in the direction of the coach	Yes	No	Attentive	Inattentive	Not Sure
Talking to other athletes	Yes	No	Attentive	Inattentive	Not Sure
Laughing	Yes	No	Attentive	Inattentive	Not Sure
Looking away from the coach	Yes	No	Attentive	Inattentive	Not Sure
________________	Yes	No	Attentive	Inattentive	Not Sure
________________	Yes	No	Attentive	Inattentive	Not Sure
________________	Yes	No	Attentive	Inattentive	Not Sure
________________	Yes	No	Attentive	Inattentive	Not Sure
________________	Yes	No	Attentive	Inattentive	Not Sure
________________	Yes	No	Attentive	Inattentive	Not Sure

Thank you for your participation

Appendix 4.6

Session Evaluation Form

Thinking about the session you have participated in today, please indicate how much you agree or disagree with each of the statements listed below. Read each item carefully and circle the appropriate number for each one. Again, please ask the experimenter if you have any questions or are unsure about anything.

Name: ______________________________ Bib Colour: ________________

(Circle the most appropriate category)

	Strongly Disagree	Disagree	Slightly Disagree	Uncertain	Slightly Agree	Agree	Strongly Agree
1. I didn't try very hard during the session	1	2	3	4	5	6	7
2. I really enjoyed the session	1	2	3	4	5	6	7
3. I liked participating in the session	1	2	3	4	5	6	7
4. It was important to me to do well in the session	1	2	3	4	5	6	7
5. I loved the feeling that the session gave me and want to capture it again	1	2	3	4	5	6	7
6. I would describe the session as very interesting	1	2	3	4	5	6	7
7. The session left me feeling great	1	2	3	4	5	6	7
8. I had fun during the session	1	2	3	4	5	6	7
9. The session did not hold my attention	1	2	3	4	5	6	7
10. I found the session extremely rewarding	1	2	3	4	5	6	7
11. Given the opportunity, I would take part in this kind of session again	1	2	3	4	5	6	7

N.B. Items 1, 3, 4, 6, 8 and 9 are intended to measure effort/mastery (adapted from Scanlan et al., 1993); items 2, 5, 7, and 10 are intended to measure autotelic experiences (adapted from Jackson & Eklund, 2002); and item 11 is intended to assess participants' intention to participate in similar sessions in the future.

Finally, we would like you to think back to the warm-up that you took part in prior to the arrival of the coach. During this warm-up, you were given some brief information about the coach by one of his assistants. Please try and recall this information and write it down in the space provided below. Don't worry if you can't remember exactly what was said, just try and give as accurate a description as possible of the information you received.

Thank you very much for your participation.

Appendix 4.7

Athlete Consent Form

CONSENT FORM

I, ... (PRINT NAME)

hereby give my consent to participate in the following coaching session, which forms part of the accreditation requirements as stipulated by a national coaching governing body.

By signing this form, I confirm that:

- the purpose of the session has been explained to me;
- I am satisfied that I understand the procedures involved;
- the possible benefits and risks of the session have been explained to me;
- any questions which I have asked about the session have been answered to my satisfaction;
- I understand that, during the course of the session, I have the right to ask further questions about it;
- the information which I have supplied prior to taking part in the session is true and accurate to the best of my knowledge and belief, and I understand that I must notify promptly of any changes to the information;
- I understand that my personal information will not be released to any third parties without my permission;
- I understand that my participation in the session is voluntary and I am therefore at liberty to withdraw my involvement at any stage;
- I understand that, if there is any concern about the appropriateness of my continuing in the session, I may be asked to withdraw my involvement at any stage;
- I understand that once the session has been completed, the information gained as a result of it (e.g., test scores, video footage) will be used for coach assessment purposes only.

NAME OF THE PARTICIPANT ....

SIGNATURE OF THE PARTICIPANT ....

DATE ....

Appendix 4.8

Scoring Sheet Used for Tests of Passing and Shooting Accuracy

Ability Scoring Sheet

Participant Name:____

Participant Bib Colour:____________________

Pre/Post Coaching Session (delete as appropriate)

Passing Accuracy Test

Mark a 1 each time a pass hits the corresponding area of the target. Passes that do not rebound beyond the scoring line are marked as zero.

