McKay, J., Anderson, A., & Lavallee, D. (2006). The influence of athletic identity on cognitive appraisals and coping following underperforming among international track athletes. *Kinesiologia Slovenia*, *12*, 48-62

Abstract

Previous studies have demonstrated that strong and exclusive athletic identity is a risk factor for adjustment difficulties following major sport career transitions such as career termination (e.g., Cecic Erpic, Wylleman, & Zupancic, 2004; Grove, Lavallee, & Gordon, 1997; Sparkes, 1998). However, little research has considered the relationship between athletic identity and athletes' responses to the less seriously disruptive events that they routinely encounter. Moreover, the stress and coping processes that may explain the influence of athletic identity on athletes' adjustment to disruptive sporting events have not been examined. This study adopted a stress perspective (Lazarus & Folkman, 1984) and qualitative method to examine the influence of athletic identity on athletes' appraisal and coping responses to underperforming. Three male and three female United Kingdom international track athletes (mean age=24.83, SD=2.99) attended semi-structured interviews during which they provided accounts of their experiences of underperforming. Athletic identity was established with the Athletic Identity Measurement Scale (AIMS; Brewer, Van Raalte, & Linder, 1993), in addition to qualitative data. Case studies were constructed and cross-case comparisons revealed that athletes with strong and exclusive athletic identity appraised performance stressors as a threat to their self-identities, experienced intense emotional disturbance and implemented emotion-focused and avoidance coping strategies. These findings suggest that the relationship between athletic identity and adjustment to sport stressors extends beyond the major transitions that have been investigated and highlight the need for intervention programs that encourage athletes to invest in non-sport sources of identification.

The influence of athletic identity on cognitive appraisals and coping following underperforming among international track athletes

The way in which individuals interpret and adapt to environmental stressors is influenced by multiple personal and situational variables (Lazarus & Folkman, 1984). Among athletes, one variable which may strongly influence responses to sport related stressors is athletic identity (AI), the degree to which one identifies with the athlete role (Brewer, Van Raalte, & Linder, 1993). AI can be considered both a cognitive structure that guides how athletes interpret events associated with the athlete role (e.g., career enhancing and threatening situations), and a social role in that it can be heavily influenced by others' perception of and attitudes towards the self as an athlete.

AI has received recent attention within the sport psychology literature, particularly in relation to sport career transitions (Shachar, Brewer, Cornelius, & Petitpas, 2004). Supporting the notion that AI influences stress responses among athletes, it has been consistently reported that individuals who identify themselves strongly and exclusively by the athlete role are at risk of adjustment difficulties following major transitions such as career ending injury and retirement (Alferman, Stambulova, & Zemaityte, 2004; Brewer, 1993; Brock & Kleiber, 1994; Cecic Erpic, Wyllemn, & Zupancic, 2004; Grove, Lavallee, & Gordon, 1997; Lavallee, Gordon, & Grove, 1997; Sparkes, 1998). Explanations for these findings revolve around the assumption that when athletes base their self-worth solely on their sport performance, events that disrupt one's sporting aspirations can give rise to identity loss and emotional difficulties (Brewer, Van Raalte, & Petitpas, 2000). A small cluster of qualitative studies have also found support for this assumption, reporting that a key element in athletes'

adjustment difficulties is perceived threat to one's self-esteem and identity (Brock & Kleiber, 1994; Sparkes, 1998; Werthner & Orlick, 1986).

Whilst broad agreement exists within the literature about the risks associated with strong and exclusive identification with the athlete role, the extent of these risks may not be fully appreciated. Research to date has tended to be limited to investigation of athletes' responses to seriously disruptive events such as career-ending injury and retirement (e.g. Grove et al., 1997; Sparkes, 1998). However, it is possible that strong and exclusive AI is a risk factor for psychological difficulties following the less critically disruptive events that athletes routinely experience. For instance, one might speculate that athletes who derive their self-worth exclusively from their sport performance may be vulnerable to emotional difficulties following events such as deselection, underperforming, minor injuries and everyday illnesses, which undermine or threaten their success as athletes. No research to date, to the authors' knowledge, has addressed this issue. However, one recent study has considered the relationship between AI and athletes' perceptions of growing old, reporting that athletes who over-identify with their athlete roles possess negative attitudes towards self-aging (Phoenix, Faulkner, & Sparkes, 2005). This finding suggests that the risks of strong and exclusive AI extend beyond the major career transitions that have typically been investigated. A broader understanding of the risks associated with over-identification with the athlete role is necessary so that sport psychologists can understand possible reasons behind athletes' adaptive struggles and develop appropriate intervention strategies.

