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Running head: Behavioral consequences of coach reputation

**The influence of coach reputation on the behavioral responses of male soccer
players**

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Abstract

The present study examined the impact of reputation information on athletes' behavioral responses to coaches within a naturalistic, field-based setting. Using a between-group design, male soccer players ($n = 35$) were assigned to one of three experimental conditions (i.e., experienced reputation, inexperienced reputation, no reputation) prior to taking part in a coaching session delivered by an unknown coach. Participants' behaviors indicative of attention to coach instruction, effort and persistence, and willingness to participate in demonstrations were video recorded throughout the coaching session. Multivariate analyses of variance revealed that participants in the experienced reputation condition exhibited significantly greater attention to coach instruction, and greater effort and persistence during free practice than participants in the inexperienced reputation condition. Results related to participants' willingness to participate in demonstrations failed to yield any significant differences. The results provide further evidence to support the contention that athletes use reputation information as a basis for their initial expectancies of coaches, and such expectancies have the potential to influence athletes' behavior during coach-athlete interactions. The findings also indicate that expectancies based on positive information may be more powerful than negatively-framed expectancies, and can be harnessed by coaches as a means of developing effective relationships with their athletes.

Key words: interpersonal perception; first impressions; reputation bias; non-verbal communication; coach-athlete relationship.

The influence of coach reputation on the behavioral responses of male soccer players

Defined as “beliefs about a future state of affairs” (Olson, Roese, & Zanna, 1996, p. 211), expectancies have been shown to influence perceivers’ thoughts, feelings, and actions in a variety of social contexts ranging from simulated telephone conversations (e.g., Snyder, Tanke, & Berscheid, 1977) to clinical settings such as consultations with medical professionals (e.g., Furnham, Petrides, & Temple, 2006). Expectancies inform the predictions that people make about the outcomes of future events, the properties of inanimate objects, and the behaviors likely to be exhibited by target individuals and groups (Jussim, 1990; Olson et al., 1996).

In the context of sport, social interaction is ubiquitous, making the formation of interpersonal expectancies between individuals such as teammates, coaches, opponents, officials, and various other sports personnel an inevitable consequence (Greenlees, 2007). One important sporting relationship that has been shown to be determined by expectancies and their consequences is that which exists between the athlete and the coach (e.g., Becker, 2009; Horn, Lox, & Labrador, 2010). The coach-athlete relationship is a highly interdependent alliance in which the thoughts, feelings, and behaviors of the people within it are mutually and causally interlinked (Jowett & Poczwardowski, 2007). Becker (2009) proposed that this relationship is of crucial importance to the performance of both athlete and coach. Furthermore, it has been demonstrated that the interpersonal expectancies adopted between athlete and coach are an important influence on the way in which this relationship develops. For example, Solomon, DiMarco, Ohlson and Reece (1998) found that basketball coaches’ expectancies of athletes influenced their coaching behavior, with high-expectancy athletes receiving more overall feedback, praise, and instruction from their coach than low-expectancy athletes.

There is also emerging evidence that expectancies formed by athletes can impact on the relationship they forge with their coach. Specifically, it has been demonstrated (e.g., Manley, Greenlees, Graydon, Thelwell, Filby, & Smith, 2008; Manley, Greenlees, Smith, & Thelwell, 2010; Thelwell, Page, Lush, Greenlees, & Manley, 2012; Thelwell, Weston, Greenlees, Page, & Manley, 2010) that athletes form initial expectancies of a coach's level of competency using various sources of information (e.g., gender, clothing, physique, reputation), and that these expectancies have the potential to impact on the quality of the relationship that evolves. With the above research in mind, it appears that athletes' expectancies of coaches are an influential factor in the development and maintenance of coach-athlete relationships. The present study aims to build on the findings of previous literature (e.g., Jones, Paull, & Erskine, 2002; Manley et al., 2008; Manley et al., 2010; Towler & Dipboye, 2006) where reputation information has been shown to elicit interpersonal expectancy effects. To date there has been no research that has examined the behavioral consequences of these expectancies from the perspective of the athlete. Furthermore, whilst athletes seem to rely heavily on third-party reports (e.g., reputation) when forming initial impressions and expectancies of coaches (e.g., Manley et al., 2008; 2010; Thelwell et al., 2012), this finding has not yet been substantiated with evidence obtained from naturalistic or field-based experiments. In order to address these gaps in the literature, the primary aim of this study is to examine the extent to which athletes' reputation-based expectancies impact on their behavioral responses towards an unknown coach.

Within the context of sports coaching, there are a number of athlete behaviors that might be influenced by the expectancies that an athlete holds of his or her coach. One such behavior is attention to coach instruction. There is ample evidence (e.g., Higgins & Bargh, 1987; Olson et al., 1996) to support the notion that expectancies

have the potential to influence perceivers' attention and encoding processes, despite debate as to whether expectancy-consistent (e.g., Harrison, Jr., 2001; Miller & Turnbull, 1986) or expectancy-inconsistent information (e.g., Macrae & Bodenhausen, 2000) will be attended to during social interactions. The expectancy-attention link has important implications not only for the development of the relationship between athlete and coach, but also for an athlete's technical development. For example, before athletes can become competent at performing a given skill, it is vital that they pay close attention to any instructions or demonstrations offered by the coach (McPherson, 1994). If an athlete is unable or unwilling to attend to such information due to his/her expectancies of the coach, then his/her learning and development are likely to be impeded.