Target Area Value	0	2	4	6	8	10
Times Scored						
Total Score						

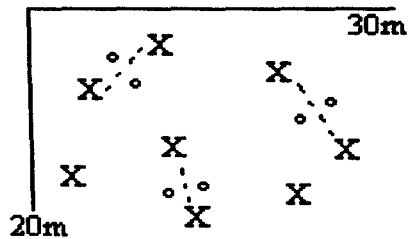
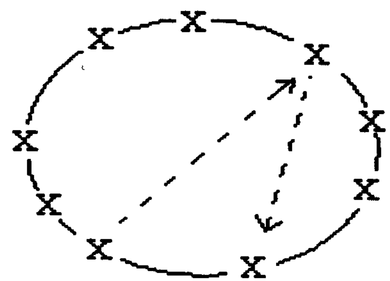
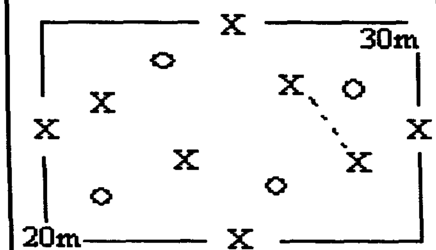
Test of Shooting Accuracy from a Pass

Participants are allowed 2 practice attempts before their first scored attempt at each corner segment. For each scored attempt, mark a cross in the appropriate box in terms of the result of the shot.

Target Area Value	**6 points** Top left or right corner segment	**2 points** Top middle segment	**1 point** Crossbar or post of top corner segments	**1 point** Lower segments	**0 points** Off target
Attempt 1					
Attempt 2					
Attempt 3					
Attempt 4					
Attempt 5					
Total Score					

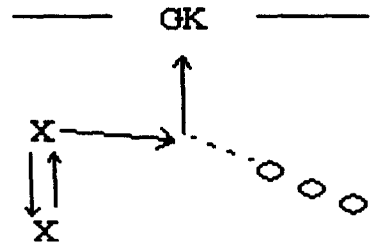
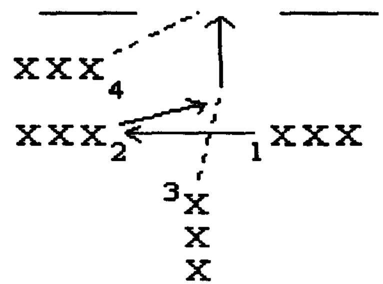
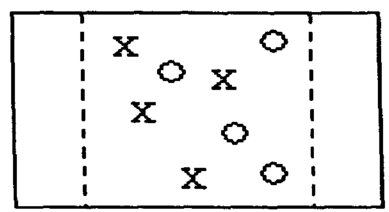
Appendix 4.9

Passing Drills (Adapted from FAW Football Leader's Resource Guide)

GAME	HOW TO PLAY	HOW IT LOOKS	CHANGES TO THE GAME
PASS TO SCORE	Pairs of cones placed 2 yards apart within area. Pairs of players try and score as many goals in 60 seconds by passing ball to partner through the cones		Easier: Teams of 3 rather than pairs Harder: Add defenders to try and block the pass
CIRCLE PASSING	Players positioned in a circle. Player with the ball passes to any other player and then follows their pass		Easier: Player dribbles then passes from a shorter distance Harder: One-touch passing; Player dribbles to the middle then turns before passes
GAME WITH SIDE PLAYERS	Two teams of 3 or 4 players on the inside of the area, with one player on each of the sides. Teams try to keep possession. Players on outside help the team in possession		Easier: Players on outside can't be tackled Harder: Players on outside only have one or two touches