A second issue that has received limited research attention concerns the processes by which strong and exclusive AI precipitate psychological difficulties

following events that disrupt the athlete role. Examination of the processes by which personal variables influence psychological states is important in enhancing understanding of emotional reactions to disruptive sporting events (Green & Weinberg, 2001). Lazarus and Folkman's (1984) cognitive transactional model of stress and coping might provide a useful framework for understanding these processes. Central to this model is cognitive appraisal, the process by which an individual evaluates the stakes of an encounter with regard to its implications for his or her well-being. Lazarus and Folkman proposed that when an environmental demand is appraised as stressful, it is viewed through a so-called primary appraisal as a harm/loss (where damage has already been done), a threat (where harm or loss is anticipated) or a challenge (where there is something to be gained). Simultaneously, through secondary appraisal, the individual evaluates what coping options are available. The overall meaning ensuing from these appraisals mediates emotional and behavioral responses.

Coping is also an integral part of Lazarus and Folkman's (1984) model and is viewed as a dynamic process in which coping efforts shift as stressful encounters unfold. Several classifications exist for categorizing coping responses. Lazarus and Folkman distinguished between emotion-focused coping, where attempts are made to regulate emotional responses to stressors, and problem-focused coping, where attempts are made to change the cause of stress. Other researchers have proposed additional categories of coping including avoidance coping, where efforts are made to mentally or physically disengage from stressful situations (Endler & Parker, 1990) and reappraisal, where efforts are made to reappraise stressful situations (Cox & Ferguson, 1991). Links between appraisal types and the use of specific coping strategies have been reported.

Emotion-focused coping is associated with appraisals that nothing can be done to change a stressful situation, while problem-focused coping is associated with appraisals that the situation is amenable to change (Carver & Scheier, 1994; Folkman & Lazarus, 1980; 1985; Stanton & Snider, 1993). In addition, avoidance coping is associated with threat and loss appraisals (Anshel, Jamieson, & Raviv, 2001; Anshel & Delaney, 2001).

A further defining feature of Lazarus and Folkman's (1984) model is that multiple person and situation variables impact on the cognitive appraisal process. The most important person variable influencing appraisal is one's commitments, an expression of what is important to the individual. Stress is proposed to ensue when a situation endangers or defeats an important commitment and the stronger the commitment, the greater the potential for stress in the area of that commitment (Lazarus & Folkman, 1984; Lazarus, 1999). Drawing from this proposal, Brewer (1993) suggested that the strength of one's commitments (i.e., commitment to being an athlete) influences cognitive appraisals of events that disrupt the athlete role which, in turn, mediates emotional and behavioral responses. Despite the potential utility of this suggestion for optimizing the efficacy of interventions designed to help athletes cope with disruptive sporting events (Green & Weinberg, 2001), it has yet to be examined.

The purpose of this study was to extend the AI literature by addressing the limitations discussed above. Accordingly, the aims of the study were two-fold. Firstly, the study aimed to qualitatively investigate whether the previously identified risks of strong and exclusive AI extend to track athletes' experiences of underperforming. Underperforming has been identified as a common source of stress among track athletes (McKay, 2005) and was therefore considered appropriate for examination in this study.

Second, the study aimed to investigate the processes underlying potential relationships between AI and responses to underperforming by examining cognitive appraisal and coping. It was anticipated that a strong and exclusive commitment to the athlete role would lead to interpretations of underperforming in terms of its implications for one's sense of identity, and would thereby give rise to threat and/or loss appraisals. Furthermore, this would be accompanied by emotional disturbance and the implementation of avoidance and emotion-focused coping styles.

Methods

Participants

Three female and three male United Kingdom (UK) senior international track athletes (mean age=24.83, SD=2.99) who had between 9 and 16 years competitive experience (M=12.17, SD=2.40) participated in the study. Track events represented by the sample included short sprints (n=2), long sprints (n=1), and middle distance (n=3).

Measures

AI was measured retrospectively and at the time of interview with the Athletic Identity Measurement Scale (AIMS; Brewer & Cornelius, 2001). The scale comprises 7 items scored on a 7-point Likert-type scale ranging from strongly disagree (1) to strongly agree (7) and summed to yield an overall AI score. Overall scores range from 7 to 49 with higher scores indicating stronger and more exclusive AI. Brewer & Cornelius reported high internal consistency of the AIMS (alpha=.81). In order to specifically assess identification with their roles as track athletes, rather than with their more general involvements in sport, the items on the AIMS were modified slightly. For example, item number 2, 'I have many goals related to sport', was changed to 'I have many goals

related to athletics.' Based on participants' scores, the internal consistency for the modified scale was strong (alpha = .96).

In qualitative research, details of the researchers' backgrounds and connections that they have with the people to be studied should be provided to help the reader interpret findings and consider alternatives (Elliot, Fischer, & Rennie, 1999; Patton, 2002). All researchers had experience of undertaking qualitative research and three of the researchers had experience of supporting athletes in an applied sport psychology context. The first author, and data collector, was a track athlete with experience of competing at international level and therefore had a good understanding of the context being studied.