Drawing on self-efficacy theory (Bandura, 1986; 1997), Lent and Lopez (2002) theorized that when people form close relationships with others, they not only develop expectancies about their own personal capabilities within that relationship (i.e., self-efficacy beliefs), but they also develop a set of other-efficacy beliefs which represent their confidence in the capabilities of the other person in the relationship. So, in the coach-athlete relationship, athletes will develop expectancies not just regarding their own abilities, but also the perceived abilities of the coach. The other-efficacy expectancies that athletes develop about their coaches might impact on the behavioral responses subsequently displayed. For example, in a qualitative study investigating athletes' perceptions of their relationship with their coach, Jackson, Knapp and Beauchamp (2009) revealed that athletes are more likely to be responsive, listen attentively and act upon advice from coaches should their other-efficacy beliefs be positive. As one athlete in the study commented: "*If I didn't think my coach was any good, I just wouldn't listen, I would just let it go over my head and go 'yeah, yeah, yeah'*" (p.224). Moreover, Jackson and colleagues also discovered that when athletes

were confident in their coaches' capabilities, the athletes reported being more likely to initiate communication, seek advice, and pay attention to coach feedback. However, research is yet to corroborate these self-reports through the direct observation and measurement of athletes' behaviors.

In addition to attentional focus, variance in effort and persistence has been identified as a direct behavioral consequence of interpersonal expectancies. The self-fulfilling prophecy (Merton, 1948) is just one behavioral consequence of interpersonal expectancies which has the potential to impact on individuals' levels of effort and persistence. Often referred to as behavioral confirmation effects (Miller & Turnbull, 1986), self-fulfilling prophecies occur when a perceiver's false expectations of a target individual are acknowledged, interpreted, and then confirmed by the target so that the originally false expectation comes true. Previous research has demonstrated that even inaccurate expectancies can lead people to alter their levels of effort, persistence and engagement in tasks ranging from competitive strength tests (Weinberg, Gould, & Jackson, 1979) to brief conversations (Snyder et al., 1977).

Experimental studies have also 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. Leventhal, Abrami, Perry, and Breen (1975) reported that teacher reputation was one of the primary determinants of college students' course selection. In addition, Wild, Enzle, and Hawkins (1992) demonstrated that students' "free-practice" behavior during an introductory piano lesson was influenced by expectancies based on third-party reports of their teacher's motivational orientation. Although the above studies were conducted within the context of student-teacher interactions, it can be inferred from these findings that athletes' reputation-based expectancies of a coach may influence not only athletes' 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 athletes persist with such activities.

The present study aims to provide the first field-based examination of *athlete-centered expectancy effects* within the coach-athlete relationship by examining the expectancy-behavior link and the associated implications this may have for athletic development and effective coach-athlete interactions. Specifically, the study will investigate the extent to which expectancies developed as a result of coach reputation information influence athletes' attention, effort and persistence, and willingness to participate in demonstrations. It is expected that the findings of the study will provide further support for the influence of third party reports on athletes' expectancies and ensuing responses to coaches. In light of previous research evidence (Jackson et al., 2009; Jones et al., 2002; Manley et al., 2008; Manley et al., 2010; Towler & Dipboye, 2006), it is hypothesized that athletes led by a reportedly experienced coach will exhibit significantly greater levels in each of the behavioral measures than those led by a reportedly inexperienced coach.

Method

Participants

Thirty-five male soccer players (Mean age = 18.2 years, $SD = 2.2$; Mean playing experience = 11.5 years, $SD = 2.6$), recruited from three British college and university soccer teams, volunteered to take part in the study. The participants were predominantly White Caucasian (94.3%), with the remainder being of Mixed Race (5.7%). Participants 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 participation level.

The coach (i.e., the first author) was 28 years old, had a total of five years experience of coaching soccer, and had completed all four Football Association of

Wales (FAW) Foundation Coaching Awards. During each coaching session, the coach wore the exact same clothing (i.e., white short-sleeved t-shirt with dark blue trim on the sleeves, plain white shorts, white socks).

Procedures

The 35 participants were randomly assigned to one of three groups, each of whom completed a two-hour coaching session with a previously unknown coach. The same experimental procedures were conducted on three separate occasions, with 11-12 participants on each occasion. This was deemed necessary since running a single coaching session with all 35 participants would have compromised the extent to which participants' specific behaviors could be captured and analyzed accurately using video footage. During each coaching session, participants were provided with information about the unknown coach based on their allocated condition. Each two-hour session consisted of a set of practice drills, verbal summaries from the coach, and a 10-minute free practice session. Specific participant behaviors were observed and assessed using video recording procedures. The remainder of this section provides more specific details regarding the experimental procedures followed.

Participant recruitment. Participants were initially sent an e-mail inviting them to take part in a two-hour soccer coaching session designed to improve passing and shooting ability. The email included a cover story informing prospective participants that by agreeing to take part in the session, they would be helping a coach fulfill the assessment requirements associated with a national coaching qualification.

Participants were also informed that the training session would be video recorded to enable assessment of the coach's behaviour at a later date. The email included a copy of the consent form, which participants signed on arrival at the coaching session venue.