Appendix 4.10

***Shooting Drills* (Adapted from FAW Football Leader's Resource Guide)**

GAME	HOW TO PLAY	HOW IT LOOKS	CHANGES TO THE GAME
CROSS AND SHOOT	Players are organised in to 2 groups: crossers (X) and shooters (O). Players take it in turns to cros and shoot. After a set period, swap roles		Easier: Reduce the shooter's distance from goal Harder: Shooters must score with first touch
UNDER SIEGE	Group is split into 4 equal teams. First player in group 1 serves ball to group 2. Player in group 2 heads the ball to group 3. Player in group 3 shoots to player in group 4. Players rotate in a clockwise direction		Easier: Serve balls on the floor Harder: Shot must be a volley; Add static defenders
IN THE ZONE	Group is split into 2 equal teams. Players play normal rules with one exception: a goal can only be scored from the end zone		Easier: Increase size of end zone Harder: Team must make at least 3 passes before shooting at goal

Appendix 4.11

SPSS Output for ANOVA Conducted on Data Obtained During Verbal Summaries

Descriptive Statistics

Dependent Variable: Total Time Spent Looking at Coach (Percentage of Clip)

Bib Colour	Mean	Std. Deviation	N
Green	26.6808	11.23791	12
Yellow	43.6200	9.90916	11
Red	32.4633	7.01951	12
Total	33.9871	11.63448	35

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Total Time Spent Looking at Coach (Percentage of Clip)

F	df1	df2	Sig.
1.383	2	32	.265

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Total Time Spent Looking at Coach (Percentage of Clip)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	1689.161[b]	2	844.581	9.278	.001	.367	18.555	.965
Intercept	40999.487	1	40999.487	450.371	.000	.934	450.371	1.000
Bib	1689.161	2	844.581	9.278	.001	.367	18.555	.965
Error	2913.120	32	91.035					
Total	46031.687	35						
Corrected Total	4602.281	34						

a. Computed using alpha = .05

b. R Squared = .367 (Adjusted R Squared = .327)

Multiple Comparisons

Dependent Variable: Total Time Spent Looking at Coach (Percentage of Clip)

Tukey HSD

(I) Bib Colour	(J) Bib Colour	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Green	Yellow	-16.9382*	3.98273	.000	-26.7202	-7.1621
	Red	-6.2825	3.80510	.312	-16.3544	3.7894
Yellow	Green	16.9382*	3.98273	.000	7.1621	26.7202
	Red	11.1567*	3.98273	.023	1.3696	20.9437
Red	Green	6.2825	3.80510	.312	-3.7894	16.3544
	Yellow	-11.1567*	3.98273	.023	-20.9437	-1.3696

Based on observed means.

*. The mean difference is significant at the .05 level.

Descriptive Statistics

Dependent Variable: Total Time Spent Looking Away From Coach (Percentage of Clip)

Bib Colour	Mean	Std. Deviation	N
Green	73.3192	11.23791	12
Yellow	56.3809	9.90977	11
Red	67.5375	7.01745	12
Total	66.0134	11.63403	35

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Total Time Spent Looking Away From Coach (Percentage of Clip)

F	df1	df2	Sig.
1.384	2	32	.265

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Total Time Spent Looking Away From Coach (Percentage of Clip)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	1688.999[b]	2	844.499	9.277	.001	.367	18.555	.965
Intercept	151033.861	1	151033.861	1659.187	.000	.981	1659.187	1.000
Bib	1688.999	2	844.499	9.277	.001	.367	18.555	.965
Error	2912.923	32	91.029					
Total	157123.968	35						
Corrected Total	4601.922	34						

a. Computed using alpha = .05

b. R Squared = .367 (Adjusted R Squared = .327)

Multiple Comparisons

Dependent Variable: Total Time Spent Looking Away From Coach (Percentage of Clip)
Tukey HSD

(I) Bib Colour	(J) Bib Colour	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Green	Yellow	16.9383*	3.98260	.000	7.1516	26.7250
	Red	5.7817	3.99506	.312	-3.7899	15.3533
Yellow	Green	-16.9383*	3.98260	.000	-26.7250	-7.1516
	Red	-11.1566*	3.98260	.023	-20.9433	-1.3699
Red	Green	-5.7817	3.99506	.312	-15.3533	3.7899
	Yellow	11.1566*	3.98260	.023	1.3699	20.9433

Based on observed means.