Interview guide

A semi-structured interview format was utilized that would ease comparison across interviews whilst still offer the interviewer flexibility in reacting to and exploring relevant issues (Patton, 2002). The interview guide was developed following the guidelines of Breakwell (1995) and Smith (1997) and included questions that were open, non-leading, and avoided jargon and complex words. In addition, questions were structured such that the relatively undemanding questions preceded the more intricate and penetrating questions. Pilot interviews were conducted with a small sample of athletes representative of the target population and minor amendments were subsequently made to the interview questions.

Preliminary sections of the interview guide contained questions designed to explore demographic information and early athletic involvements. Level of identification with the athlete role was then examined in conjunction with the modified

AIMS. Subsequent questions were designed to investigate how participants' identification with the athlete role influenced their responses to underperforming. Specifically, they were asked to recall and describe an underperformance (i.e., single underperformance or series of underperformances) that they had perceived as stressful. Based on Lazarus and Folkman's (1984) conceptualization, stress was defined as 'those encounters where you have felt taxed in meeting the demands and pressures of a situation that has had important consequences for you.' AI level at the time of underperforming was established by asking participants to complete a retrospective version of the modified AIMS, in addition to qualitative data. Primary appraisals were then assessed by asking participants to explain what it was about their underperformance that made it stressful, and the kind of stress appraisal that they made (i.e., threat, harm, loss, or challenge). Secondary appraisals were assessed by asking participants to recall the extent to which they believed they could cope. Further questions investigated emotional responses to underperforming and coping strategies employed. Coping was defined as 'any effort used to deal with a stressor to lessen its impact.' Elaboration probes (Patton, 2002) were used throughout interviews where it was deemed necessary for participants to expand upon their responses. During the interview, the interviewer demonstrated that she was sympathetic to the world of participants' by sharing her personal experiences where appropriate (Rubin & Rubin, 1995).

Procedure

Institutional ethical approval for the study was granted and all participants completed informed consent forms. Participants were approached at the end of the outdoor athletics season (September), and invited to participate in the study. All prospective interviewees

agreed to take part. Interviews were conducted by the first author, took place at locations that were convenient to participants and lasted for approximately one hour. Interviews were tape recorded with participants' permission and subsequently transcribed verbatim, yielding 125 pages of single-spaced text.

Data analysis

A case study approach was employed to analyze the data. Specifically, what Stake (2000) terms 'collective' case studies were undertaken, where the ultimate aim is to jointly understand a number of so-called 'instrumental' case studies in order to gain a general understanding of a phenomenon. In such an approach, whilst the researcher is investigating an individual or group in depth, the primary concern is with advancing understanding of an external interest rather than with an intrinsic interest in the case itself. Thus, the aim was to foster a broad understanding of the influence of AI on stress and coping outcomes by examining this issue within individual cases.

The data analysis involved two phases. In the first phase, all researchers familiarized themselves with individual cases by reading and re-reading interview transcripts. Each researcher then worked on the transcripts independently, noting points of significance and interest. Researchers then met to discuss their general thoughts on individual transcripts and consensus was reached regarding the information that should be included in the case studies. Case studies were written by the first author and forwarded to the other researchers to ensure that they contained all the relevant data and that sufficient thick description (Geertz, 1973) had been provided. Case studies considered identification with the athlete role; the context of stressful events; and stress and coping processes including primary and secondary appraisals, emotional responses

and coping strategies implemented. Idiographic profiles, shortened versions of cases studies, were then forwarded to participants for member checking (Lincoln & Guba, 1985). Participants were later contacted to discuss their perceptions of the accuracy of these profiles and they all responded favorably.

It has been noted that a lack of clarity exists in case study research surrounding how researchers arrive at conclusions (Eisenhardt, 2002; Miles & Huberman, 1994). In the second phase of the data analysis, conclusions were made following the identification of cross-case comparisons. Following Eisenhardt's (2002) suggestions for identifying cross-case patterns among case studies, categories were selected based on the theoretical underpinning of the study. The categories identified for this comparative purpose were appraisal types, emotional responses, coping strategies used, and perceived effectiveness of coping. Similarities and differences across cases relative to AI level were systematically listed. In this way, the anticipated relationships between AI and stress and coping outcomes were compared with the evidence from each case (Yin, 1991). Cross-case comparisons were conducted by the first author and forwarded to the other researchers to ensure that they agreed with the conclusions drawn. Minor amendments were subsequently made.

Following recognized guidelines (Elliot, et al., 1999; Lincoln & Guba, 1985), several efforts were undertaken to enhance the trustworthiness of the research. As discussed previously, these included providing information on the researcher's background and connections with participants, undertaking independent verifications of the content and conclusions drawn from case studies, and member checking. In addition to this, the interviewer's affiliation with and in-depth appreciation of the social setting

being studied was deemed important in aiding the development of rapport and trust, and ensuring that participants gave full and honest responses (Eklund, 1994; Lincoln & Guba, 1985; Rubin & Rubin, 1995). Finally, quotations from interviews are included in the results section to enhance the authenticity of findings (Sparkes, 2002) and to allow readers to judge the range of persons and situations to which the findings might be relevant (Lincoln & Guba, 1985).