Procedures prior to the introduction of the coach. On arrival at the venue, participants were welcomed by a confederate research assistant, who randomly assigned participants to one of three experimental groups (i.e., experienced reputation, inexperienced reputation, no reputation) by giving them a colored bib (red, green, or yellow) to wear for the duration of the coaching session. The bibs ensured that participants could be clearly identified on the video footage by experimental group. An equal number of participants were assigned to each experimental condition (with the exception of the third repetition of the coaching session, which consisted of 11 participants). The coach remained blind to the experimental conditions throughout the delivery of the coaching sessions and during subsequent data analysis. Participants were then led out to the training area to complete a brief warm-up in their experimental groups. During the warm-up, participants received reputation information about the visiting coach who would be delivering the session. This reputation information was verbally conveyed by the confederate research assistant. Warm-up groups were separated by a distance of at least 30 metres as pilot testing of the procedures had deemed this sufficient to prevent participants from overhearing conflicting reputation information. The confederate who provided the reputation information was a member of teaching staff who was well known to the participants 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). Participants in the no reputation condition were provided with the following details:

“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 will be arriving shortly so carry on with your warm-up exercises and I'll call you in when he arrives."

Participants in the experienced reputation condition received the same information as above, except that the following details were provided as the penultimate sentence: *"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."* Similarly, participants in the inexperience reputation condition received the same information as above, except that the penultimate sentence was altered to be read as follows: *"He's currently working towards completing his first coaching qualification and has not coached any teams as of yet so he's pretty inexperienced at running this kind of session."*

Initial introduction to the coach. Once all three experimental groups had been provided with the reputation information and had completed the warm-up, the coach arrived and asked all participants to join him so that he could introduce himself for the first time and provide everyone with a brief overview of the session. Participants were asked to gather around a horseshoe-shaped area that was marked out by cones 2.5m from the edge of the training area where the drills would be conducted. 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. During the introduction, the coach reiterated the cover story (i.e., video cameras were being used to capture the coach's behavior as part of an assessment linked to a formal coaching qualification). Before outlining the first practice drill, the coach informed participants that whenever they heard him blow his whistle, they should gather around the edge of the horseshoe so that the coach could provide 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 participants' behaviors.

Content and structure of the coaching session. The coaching session consisted of six soccer drills; three of which focused on participants' passing ability, and three designed to improve participants' shooting ability. The drills were adapted from the FAW Football Leader's Resource Guide (FAW, 2001). In order to facilitate the accurate observation and analysis of participants' specific behaviors throughout the coaching session, a total of eight verbal summaries were incorporated within the coaching session. These verbal summaries were designed to allow for breaks in physical training when the athletes could be addressed as a group by the coach. Each verbal summary served as a way of recapping on the previous drills (where applicable), describing the content and relevance of the upcoming drill, and providing an opportunity to observe the specific behaviors exhibited by participants when directly addressed by the coach. Table 1 provides further details regarding the order, duration, and content of each of the verbal summaries delivered by the coach.

INSERT TABLE 1 HERE

Free-practice period. 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 training area for a period of approximately 10 minutes (using a cover story of having to prepare some post-training ability tests). This allowed participants their first and only opportunity to engage in "free practice" (i.e., practice in the coach's absence).

Session conclusion and debrief. The end of the coaching session was marked by the return of the coach to the training area and the final verbal summary. At this point, the coach thanked the participants for taking part in the session before leaving the training area again. The confederate research assistant then led the participants

back to an indoor area where they were each asked to complete a manipulation check designed to verify that participants had heard and understood the coach reputation information provided to them during the warm-up. Participants 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. Pen and paper were provided so that participants could write down the information as they remembered it. On completion of the manipulation check, the coach returned to provide participants with a full debrief regarding the true nature of the study (i.e., video cameras used to capture participants' behaviors in response to coach instruction). In light of this debrief, participants were asked to provide consent to their data being used for research purposes. All participants consented to their data being included within the analyses. Finally, the coach thanked the participants once again for their cooperation. The study was carried out in line with the ethics procedures of the University of the first author.

Measures

Two methods were employed in order to identify appropriate behavioral measures that could be used to assess participants' effort, persistence, and attention to coach instruction at key points during the coaching session. First, a review of the existing literature was conducted in order to identify valid behavioral indicators of attention, effort, and persistence. Following this, a sample of 25 sports coaches (Male = 19, Female = 6; Mean age = 28.0 years, $SD = 6.9$; Mean coaching experience = 5.7 years, $SD = 4.4$) were surveyed in order to ensure that the behavioral indicators initially identified were valid within the context of sports coaching.

Indicators of participant attention to coach instruction. Gaze behavior (i.e., gaze direction and fixation frequency) was identified as a valid indicator of attention following examination of previous relevant literature (e.g., Eccles, Walsh, & Ingledew, 2006; Jacob & Karn, 2003; Just & Carpenter, 1976; Langton, Watt, &

Bruce, 2000; Poole & Ball, 2006). According to Just and Carpenter (1976), the direction of a person's gaze indicates the primary thought in a given list of cognitive processes and can determine where a person's attention is being directed. In addition, fixations (i.e., moments when the gaze direction is relatively stationary) can reveal the amount of processing or encoding of information being applied to a particular object (Poole & Ball, 2006), with higher fixation *frequency* (i.e., greater number of fixations) on a particular area believed to be indicative of greater interest in the target object (Jacob & Karn, 2003). The sample of sports coaches agreed unanimously that gaze behavior represented a valid observable cue that a coach may use to assess whether or not an athlete is paying attention during a coaching demonstration. Thus, participants' gaze toward the coach and fixation frequency were employed as indicators of athlete attention to coach instruction.