*. The mean difference is significant at the .05 level.

Descriptive Statistics

Dependent Variable: Total Number of Fixations On Coach

Bib Colour	Mean	Std. Deviation	N
Green	11.9975	3.00746	12
Yellow	14.9527	3.10359	11
Red	15.0175	2.32042	12
Total	13.9617	3.09421	35

Levene's Test of Equality of Error Variances [a]

Dependent Variable: Total Number of Fixations On Coach

F	df1	df2	Sig.
.583	2	32	.564

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Total Number of Fixations On Coach

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	70.477[b]	2	35.239	4.421	.020	.217	8.843	.720
Intercept	6837.960	1	6837.960	857.940	.000	.964	857.940	1.000
Bib	70.477	2	35.239	4.421	.020	.217	8.843	.720
Error	255.044	32	7.970					
Total	7149.052	35						
Corrected Total	325.521	34						

a. Computed using alpha = .05

b. R Squared = .217 (Adjusted R Squared = .168)

Multiple Comparisons

Dependent Variable: Total Number of Fixations On Coach

Tukey HSD

(I) Bib Colour	(J) Bib Colour	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Green	Yellow	-2.9552*	1.17944	.045	-5.8511	-.0594
	Red	-3.0200*	1.16264	.036	-5.8622	-.1878
Yellow	Green	2.9552*	1.17944	.045	.0594	5.8511
	Red	-.0048	1.17944	.999	-2.9006	2.8911
Red	Green	3.0200*	1.16264	.036	.1878	5.8622
	Yellow	.0048	1.17944	.999	-2.8911	2.9006

Based on observed means.

*. The mean difference is significant at the .05 level.

Descriptive Statistics

Dependent Variable: Percentage of time participant volunteered

Bib Colour	Mean	Std. Deviation	N
Green	33.3333	31.13996	12
Yellow	18.1818	18.87760	11
Red	25.0000	21.10579	12
Total	25.7143	24.52918	35

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Percentage of time participant volunteered

F	df1	df2	Sig.
3.409	2	32	.045

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Percentage of time participant volunteered

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Corrected Model	1326.840	2	663.420	1.110	.342	.065	2.219	.228
Intercept	22729.501	1	22729.501	38.021	.000	.543	38.021	1.000
Bib	1326.840	2	663.420	1.110	.342	.065	2.219	.228
Error	19130.303	32	597.822					
Total	43600.000	35						
Corrected Total	20457.143	34						

Appendix 4.12

SPSS Output for ANOVA Conducted on Data Obtained During "Free Practice" Period

Descriptive Statistics

Dependent Variable: Total Shots At Goal

Bib Colour	Mean	Std. Deviation	N
Green	1.44	1.424	9
Yellow	1.75	1.282	8
Red	.71	.951	7
Total	1.33	1.274	24

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Total Shots At Goal

F	df1	df2	Sig.
.102	2	21	.904

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Total Shots At Goal

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	4.183[b]	2	2.091	1.325	.287	.112	2.650	.254
Intercept	40.315	1	40.315	25.538	.000	.549	25.538	.998
Bib	4.183	2	2.091	1.325	.287	.112	2.650	.254
Error	33.151	21	1.579					
Total	80.000	24						
Corrected Total	37.333	23						

a. Computed using alpha = .05

b. R Squared = .112 (Adjusted R Squared = .027)

Descriptive Statistics

Dependent Variable: Total Passes Made

Bib Colour	Mean	Std. Deviation	N
Green	4.56	2.068	9
Yellow	4.25	2.053	8
Red	4.43	5.094	7
Total	4.42	3.092	24

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Total Passes Made

F	df1	df2	Sig.
3.314	2	21	.056

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Total Passes Made

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	.397[b]	2	.198	.019	.981	.002	.038	.052
Intercept	462.155	1	462.155	44.228	.000	.678	44.228	1.000
Bib	.397	2	.198	.019	.981	.002	.038	.052
Error	219.437	21	10.449					
Total	688.000	24						
Corrected Total	219.833	23						

a. Computed using alpha = .05

b. R Squared = .002 (Adjusted R Squared = -.093)