Results

The mean modified AIMS score at the time of interview for the sample of athletes was 41.00 (SD=8.92). AIMS scores indicated that five participants possessed strong and exclusive AI, while one individual identified relatively weakly with the athlete role. This enabled some, albeit limited, comparisons of responses to underperforming as a function of AI level. AIMS scores relating to the time of interview and time of underperforming for each participant are displayed in Table 1. Due to space restrictions, shortened versions of case studies are presented, detailing each athlete's underperformance, appraisal process, emotional response and coping. Cross-case comparisons are considered in the discussion and compared with the extant literature. All participants have been renamed for confidentiality purposes.

Scott

At the time of interview Scott was a 25-year-old student-athlete, studying for a Ph.D. in computing science. He had been involved in athletics for ten years and specialized in the 400 meters event. Scott viewed his athletic participation as the most important area of his life. He reported having made "absolutely no plans for future employment" and that his reasons for undertaking his degree centre on the fact that is

allows him to manage his working hours so that they fit around training. Scott identified with his athlete role strongly and with a sense of exclusivity, stating that he defined himself as "an athlete then as a student with the gap signifying quite a lot." This strong AI was accompanied by an intense investment and drive to achieve in athletics, which far surpassed his academic commitments. He claimed: "I will give to my athletics everything that I need to succeed. I will give to my PhD anything that's left over."

Scott recalled a recent performance slump during which he failed to fulfil his goal of gaining selection for the Commonwealth Games Team. Attaining this goal was clearly of extreme importance to him because he had planned to change events to the 800 metres at the end of the season and so viewed the season to be his "last chance to succeed" as a 400 metres runner. Leading up to the start of the season, Scott's training had been going well and he "truly believed" that he was capable of achieving his goal. However, despite having a reasonably successful performance in his first race of the season, his performances declined thereafter and he failed to gain selection for the Team. Scott's level of AI at the time of his performance slump was very high, as indicated by his score of 44 on the retrospective AIMS.

Through primary appraisal, Scott viewed his performance slump as a threat. He spoke explicitly about the meaning behind this appraisal, relating it to his belief that his underperformances had demeaned his sense of identity as an accomplished athlete. He stated: "I had an image of myself that was about to be dispelled." Similarly, when it was confirmed that he had failed to make the Commonwealth Games Team, Scott appraised the situation in terms of its disruptive effect on his AI, recalling:

…I felt quite low really. I felt that this picture I'd had of myself as an athlete

> who was capable of making the Commonwealth Games obviously wasn't true…so you start to think that you're not who you thought you were, you're not as worthwhile an athlete as you thought you were.

In terms of secondary appraisal, Scott felt that he could not cope with the situation as he "just couldn't see how he could turn it around that quickly" and he experienced feelings of anger, frustration and loss. He initially adopted a problem-focused style of coping in which he spent "every minute thinking about the situation and trying hard to work out something to do." However, Scott was unable to find a solution and resorted to an avoidance coping strategy in which he "disconnected" from athletics so that he could "forget about it all and relax." Whilst he remained physically involved in athletics, his psychological investment diminished as he "deliberately promoted the importance of other things over athletics." Specifically, Scott diverted his interests to his social life and after about two weeks, was able to reappraise the situation to be more controllable. This was accompanied by his return to a problem-focused coping style in which he constructed a new set of goals for his career as an 800 meters runner. According to Scott, this strategy was effective in providing a new focus and a new identity as an 800 meters runner:

> It gave me something else to look ahead to so it wasn't just this void of where things had gone wrong. I just kind of started to think of myself as an 800 meters runner so I was starting to build myself up again up…so that you know reinforces a new good image of yourself.

Amy

Amy was 29 years old and was working on a full-time basis as a personnel

officer. She had been involved in athletics for 13 years and had gained much success in middle distance events, but in recent years had been plagued by a series of lower leg injuries which had hampered her progression. Despite this, athletics remained the "most important single factor" in Amy's life and her AI was very strong, as is reflected in this comment: "I see myself as an athlete and I'd expect other people to see me as an athlete…the biggest part of me is about being an athlete."

Amy spoke of an international representative match that had taken place eight years prior to the time of interview. She claimed that she could remember the event particularly well and demonstrated a strong recollection of the cognitions and emotions that she had experienced. The event marked the second race of her competition schedule and was held over three days such that it comprised a heat, semi-final and final. Amy's goal was to make the final but due to a tactical mistake she underperformed in the heat and was subsequently eliminated from the competition. At the time of the event her AI level was strong and exclusive, as indicated by her score of 47 on the retrospective AIMS.

Amy appraised her underperformance to be threatening and highly stressful. This primary appraisal appeared to be rooted in her belief that she had failed to justify her place in the team, which in turn threatened her sense of identity as an elite athlete. She recalled:

> What was at stake was me being seen as that international athlete or that successful athlete…I hadn't made the final and at the end of the day you know, what was at stake was one simple thing, which was the self-perception, but to me it was absolutely everything.