Participants' gaze behaviors that were captured on video during the verbal summaries were coded by the first author (twice) and the fifth author. An *Apple Macintosh* laptop and the *Sportscod 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 participants' gaze toward 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 participants fixed their gaze on the coach during the verbal summaries.

Participants' willingness to participate in demonstrations. In conjunction with guidelines from the coaching literature (e.g., Cassidy, Jones, & Potrac, 2009), all 25 coaches indicated that it was common practice within their coaching sessions to request the help of athletes when demonstrating specific techniques or exercises. Thus, it was decided that throughout the coaching session, participants would be

provided with opportunities to volunteer to participate in coaching demonstrations during the introduction of each new coaching drill. These opportunities consisted of the coach explicitly asking for volunteers to help demonstrate the next activity. Participants were asked to raise their hand if they were willing to participate in the demonstration. In line with the views of the sample of 25 coaches, a raised hand in response to this request was deemed to be an observable indication of high levels of effort and engagement in the session. The coach ensured that all participants were given plenty of opportunity to volunteer by leaving a brief pause between asking the question and selecting willing volunteers. Participants' willingness to participate in demonstrations was captured and coded using the same equipment and personnel as the measures of attention to coach instruction. However, willingness to participate in demonstrations was measured by calculating the percentage of time participants volunteered to take part in the coaching demonstrations.

Behavioral measures of participants' effort and persistence. Based on methods used by Wild et al. (1992), the analysis of "free practice" behaviors was employed to represent a behavioral measure of effort and persistence. Participants' "free practice" behavior was videotaped and later coded in terms of the percentage of total time participants exhibited each of four behaviors: running; walking; standing still; and retrieving the ball from out of play. In addition, the total number of drill-specific activities (i.e., attempted shots, passes, and tackles) made by participants during the "free practice" period were recorded. Any behaviors exhibited when the ball was out of play or when the participant was taking his turn in goal were not included in the analyses. Again, this method of measuring effort and persistence was met with unanimous approval from the 25 coaches surveyed. Participants' "free practice" behaviors were coded in the same way as behaviors exhibited during the verbal summaries (i.e., gaze behavior and willingness to participate in demonstrations).

Data Analysis

Two separate multivariate analyses of variance (MANOVA) were performed to examine changes in behavior during verbal summaries (i.e., gaze toward the coach; fixation frequency; willingness to participate in demonstrations) and behavior during “free practice”. In the event of significant main effects, follow-up univariate analyses of variance (ANOVA) were performed. Eta squared (η^2) effect sizes were also computed. In line with the recommendations of Clark-Carter (2010), 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. To ensure inter-rater reliability, intraclass correlation coefficients (ICC) between coders were conducted for each dependent variable. In addition, ICCs were conducted between the two sets of coded data produced by the first author to ensure intra-rater reliability. According to Vincent (1999), ICCs of .70 or above represent acceptable levels of test-retest reliability. Responses to the manipulation check question were examined to ensure that participants were able to accurately recall the relevant reputation information.

Results

Preliminary Analysis

Examination of participants’ written responses to the manipulation check 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 (see Tables 2 & 3 for mean values) were included in subsequent analyses. ICCs revealed sufficient levels of inter-rater and intra-rater reliability for gaze toward the coach (inter-rater = .85; intra-rater = .99), fixation frequency (inter-rater = .79; intra-rater = .98), and willingness to participate in demonstrations (inter-rater = 1.00; intra-rater = 1.00). ICCs computed for measures of “free practice” behavior were all

1.00 (i.e., absolute agreement), except for the following: 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).

Main Analyses

MANOVAs revealed significant main effects for coach reputation on athletes' observable behaviors during verbal summaries (Wilks' Lambda $_{6, 60} = 0.48$, $F = 4.47$, $p < .001$, $\eta^2 = .31$, observed power = .98) and "free practice" (Wilks' Lambda $_{10, 34} = 0.29$, $F = 2.89$, $p < .01$, $\eta^2 = .46$, observed power = .93). Follow-up ANOVAs and post-hoc tests (where required) will now be described for each dependent variable.

Gaze toward the coach. Data analysis following the combination of data obtained during all verbal summaries revealed a significant between-group difference in participants' overall gaze toward the coach ($F = 9.28$, $p = .001$, $\eta^2 = .37$, observed power = 0.97). A post-hoc Tukey HSD test revealed that participants in the experienced reputation condition gazed toward the coach significantly more than did participants in the inexperienced condition ($p < .001$). In addition, the analyses revealed that participants in the experienced reputation condition exhibited significantly greater levels of gaze toward the coach than participants within the no reputation condition ($p < .05$). No significant differences in gaze toward the coach were found between the inexperienced and no reputation conditions.

INSERT TABLE 2 HERE

Fixation frequency. Data analysis following the combination of data obtained during all verbal summaries 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 participants in the experienced reputation condition exhibited significantly greater fixation frequency than did

participants in the inexperienced condition ($p < .05$). Moreover, participants in the no reputation condition displayed significantly greater fixation frequency than participants in the inexperienced reputation condition ($p < .05$). There was no significant difference between the experienced and no reputation conditions.