Descriptive Statistics

Dependent Variable: Total Tackles Made

Bib Colour	Mean	Std. Deviation	N
Green	1.67	1.500	9
Yellow	4.13	2.167	8
Red	2.14	2.340	7
Total	2.63	2.203	24

Levene's Test of Equality of Error Variances [a]

Dependent Variable: Total Tackles Made

F	df1	df2	Sig.
.306	2	21	.740

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Total Tackles Made

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	27.893[b]	2	13.946	3.498	.049	.250	6.996	.588
Intercept	166.126	1	166.126	41.664	.000	.665	41.664	1.000
Bib	27.893	2	13.946	3.498	.049	.250	6.996	.588
Error	83.732	21	3.987					
Total	277.000	24						
Corrected Total	111.625	23						

a. Computed using alpha = .05

b. R Squared = .250 (Adjusted R Squared = .178)

Multiple Comparisons

Dependent Variable: Total Tackles Made

Tukey HSD

(I) Bib Colour	(J) Bib Colour	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Green	Yellow	-2.45*	.970	.049	-4.90	-.01
	Red	-.46	1.006	.886	-3.01	2.08
Yellow	Green	2.45*	.970	.049	.01	4.90
	Red	1.98	1.033	.159	-.62	4.59
Red	Green	.46	1.006	.886	-2.08	3.01
	Yellow	-1.98	1.033	.159	-4.59	.62

Based on observed means.

*. The mean difference is significant at the .05 level.

Descriptive Statistics

Dependent Variable: Total Time Running (%)

Bib Colour	Mean	Std. Deviation	N
Green	13.2311	9.17380	9
Yellow	13.8050	6.45875	8
Red	14.3271	11.71445	7
Total	13.7421	8.83034	24

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Total Time Running (%)

F	df1	df2	Sig.
1.036	2	21	.372

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Total Time Running (%)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	4.778[b]	2	2.389	.028	.972	.003	.056	.054
Intercept	4514.676	1	4514.676	53.006	.000	.716	53.006	1.000
Bib	4.778	2	2.389	.028	.972	.003	.056	.054
Error	1788.647	21	85.174					
Total	6325.701	24						
Corrected Total	1793.424	23						

a. Computed using alpha = .05

b. R Squared = .003 (Adjusted R Squared = -.092)

Descriptive Statistics

Dependent Variable: Total Time Walking (%)

Bib Colour	Mean	Std. Deviation	N
Green	38.3889	7.02332	9
Yellow	47.7738	8.93943	8
Red	41.6286	9.92418	7
Total	42.4621	9.14815	24

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Total Time Walking (%)

F	df1	df2	Sig.
1.739	2	21	.200

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Total Time Walking (%)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	379.892[b]	2	189.946	2.582	.099	.197	5.164	.458
Intercept	43092.247	1	43092.247	585.740	.000	.965	585.740	1.000
Bib	379.892	2	189.946	2.582	.099	.197	5.164	.458
Error	1544.947	21	73.569					
Total	45197.523	24						
Corrected Total	1924.839	23						

a. Computed using alpha = .05

b. R Squared = .197 (Adjusted R Squared = .121)

Descriptive Statistics

Dependent Variable: Total Time Standing Still (%)

Bib Colour	Mean	Std. Deviation	N
Green	16.6256	10.88127	9
Yellow	6.1950	4.36084	8
Red	11.7343	8.17995	7
Total	11.7221	9.19024	24

Levene's Test of Equality of Error Variances [a]

Dependent Variable: Total Time Standing Still (%)

F	df1	df2	Sig.
5.337	2	21	.013

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Total Time Standing Still (%)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	460.787[b]	2	230.393	3.266	.058	.237	6.532	.557
Intercept	3150.757	1	3150.757	44.652	.000	.680	44.652	1.000
Bib	460.787	2	230.393	3.266	.058	.237	6.532	.557
Error	1481.803	21	70.562					
Total	5240.364	24						
Corrected Total	1942.590	23						

a. Computed using alpha = .05

b. R Squared = .237 (Adjusted R Squared = .165)