Additionally, Amy developed concerns about how her social identity had been damaged by her underperformance. This manifested itself in self-presentational concerns as she worried about how she would be judged by her team mates.

Through secondary appraisal, Amy viewed the situation to be uncontrollable as she perceived that she did not have the necessary coping skills and resources to deal with the situation. Consequently, she felt "totally gutted, angry and frustrated and really, really disappointed." On explaining her feelings of disappointment, Amy referred again to her sense of shattered identity:

> …when you fail to achieve something it is disappointing but the reason it's disappointing is because suddenly that belief that you are this wonderful successful athlete is gone and that has a knock on effect on absolutely everything.

Initially Amy failed to employ an adaptive coping strategy as she reported the she "still felt as bad" on day three of the competition as she had done on day one. On returning home and discussing her underperformance with her coach, she was encouraged to extract "something positive" from her experience. However, she was unable to so. Eventually, Amy was able to adopt an adaptive problem-focused style of coping in which she increased her determination and focus for success to an even higher level in an attempt to ensure that she did not encounter a similar situation in the future. She explained "…I was actually more determined to put in more of an effort because as I said, I wanted to kind of reverse the situation that I found myself in, never to allow it to happen again." In retrospect, Amy felt that she did not cope well with her performance slump but viewed her intensified commitment to athletic achievement to be effective in

alleviating the emotional disturbance associated with her underperformance.

Tom

At the time of interview Tom was a 22-year-old full-time athlete, specializing in middle distance track events. He had been involved in athletics for 11 years and viewed athletics to be the most important area of his life. Tom defined himself by his athlete role describing it as his "master status" and stating: "I'm an athlete and that's first and foremost. That's who I am, that's what I am and that's what I do." Moreover, his sense of identity did not appear to extend beyond his athlete role and he reported having difficulties identifying with alternative roles. For example, with regard to family and friends he claimed: "…I can't really identify with that very often because it's not as huge a part of my life as athletics."

Tom recalled a performance slump that he had experienced during the season prior to the interview. The slump occurred during a period of five to six weeks and involved two competitions, an international match and the Commonwealth Games Trials. Tom's main goal for the season was to gain selection for the Commonwealth Games Team. Attaining this goal was of central importance to Tom. Indeed, he placed greater value on competing in the Games and being successful than on his own life: "…that was all that I wanted and if I'd been told that I could go to the Games and be successful but I'd be dead when I came back then I think I would've taken the Games." Tom's AI level at the time of his performance slump was extremely high, as indicated in his maximum score of 49 on the retrospective AIMS.

Tom appraised his underperformances to be highly stressful. Specifically, he viewed them as a threat and he attributed this explicitly to his perception that his sense

of self- and social- identity had been endangered: "…it was threatening to how I viewed myself and my success and the way I thought other people perceived me. It was threatening just to me and my identity really, certainly threatening to me as an athlete." In addition to feelings of threat, Tom's primary appraisals reflected a sense of loss. Again this arose from his interpretation of the situation in terms of its disrupting effect on his AI. He explained, "…I'd only ever identified myself as being an athlete that was successful and that didn't happen, so it sort of affected how I viewed myself. I thought, 'Maybe I'm not the athlete anymore.'"

Due to his inexperience of underperforming, Tom appraised his personal coping resources to be inadequate. He recalled, "I felt that I didn't know how to react because I'd never been faced with it before, so what could I do to get back to feeling the way I did before the slump?" Accompanying Tom's appraisals were feelings of shock, disbelief, "absolute distraught" and depression. He stated: "I was really depressed all through that time. I don't think anybody would've wanted to be near me. I got really irritable and really down."

Tom's initial coping strategy involved isolating himself from the competitive arena to avoid confrontation with others. Further coping strategies were directed at alleviating his emotional distress and included positive self-talk. However, Tom's efforts to view the situation in a more positive light failed and his attention became heavily focused on his situation. He stated: "…because I was on my own a lot during the day, that's all I could think about - being depressed and thinking about the next training session and whether that was going to go well or not." Tom reported that the negative affect he experienced lasted for almost the entire period of his performance slump.

During this period however, he did implement an effective coping strategy. This involved an avoidance strategy in which he disconnected from his AI. He recalled: "…it sounds weird but although at the time the underperformance had threatened the identity I had as an athlete, there was part of me that wanted to move away from that identity and not think about it really." Specifically, Tom turned his attention to his social life, as is illustrated in this comment: "…all I did was take myself away from my identity as an athlete and start maybe living up to my label more as a friend rather than just focusing on training or my slump." Tom viewed his diversion of attention to an alternative identity to be successful in "diluting" the emotional distress he encountered. This strategy was also effective in facilitating his ability to positively reappraise his performance slump and return to his former performance level.