Willingness to Participate in Demonstrations. Analyses of the data obtained during the five verbal summaries regarding participants' 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 2.

Effort and Persistence. Significant main effects were found for total drill-specific activities ($F = 3.72$, $p < .05$, $\eta^2 = .26$, observed power = 0.62) and retrieving the ball from out of play ($F = 4.92$, $p = .018$, $\eta^2 = .40$, observed power = 0.75) during "free practice". 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 were conducted for this measure. Mean values are displayed in Table 3.

Post-hoc Tukey HSD tests revealed that participants in the experienced reputation condition completed significantly more drill-specific activities ($p < .05$), spent significantly less time standing still ($p < .05$), and retrieved the ball from out of play on significantly more occasions ($p < .05$) compared to participants within the inexperienced reputation condition. In addition, the analysis revealed that athletes retrieved 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 observed regarding "free practice" behavior¹.

INSERT TABLE 3 HERE

Discussion

The aim of the present study was to examine the effect of coach reputation on the behavioral responses of athletes within the context of a naturalistic coaching

session. The findings indicate that reputation-based expectancies have the potential to influence athletes' behavioral responses to coaches within a field-based setting. It was predicted that participants would exhibit significantly greater levels of attention in response to a coach who was described as experienced rather than inexperienced. The results for data obtained during the verbal summaries revealed significant differences for both measures of participants' gaze behavior (i.e., gaze toward the coach; fixation frequency). According to results for these indicators of attention, participants in the experienced reputation condition attended to verbal summaries significantly more than participants in the inexperienced reputation condition. Thus, with regard to attention to coach instruction, the hypothesis was supported.

The results obtained for gaze toward the coach revealed that participants in the no reputation condition paid less attention to the coach's verbal summaries than participants in the experienced reputation condition. In contrast, there were no significant differences between the inexperienced reputation and no reputation groups regarding gaze direction during verbal summaries. Such results appear to run counter to the implication (e.g., Fiske & Taylor, 1991) 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), which has suggested that positive expectancy effects are more powerful than negative ones. Consequently, the findings for gaze direction suggest that if coaches wish to maximize athletes' attention to instruction, they should make attempts to harness the beneficial aspects of expectancies by placing emphasis on positive informational cues. Furthermore, given that fixation frequency is indicative of greater interest in the target object (Jacob & Karn, 2003), it appears that athletes who knew nothing about the coach's reputation were just as eager to attend to the coaching instructions as athletes who were privy to the experienced reputation held by the coach. Such an

interpretation fuels the contention that coaches should simply avoid placing emphasis on negative informational cues by accentuating more positive qualities (e.g., autonomy-supportive behaviors) in order to help athletes maintain an optimal level of attention to their instructions.

The results for fixation frequency also indicated that participants in the no reputation condition paid significantly more attention to the coach during the delivery of verbal summaries compared with participants who believed the coach was inexperienced. In this case, it could be argued that the negatively-framed reputation information led participants in the inexperienced condition to pay less attention to coach instruction than participants who were given no reputation information. However, there is another way in which the fixation frequency data can be interpreted. Poole and Ball (2006) 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 participants in the no reputation condition to engage in a more rigorous 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 provide an alternative explanation as to why these participants displayed greater fixation frequency compared with those in the inexperienced reputation condition.

It was expected that participants' effort and persistence during the "free practice" period would be greater when the coach was described as experienced as opposed to inexperienced. Of the five behavioral indicators of effort and persistence, three showed a significant difference in the hypothesized direction. Participants in the experienced reputation condition completed more drill-specific activities (e.g., shots,

passes, tackles/blocks), spent less time standing still, and retrieved the ball from out of play on more occasions compared with participants in the inexperienced reputation condition. These results infer that participants in the experienced reputation condition exerted more effort and showed greater persistence during “free practice” than did participants who were told that the coach was inexperienced. In addition, participants 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 they retrieved the ball from out of play. By voluntarily retrieving the ball from out of play more frequently than others, the authors posit that the participants in the experienced coach condition are exhibiting a greater level of urgency to continue with the training session (and therefore greater effort) than those within the inexperienced and no reputation conditions. Thus, as with the findings related to participants’ attentive gaze behavior, these results add further credence to the suggestion (e.g., Jussim & Harber, 2005) that positive expectancy effects are more powerful than expectancy effects elicited by negative information. However, given that individual differences (e.g., levels of self-determined or intrinsic motivation) were not accounted for between experimental groups, the authors remain cautious about this interpretation.

It was also hypothesized that the reputation of the coach would influence participants’ willingness to participate in coaching demonstrations. Specifically, participants in the experienced reputation condition were expected to show significantly greater willingness to participate in demonstrations than those in the inexperienced reputation condition. The overall results showed no significant differences between any of the three experimental conditions. However, the data obtained showed a trend that was counter to the original hypothesis. Although not significant, participants in the inexperienced reputation condition showed greater

willingness to participate in demonstrations than those in the other two experimental conditions. Moreover, participants who received no reputation information about the coach volunteered more than those who thought the coach was experienced.