Multiple Comparisons

Dependent Variable: Total Time Standing Still (%)

Tukey HSD

(I) Bib Colour	(J) Bib Colour	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Green	Yellow	10.4306*	4.08173	.047	.1423	20.7188
	Red	4.8913	4.23326	.492	-5.7790	15.5616
Yellow	Green	-10.4306*	4.08173	.047	-20.7188	-.1423
	Red	-5.5393	4.34748	.425	-16.4974	5.4188
Red	Green	-4.8913	4.23326	.492	-15.5616	5.7790
	Yellow	5.5393	4.34748	.425	-5.4188	16.4974

Based on observed means.

*. The mean difference is significant at the .05 level.

Descriptive Statistics

Dependent Variable: Percentage of Time Participant Ran to Retrieve Ball

Bib Colour	Mean	Std. Deviation	N
Green	3.2100	7.46224	9
Yellow	8.0550	7.96157	8
Red	4.7629	7.41827	7
Total	5.2779	7.57976	24

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Percentage of Time Participant Ran to Retrieve Ball

F	df1	df2	Sig.
.192	2	21	.827

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Percentage of Time Participant Ran to Retrieve Ball

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	102.041[b]	2	51.021	.879	.430	.077	1.757	.181
Intercept	677.873	1	677.873	11.674	.003	.357	11.674	.903
Bib	102.041	2	51.021	.879	.430	.077	1.757	.181
Error	1219.371	21	58.065					
Total	1989.966	24						
Corrected Total	1321.412	23						

a. Computed using alpha = .05

b. R Squared = .077 (Adjusted R Squared = -.011)

Descriptive Statistics

Dependent Variable: Percentage of Time Participant Walked to Retrieve Ball

Bib Colour	Mean	Std. Deviation	N
Green	1.9756	4.07424	9
Yellow	6.9450	4.95920	8
Red	.9529	2.52102	7
Total	3.3338	4.67973	24

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Percentage of Time Participant Walked to Retrieve Ball

F	df1	df2	Sig.
1.305	2	21	.292

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Percentage of Time Participant Walked to Retrieve Ball

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	160.612[b]	2	80.306	4.916	.018	.319	9.831	.745
Intercept	257.238	1	257.238	15.746	.001	.428	15.746	.968
Bib	160.612	2	80.306	4.916	.018	.319	9.831	.745
Error	343.085	21	16.337					
Total	770.430	24						
Corrected Total	503.696	23						

a. Computed using alpha = .05

b. R Squared = .319 (Adjusted R Squared = .254)

Multiple Comparisons

Dependent Variable: Percentage of Time Participant Walked to Retrieve Ball
Tukey HSD

(I) Bib Colour	(J) Bib Colour	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Green	Yellow	-4.9094*	1.96403	.049	-9.8188	-.0190
	Red	1.0227	2.03606	.871	-4.1116	6.1570
Yellow	Green	4.9094*	1.96403	.049	.0190	9.8188
	Red	5.9921*	2.09101	.024	.7193	11.2649
Red	Green	-1.0227	2.03606	.871	-6.1570	4.1116
	Yellow	-5.9921*	2.09101	.024	-11.2649	-.7193

Based on observed means.

*. The mean difference is significant at the .05 level.

Descriptive Statistics

Dependent Variable: Percentage of Time Participant Did Not Retrieve Ball

Bib Colour	Mean	Std. Deviation	N
Green	94.8144	7.61683	9
Yellow	85.0013	10.19955	8
Red	94.2843	9.76030	7
Total	91.3888	9.90089	24

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Percentage of Time Participant Did Not Retrieve Ball

F	df1	df2	Sig.
.225	2	21	.801

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Percentage of Time Participant Did Not Retrieve Ball