Anna

At the time of interview Anna was a 25-year-old professional athlete participating in middle distance track events and had been involved in athletics since the age of nine. Anna reported viewing athletics as the most important aspect of her life and demonstrated a strong commitment, claiming that she is generally unwilling to give other activities priority over athletic commitments. Anna identified with her athlete role strongly, claiming: "I don't know what I'd do without my athletics to be honest with you…it makes up a huge part of me." Furthermore, her athletic participation provided a strong sense of social identity, which she was keen to develop: "I just want to be well known. I want to be like what Kelly Holmes has been over the past six years or so. I want to be the best middle distance runner in Britain."

Anna spoke of her experiences of motivation difficulties and underperforming,

which she experienced in her late teens and described as “the lowest point in [her] athletics career.” Specifically, Anna lost the drive to train and consequently suffered a loss of fitness and slump in performance. Despite this, her AI level remained fairly strong and exclusive, as indicated by her score of 42 on the retrospective AIMS. Initially, Anna continued to compete but after performing below her usual standard and being beaten by athletes whom she perceived were less talented, she lost the drive to race and temporarily suspended her athletic participation. Anna was unable to explain the exact cause of her motivation and performance difficulties but attributed them partially to distractions caused by her training group.

Anna appraised her motivation difficulties and underperformances to be threatening. Superficially, this appeared to be due to her perception that she was being beaten by less talented athletes who were progressing and gaining recognition. On deeper examination, however, Anna alluded to her interpretation of events in terms of their threatening effect on her AI. Specifically, she appeared to experience a loss of social identity, which was reflected in a sense that she was no longer “special” or “the best.” This notion is conveyed in the following quote:

> I think beforehand when I was doing well at my running I felt kind of special in a way, but then nobody seemed to be bothered with me…I knew I wasn’t a very good athlete at the time and I didn’t like that.

Anna appraised her situation to be beyond her control as she “knew what [she] was capable of but just couldn’t turn things around at that point.” Accompanying these appraisals were a variety of negative emotions including guilt, anger and frustration. In addition, Anna appeared to experience a loss of self-worth as she claimed: “I wasn’t

feeling great about myself because since the age of nine my running had been my main kind of thing."

Anna adopted an avoidance form of coping which involved a degree of detachment from the athletic part of her life. She recalled: "I think I kind of isolated myself a bit from my athletics even although I was still training twice a week at that point." In order to facilitate her disconnection from athletics, Anna avoided spending time with other athletes, explaining: "…I went from being friends with athletes and being totally dedicated to my running to going away with other people." As a consequence of her increased investment in her social life, Anna's identification with her athlete role diminished and she "didn't really think of [herself] as an athlete."

Approximately a year after the onset of her motivation difficulties, Anna began to reappraise her situation, viewing it to be more controllable and as more of a challenge. This reappraisal appeared to be stimulated by an increased awareness of the success of her fellow competitors. In conjunction with this appraisal Anna implemented problem-focused coping in which she began to devise strategies to assist her in returning to a high level of performance. These included a move to a more motivated training group and the construction of a new set of goals. Whilst these strategies facilitated Anna's return to her previous performance level and restoration of her identity as a successful athlete, she felt, in retrospect, that she had not coped effectively with her situation.

Hazel

At the time of interview Hazel was 21 years old. She had been involved in athletics for nine years and specialized in sprint events. Although she worked on a full-time basis in a bank, she viewed her athletic participation as her career and the most

important area of her life. Hazel identified with her athlete role strongly. This was evident in her suggestion that her sense of self-worth was dependent on athletic success and the value she placed on her social identity as a successful athlete. She explained: "…if I was describing myself to someone else one of the first things I'd say was that I was an athlete…I want other people to know that about me." Hazel rated her identity with the athlete role not only highly, but with a sense of exclusivity where she had difficulties identifying with other roles. She explained: "I'm trying to think if I wasn't an athlete what I'd see myself as and I can't really."

Hazel described a performance slump, and a particular competition within it, that she had experienced in the season preceding the interview. The slump had occurred at the start of the competitive season and involved a series of four competitions, which took place over a period of two to three weeks. Prior to the start of the season, Hazel's training had been going particularly well and her goal for the season was to perform well at the national championships, which were due to be her fifth race of the season. She detailed her response to the final competition within her performance slump, which represented her last chance to perform well before the national championships. However, she underperformed again, describing her performance as an "absolute disaster." Hazel's AI level at the time of her underperformance was strong and exclusive, as indicated in her score of 47 on the retrospective AIMS.

Hazel appraised her underperformance to be threatening. Her primary appraisals appeared to be influenced by her strong identification with her athlete role, as she perceived her underperformance to have damaged her self-identity as a successful athlete. She recalled, "I think at the time I saw myself as being capable of more than

what I was achieving so when I was performing badly it threatened kind of how I saw myself." Additionally, she believed that her underperformance threatened her sense of social identity and this manifested itself in self-presentational concerns, as is illustrated in the following comment: "…And also just I guess your reputation, people are watching out for you, just anyone really, and then you come out and perform badly, you look bad." Hazel felt that the social support network offered by her family and coaches was strong. However, she appraised that she did not have the personal skills to deal with the situation, as is reflected in the following comment: "…at first I thought it would be okay and it was manageable and then at the last race I think I just realized that I couldn't cope and I wasn't coping." Accompanying these appraisals were feelings of frustration, anger and disappointment. Hazel linked her disappointment with her high degree of investment in achieving in athletics. Furthermore, she experienced a loss of self-worth, reinforcing the notion that her sense of self was defined by performance in the athletic domain. She recalled: "I had a bad self-image I guess. It wasn't how I wanted to be, so as the situation got more stressful my image kind of got a lot worse and I felt worse about myself."