It is possible that participants 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 (e.g., Leary, 1992), leading to greater willingness to participate in demonstrations. However, there are other possible explanations for the high frequency with which participants in the inexperienced reputation condition volunteered to help with demonstrations (e.g., an altruistic desire to help an inexperienced coach achieve their first coaching qualification; a motivation to actively participate rather than passively listen to someone whose reputation implied that they were not really worth listening to). Given the lack of any significant findings, the above are suggested as tentative explanations for the results related to participants' willingness to participate in demonstrations. Further research should be conducted over a longer timeframe in order to obtain a clear understanding of the extent to which athletes' willingness to engage in coaching demonstrations is influenced by the reputation of the coach. In addition, qualitative research methods (e.g., interviews, stimulated recall) may help in obtaining more in-depth explanations for athletes' responses (e.g., decision to assist with coaching demonstrations) to their initial impressions and expectations of a coach.

Although the findings of the current research provide further evidence for the impact of reputation-based expectancy effects within the coach-athlete relationship, a limitation of the research is that participants' behavioral responses were only observed over the course of a single coaching session. It is reasonable to assume that further significant findings in line with the original hypotheses might have been observed had the experiment consisted of a greater number of sessions. By conducting the experiment over a longer duration, participants and the coach would have experienced higher levels of interpersonal contact with each other. Greater likelihood of future interactions is associated with greater likelihood of the occurrence of expectancy effects (Snyder & Stukas, 1999). Thus, participants' responses may have been influenced by their knowledge that their interaction with the coach was 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. Such a design would offer an appropriate opportunity to examine whether the presently reported behavioral consequences of expectancies based on coach reputation (i.e., changes in participants' levels of attention to coach instruction, effort and persistence) would have a subsequent impact on other behaviors such as changes in participants' technical ability. Moreover, given that the effects of initial expectancies may dissipate over time (Jussim & Harber, 2005), longitudinal research designs conducted in naturalistic settings would enhance our understanding of the degree to which impressions and expectancies based on fleeting, short-term interactions can determine the long-term nature of coach-athlete relationships.

A further limitation of the present study is related to the measures of attention employed (i.e., gaze toward the coach, fixation frequency). Although the views of experienced coaches were used as a way of ensuring the validity of such measures as

far as possible, the authors concede that the use of eye-tracking equipment would provide much more accurate measures of gaze behavior. However, the use of such equipment within a naturalistic, field-based study was considered to be an insurmountable challenge given the technology available. Nevertheless, the authors urge researchers to use more sophisticated technology within more controllable, lab-based studies as a means of collecting data that may substantiate the present findings. Additionally, research within more controlled environments could draw on previously developed observational methodologies (e.g., Morgan, Sproule, Weigand, & Carpenter, 2005) as a means of enhancing the validity and reliability of future work.

By examining participants' gaze behavior as the sole measure of attention to coach instruction, the study does not account for the possibility of different learning styles between participants. Fleming, Robson, and Smith (2005) highlighted that athletes may adhere to a range of learning styles or preferences (i.e., visual, auditory, reading/writing, kinesthetic) that can impact on the degree to which they 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 of concentrating on visual cues (i.e., an auditory learner). It is possible that the reported findings may have been impacted by not controlling for potential differences in participants' learning styles. 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). Moreover, since there is currently no adequate evidence base to justify incorporating learning-styles assessments into general pedagogical practice (Pashler, McDaniel, Rohrer, & Bjork, 2008), the authors felt justified in their decision to assess participants' attention to coach instruction through gaze behavior

alone. Nevertheless, a fruitful avenue for future research in this area would be to develop a more robust measure of attention to coach instruction, particularly one that represents a wider variety of attentional modalities. On a broader note, it is possible that the between-subjects design of this study failed to control for individual differences which may be reflected in the subsequent findings. Thus, further research should consider within-participant research designs in order to account for such confounding variables.

Perspectives

The present study has provided 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 indicate that reputation-based expectancies have the potential to influence athletes' behavioral responses to a coach within a naturalistic, field-based setting. Such findings make a unique and valuable contribution to the existing literature on expectancy effects within sport. The results have implications for coaches, suggesting that athletes' expectancies based on coach reputation can influence behaviors indicative of athletes' attention to coach instruction, effort and persistence. Such effects could impact on the short- and long-term performance of both coach and athlete, and may also determine the quality of the ensuing coach-athlete relationship. However, given that this is the first study of its kind to examine the behavioral effects of athletes' reputation-based expectancies of a coach, further research is required. Specifically, investigations similar to that of the present study should be conducted over a more extensive period of time (e.g., several weeks, months). Research of this nature would not only further enhance the relative ecological validity of the present findings, but also inform the practice of coaches, athletes, and other sport professionals.

Footnotes

¹It could be argued that the findings reported above need to be considered with caution, since some would not be significant to a Bonferroni corrected alpha. The Bonferroni correction method was developed to counter the increased likelihood of a Type I error when conducting multiple analyses, but it is important to acknowledge that due to problems associated with the substantial reduction in statistical power (of rejecting an incorrect null hypothesis), many psychologists (see Nakagawa, 2004; Perneger, 1998) have abandoned this procedure and urged other researchers to report standard alphas, and effect sizes in particular, as the main criteria for interpretation of findings. Given that all significant main effects reported in the present study meet Clark-Carter's (2010) recommendations for classifying effect sizes as large, the authors deem this to be sufficient indication of the robustness of the present findings.