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	490.709[b]	2	245.354	2.921	.076	.218	5.842	.509
Intercept	198250.904	1	198250.904	2360.230	.000	.991	2360.230	1.000
Bib	490.709	2	245.354	2.921	.076	.218	5.842	.509
Error	1763.925	21	83.996					
Total	202700.321	24						
Corrected Total	2254.634	23						

a. Computed using alpha = .05

b. R Squared = .218 (Adjusted R Squared = .143)

Appendix 4.13

SPSS Output for ANOVA Conducted on Data Obtained During Tests of Passing and Shooting Ability

Descriptive Statistics

Dependent Variable: Percentage Improvement in Passing Ability

Bib Colour	Mean	Std. Deviation	N
Green/Orange	14.5027	17.69378	12
Yellow/Green	6.9279	11.74997	11
Red/Blue	5.4507	17.64833	12
Total	9.0185	16.09917	35

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Percentage Improvement in Passing Ability

F	df1	df2	Sig.
.455	2	32	.638

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Percentage Improvement in Passing Ability

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	561.742[b]	2	280.871	1.089	.349	.064	2.179	.224
Intercept	2805.397	1	2805.397	10.881	.002	.254	10.881	.892
Bib	561.742	2	280.871	1.089	.349	.064	2.179	.224
Error	8250.485	32	257.828					
Total	11658.890	35						
Corrected Total	8812.227	34						

a. Computed using alpha = .05

b. R Squared = .064 (Adjusted R Squared = .005)

Descriptive Statistics

Dependent Variable: Percentage Improvement in Shooting Ability

Bib Colour	Mean	Std. Deviation	N
Green/Orange	67.3743	185.48981	12
Yellow/Green	43.2401	90.01121	11
Red/Blue	19.5238	98.50935	12
Total	43.3834	130.60659	35

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Percentage Improvement in Shooting Ability

F	df1	df2	Sig.
1.764	2	32	.188

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+Bib

Tests of Between-Subjects Effects

Dependent Variable: Percentage Improvement in Shooting Ability

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	13738.368[b]	2	6869.184	.388	.681	.024	.776	.107
Intercept	65751.381	1	65751.381	3.716	.063	.104	3.716	.464
Bib	13738.368	2	6869.184	.388	.681	.024	.776	.107
Error	566236.368	32	17694.887					
Total	645848.898	35						
Corrected Total	579974.736	34						

a. Computed using alpha = .05

b. R Squared = .024 (Adjusted R Squared = -.037)

Appendix 4.14

SPSS Output for MANOVA Conducted on Data Obtained Using the Session Evaluation Form

Between-Subjects Factors

		Value Label	N
Bib Colour	1	Green/ Orange	12
	2	Yellow/ Green	11
	3	Red/Blue	12

Descriptive Statistics

	Bib Colour	Mean	Std. Deviation	N
Total Rating of Enjoyment	Green/Orange	49.33	8.978	12
	Yellow/Green	52.82	6.129	11
	Red/Blue	50.33	8.305	12
	Total	50.77	7.848	35
Total Rating of Intention to Participate in Future Sessions	Green/Orange	5.42	.900	12
	Yellow/Green	5.64	1.804	11
	Red/Blue	5.50	.798	12
	Total	5.51	1.197	35

Box's Test of Equality of Covariance Matrices[a]

Box's M	16.348
F	2.477
df1	6
df2	24221.190
Sig.	.021

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept+Bib

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	Pillai's Trace	.979	728.491	2.000	31.000	.000	.979	1456.982	1.000
	Wilks' Lambda	.021	728.491	2.000	31.000	.000	.979	1456.982	1.000
	Hotelling's Trace	46.999	728.491	2.000	31.000	.000	.979	1456.982	1.000
	Roy's Largest Root	46.999	728.491	2.000	31.000	.000	.979	1456.982	1.000
Bib	Pillai's Trace	.036	.290	4.000	64.000	.884	.018	1.158	.110
	Wilks' Lambda	.964	.283	4.000	62.000	.888	.018	1.132	.109
	Hotelling's Trace	.037	.276	4.000	60.000	.892	.018	1.106	.107
	Roy's Largest Root	.037	.588	2.000	32.000	.561	.035	1.177	.139

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