Hazel initially adopted an emotion-focused style of coping involving venting of emotions where she "cried and cried." Additionally, she used social support, discussing the situation with her father to "get it off her chest" and confiding in her coach. Hazel implemented these emotion-focused coping strategies for less than twenty-four hours before she adopted a more problem-focused form of coping. This shift in her coping style appeared to reflect, at least in part, her awareness of the imminence of the national championships and her perceived need to recapture her mental focus. She explained:

"…I just wanted to try and deal with it. I didn't have much time. I only had about a week and a half until the nationals so I wanted to make sure I got focused again. Subsequently, Hazel "challenged [herself] out of the slump" and was able to perform well in her national championships. On reflection, she viewed her use of coping strategies to be highly effective.

Jamie

At the time of interview Jamie was 27 years old and was employed on a full-time basis by a railway company. He had been involved in competitive athletics for 13 years and specialised in sprint events. Despite gaining considerable success, Jamie was not heavily absorbed in his athlete role and claimed that his level of involvement in athletics fluctuated depending on other activities that grasped his attention. He claimed that the interview had caught him at a time when he was "investing a little bit more of [himself] into athletics", however, his identification with his athlete role was relatively low and he placed greater value on work commitments and relationships. In that connection, Jamie believed in the importance of maintaining a balanced lifestyle, stating that it was "unhealthy" to "throw all [his] eggs in one basket." Whilst Jamie reported feeling proud of his athleticism, it did not form a core element if his sense of self. He claimed: "…if I wasn't a successful athlete I'd still be the same person. I don't think it would really cut me up too much." As a senior athlete, Jamie's level of AI had not always been low. In previous years he had become heavily invested in gaining selection for the Commonwealth Games Team and claimed to spend time doing little other than train in preparation for the Games. However, after qualifying for the Games, he sustained a severe knee injury and was unable to compete. Jamie frequently referred to this event

during the interview, describing the emotional and motivational difficulties that he subsequently encountered. This event may have shaped his views on the importance of maintaining a balanced lifestyle.

Jamie spoke of his performance in the national championships, which had taken place five months prior to the time of interview. His competitive goal was to reach the final and he viewed this goal to be attainable in light of previous successful performances at the same competition. However, he underperformed in the preliminary rounds and was eliminated from the final. At the time of his underperformance, Jamie's AI level was low, as indicated by his score of 18 on the retrospective AIMS. Qualitative support for this is reflected in his recollection that he "didn't have a great image of [himself] as being an athlete."

Jamie appraised his underperformance both positively and negatively. The main meaning he ascribed to the event appeared to centre on his defeat. He explained: "…after, I don't know, forty metres, fifty metres I just knew that there was no strength or speed in the legs and then watching other people come past that I've known in the past that I can destroy basically." Whilst it is possible that this meaning is indicative of an underlying identity issue, Jamie indicated that this was not the case because his investment in athletics had been relatively low. He explained:

> …because there wasn't a lot at stake in the race for me, in the whole scope of things I didn't have much to lose. It was no big deal for me; everyone else in that race had a lot more to lose than I did.

In terms of secondary appraisal Jamie recalled feeling that he was in control of the situation, stating: "I felt confident in my ability and talent to come through it at that

time." Jamie reported feeling temporarily frustrated but he was able to positively reappraise his situation as an incentive to become more committed to his athlete role. Consequently, he appraised the situation as a challenge as the event "rekindled the fires in [his] belly" and gave rise to feelings of excitement. He explained:

> …you're sickened a bit, it's like just being a bit gutted momentarily and then you think, 'Hang on just a second here. I can do loads better than this. I know just now that I can't expect better from myself than this, but I'm looking forward to putting the work in and getting better results in the future.'

In addition to positively reappraising his situation, Jamie implemented a problem-focused approach to coping in which he devised strategies to minimize future underperformances. This involved setting out personal goals and structured training programs which enabled him to focus on future plans and positive outcomes. In retrospect Jamie felt that he "couldn't have done anything better to cope with his underperformance" and praised himself for using the situation to his advantage. In contrast, following his previously described experience of injury prior to the Commonwealth Games, Jamie experienced severe adjustment difficulties and coped by seeking social support and psychologically detaching himself from athletics. These difficulties, according to Jamie, were a consequence of the greater psychological significance that he placed on his athlete role at the time. He recalled:

> In the past I've had situations where I've underperformed or I've had set-backs when athletics has been more important to me and I've definitely had to talk my trials and tribulations through with people. Probably the biggest one would be the Commonwealth Games after getting injured and not getting to go.