References

- Bandura A. Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall, 1986.
- Bandura A. Self-efficacy: The exercise of control. New York: W.H. Freeman, 1997.
- Becker AJ. It's not what they do, it's how they do it: Athlete experiences of great coaching. *Int J Sport Sci Coaching* 2009; 4: 93-119.
- Cassidy T, Jones R, Potrac P. Understanding sports coaching: Social, cultural, and pedagogical foundations of coaching practice, 2nd edn. Abingdon, UK: Routledge, 2009.
- Clark-Carter D. Quantitative psychological research, 3rd edn. Hove: Psychology Press, 2010.
- Department for Culture, Media and Sport. DCMS Annual Report. London: The Stationary Office, 2007.
- Eccles DW, Walsh SE, Ingledeu DK. Visual attention in orienteers at different levels of experience. *J Sport Sci* 2006; 24: 77-87.

- Fiske ST, Taylor SE. Social cognition, 2nd edn. New York: McGraw-Hill, 1991.
- Fleming ND, Robson G, Smith R. Sports coaching and learning: Using learning preferences to enhance performance. New Zealand: N.D. Fleming, 2005.
- Football Association of Wales. Football Leader's Resource Guide. Cardiff: FAW, 2001.
- Furnham A, Petrides KV, Temple J. Patient preferences for medical doctors. *Br J Health Psychol* 2006; 11: 439-449.
- Greenlees I. Person perception and sport performance. In Jowett S, Lavallee D. eds. *Social psychology in sport*. Champaign, IL: Human Kinetics, 2007: 195-208.
- Harrison Jr, L. Understanding the influence of stereotypes: Implications for the African American in sport and physical activity. *Quest* 2001; 53: 97-114.
- Higgins ET, Bargh JA. Social cognition and social perception. *An Rev Psychol* 1987; 38: 369-425.
- Horn TS, Lox C, Labrador F. The Self-fulfilling Prophecy Theory: When coaches' expectations become reality. In Williams JM. ed. Applied sport psychology: Personal growth to peak performance, 6th edn. Boston, MA: McGraw-Hill, 2010: 81-105.
- Jackson B, Knapp P, Beauchamp MR. The coach-athlete relationship: A tripartite efficacy perspective. *Sport Psychol* 2009; 23: 203-232.
- Jacob RJK, Karn KS. Eye tracking in Human-Computer Interaction and usability research: Ready to deliver the promises. In Hyönä J, Radach R, Deubel H. eds. *The mind's eye: Cognitive and applied aspects of eye movement research*. Amsterdam: Elsevier, 2003: 573-605.
- Jones MV, Paull GC, Erskine J. The impact of a team's aggressive reputation on the decisions of association football referees. *J Sport Sci* 2002; 20: 991-1000.

- Jowett S, Poczwadowski A. Understanding the coach-athlete relationship. In Jowett S, Lavallee D. eds. *Social Psychology in Sport*. Champaign, IL: Human Kinetics, 2007: 3-14.
- Jussim L. Expectancies and social issues: Introduction. *J Soc Iss* 1990; 46: 1-8.
- Jussim L, Harber KD. Teacher expectations and self-fulfilling prophecies: Knowns and unknowns, resolved and unresolved controversies. *Person Soc Psychol Rev* 2005; 9: 131-155.
- Just MA, Carpenter PA. Eye fixations and cognitive processes. *Cog Psychol* 1976; 8: 441-480.
- Langton SRH, Watt RJ, Bruce V. Do the eyes have it?: Cues to the direction of social attention. *Trends Cog Sci* 2000; 4: 50-59.
- Leary M. Self-presentational processes in exercise and sport. *J Sport Exerc Psychol* 1992; 14: 339-351.
- Lent RW, Lopez FG. Cognitive ties that bind: A tripartite view of efficacy beliefs in growth-promoting relationships. *J Soc Clin Psychol* 2002; 21: 256-286.
- Leventhal L, Abrami PC, Perry RP, Breen LJ. Section selection in multi-section courses: Implications for the validation and use of teacher rating forms. *Educ Psychol Meas* 1975; 35: 885-895.
- McPherson SL. The development of sports expertise: Mapping the tactical domain. *Quest* 1994; 46: 223-240.
- Macrae CN, Bodenhausen GV. Social cognition: Thinking categorically about others. *An Rev Psychol* 2000; 51: 93-120.
- Manley AJ, Greenlees I, Graydon J, Thelwell R, Filby WCD, Smith MJ. Athletes' perceptions of the sources of information used when forming initial impressions and expectancies of a coach. *Sport Psychol* 2008; 22: 73-89.

- Manley AJ, Greenlees IA, Smith MJ, Thelwell RC. Athletes' use of reputation and gender information when forming initial expectancies of coaches. *Int J Sport Sci Coaching* 2010; 5: 517-532.
- Merton RK. The self-fulfilling prophecy. *Antioch Rev* 1948; 8: 193-210.
- Miller DT, Turnbull W. Expectancies and interpersonal processes. *An Rev Psychol* 1986; 37: 233-256.
- Morgan K. Pedagogy for coaches. In Jones RL, Hughes M, Kingston K. eds. *An introduction to sports coaching: From science and theory to practice*. Abingdon, UK: Routledge, 2007: 3-15.
- Morgan K, Sproule J, Weigand D, & Carpenter P. Development of a computer-based measure of teacher behaviours related to motivational climate in physical education. *Phys Educ Sport Pedagog J* 2005; 10: 113-135.
- Nakagawa S. A farewell to Bonferroni: The problems with low statistical power and publication bias. *Behav Ecol* 2004; 15: 1044-1045.
- Olson JM, Roese NJ, Zanna MP. Expectancies. In Higgins ET, Kruglanski AW. eds. *Social psychology: Handbook of basic principles*. New York: The Guildford Press, 1996: 211-238.
- Pashler H, McDaniel M, Rohrer D, Bjork R. Learning styles: Concepts and evidence. *Psychol Sci Public Interest* 2008; 9: 105-119.
- Perneger TV. What's wrong with Bonferroni adjustments. *Br Med J* 1998; 316: 1236-1238.
- Poole A, Ball LJ. Eye tracking in Human-Computer Interaction and usability research: Current status and future prospects. In Ghaoui C. ed. *Encyclopaedia of human-computer interaction*. Hershey, PA: Idea Group Inc, 2006: 211-219.

- Snyder M, Stukas Jr, AA. Interpersonal processes: The interplay of cognitive, motivational, and behavioral activities in social interaction. *An Rev Psychol* 1999: 50: 273-303.
- Snyder M, Tanke ED, Berscheid E. Social perception and interpersonal behavior: On the self-fulfilling nature of social stereotypes. *J Person Soc Psychol* 1977: 35: 656-666.
- Solomon GB, DiMarco AM, Ohlson CJ, Reece SD. Expectations and coaching experience: Is more better? *J Sport Behav* 1998: 21: 444-455.
- Thelwell RC, Page JL, Lush A, Greenlees IA, Manley AJ. Can reputation biases influence the outcome and process of making competence judgments of a coach? *Scand J Med Sci Sports* 2012: doi: 10.1111/sms.12000.
- Thelwell RC, Weston NJV, Greenlees IA, Page JL, Manley AJ. Examining the impact of physical appearance on impressions of coaching competence. *Int J Sport Psychol* 2010: 41: 277-292.
- Towler A, Dipboye RL. Effects of trainer reputation and trainees' need for cognition on training outcomes. *J Psychol* 2006: 140: 549-564.
- Vincent WJ. *Statistics in kinesiology*, 2nd edn. Champaign, IL: Human Kinetics, 1999.
- Weinberg RS, Gould D, Jackson A. Expectations and performance: An empirical test of Bandura's Self-efficacy Theory. *J Sport Exerc Psychol* 1979: 1: 320-331.
- White KJ, Jones K, Sherman MD. Reputation information and teacher feedback: Their influences on children's perceptions of behavior problem peers. *J Soc Clin Psychol* 1998: 17: 11-37.
- Wild TC, Enzle ME, Hawkins W. Effects of perceived extrinsic versus intrinsic teacher motivation on student reactions to skill acquisition. *Person Soc Psychol Bull* 1992: 18: 245-251.

Table 1. Order, mean duration, and content of verbal summaries.

Order	Duration (secs)	Content
<i>1</i>	169.32 (10.09)	Introductions; overview of session and key instructions; summary of passing drill #1; opportunity to volunteer #1
<i>2</i>	61.26 (1.53)	Recap of passing drill #1; summary of passing drill #2; opportunity to volunteer #2
<i>3</i>	59.82 (6.38)	Recap of passing drill #2; summary of passing drill #3; opportunity to volunteer #3
<i>4</i>	77.58 (4.37)	Recap of passing drills #1 to #3 ----- 15 MINUTE BREAK -----
<i>5</i>	72.57 (0.43)	Welcome back; summary of shooting drill #1; opportunity to volunteer #4
<i>6</i>	98.87 (7.62)	Recap of shooting drill #1; summary of shooting drill #2; opportunity to volunteer #5
<i>7</i>	77.84 (18.84)	Recap of shooting drill #2; summary of small-sided game exercise (i.e., “free practice” period)
<i>8</i>	84.40 (1.94)	Recap of entire session; comments invited; thank participants and direct them to sports hall
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 2. Mean values and standard deviations for athletes' gaze towards the coach, fixation frequency, and willingness to participate in demonstrations (WTP) as exhibited during the coach's delivery of verbal summaries.

<i>Dependent Variable</i>	Reputation Condition			<i>F</i>	<i>p</i>
	Experienced (<i>n</i> = 11)	Inexperienced (<i>n</i> = 12)	No Reputation (<i>n</i> = 12)		
Gaze To Coach (%)	43.62 (9.91) ^a	26.68 (11.24) ^b	32.46 (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. *F* and *p* values are in relation to follow-up ANOVA and post-hoc tests, respectively.

Table 3. Mean scores and standard deviations for athletes' behaviors exhibited during the "free practice" period.

<i>Dependent Variable</i>	Reputation Condition			<i>F</i>	<i>p</i>
	Experienced (<i>n</i> = 8)*	Inexperienced (<i>n</i> = 9)*	No Reputation (<i>n</i> = 7)*		
Total Drill-specific Activities	11.63 (2.67) ^a	6.11 (4.28) ^b	7.00 (5.89)	3.72	.04
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
Retrieve Ball from Out of Play (%)	6.95 (4.96) ^a	1.98 (4.07) ^b	0.95 (2.52) ^b	4.92	.02

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. *F* and *p* values are in relation to follow-up ANOVA and post-hoc tests, respectively.