Discussion

The aim of this study was to investigate how a sample of international track athletes' identification with the athlete role influenced how they appraised and coped with underperforming. The following discussion examines cross-case patterns among participants' appraisal processes, emotional responses and coping and then considers practical implications and future research directions.

At the time of interview, all participants except Jamie possessed strong and exclusive AI, attaining scores in the upper range of the AIMS. Qualitative data revealed that those athletes had difficulties identifying with roles beyond the boundaries of sport and allowed athletics to take priority over all other areas of their lives. In contrast, Jamie maintained a more balanced sense of identity and acknowledged the risks of exclusive commitments to single life domains.

On recalling underperformances that they had found stressful, some participants spoke of their experiences of single underperformances, while others described their experiences of more prolonged slumps in performance. All athletes with the exception of Jamie were strongly and exclusively committed to their AI at the time of their underperformances. Following the theoretical propositions of Lazarus and Folkman (1984) that the stronger one's commitment, the greater the potential for stress in the area of that commitment, it was expected that athletes who were more committed to their AIs would interpret underperforming in terms of its implications for their sense of identity, and would make threat and/or loss appraisals. This expectation was confirmed, with all participants who identified strongly and exclusively with their athlete roles making threat and/or loss appraisals. Supporting findings from qualitative studies (Brock &

Kleiber, 1994; Sparkes, 1998; Werthner & Orlick, 1986), the meaning behind these appraisals was consistently linked to the perception that underperforming had endangered one's identity as an accomplished athlete. Many participants articulated this explicitly, providing bold and specific elaborations. A further pattern arising from participants' accounts was that not only did athletes appraise their performance decrements to threaten their self-identities as accomplished athletes; they also developed concerns about how their performance decrements influenced their social identities. These concerns typically manifested themselves in self-presentational worries about "looking bad" following underperformances, supporting the conceptualization of AI as a social role (Brewer et al., 1993). In contrast, because Jamie's level of AI was relatively weak, performance in the athlete role had little significance for the maintenance of his sense of self-identity and consequently he was able to appraise his underperformance predominantly as a challenge.

Whilst this study focused on the influence of AI in shaping participants' primary appraisals of underperforming, it is important to acknowledge the potential influence of other factors. One such factor is the unexpected element of underperforming, which was particularly evident in Tom and Hazel's accounts, and has previously been linked with feelings of threat among athletes (Dugdale, Eklund, & Gordon, 2002). Other situation variables heightening stress appraisals included the difficult timing of their underperformances, as in Scott and Amy's cases, and being informed about the success of her competitors', as in Anna's case. These findings highlight the complex interactional nature of the stress process (Lazarus & Folkman, 1984).

Through secondary appraisal, those athletes with strong and exclusive AI felt that they could not cope with the consequences of underperforming. They experienced intense emotional disturbance, which typically manifested itself in feelings of anger, depressed mood, and diminished self-worth. Conversely, Jamie felt confident in his ability to cope with the demands of his situation and his affective response was largely positively toned and characterized by feelings of excitement and enhanced motivation. These findings highlight the different psychological demands faced by participants following their underperformances. Whilst those athletes with strong and exclusive AI encountered a sense of loss of identity, Jamie's underperformance had no deeper implications for his self-identity and consequently he felt a greater sense of control over his situation in comparison to the other participants.

In addition to perceiving a sense of threat and loss of control following their underperformances, participants with strong and exclusive AI experienced difficulties coping. This was evident in their intense and typically prolonged negative affective states, as well as a general sense that their initial coping efforts had been maladaptive. Again, Jamie's account provided an exception to the coping patterns observed, as he positively reappraised his situation rapidly and implemented problem-focused strategies. However, intra-individual comparisons across Jamie's case revealed that he too had experienced intense emotional difficulties following negative sport outcomes at times when he had identified more deeply with his athlete role. These intra-individual comparisons provide further support for the stress-generating effects of AI.

Having appraised their underperformances to be threatening and out-with their capacities to cope, all participants with strong and exclusive AI implemented emotion-

focused and avoidance coping strategies. This finding supports research reporting that events appraised to be uncontrollable are associated with emotion-focused coping (Carver & Scheier, 1994; Folkman & Lazarus, 1980; 1985; Stanton & Snider, 1993) and that threat and loss appraisals are associated with avoidance coping (Anshel, et al., 2001; Anshel & Delaney, 2001). Moreover, the finding that athletes who over-identified with their athlete roles implemented avoidance and emotion-focused coping strategies supports research reporting that athletes who identified deeply with their athlete roles used emotion-focused and avoidance strategies such as venting of emotions and behavioral and mental disengagement following retirement (Grove et al., 1997). It should be noted that in the present study there was an exception to this general finding. Whilst Hazel possessed strong and exclusive AI and experienced intense emotional difficulties following her underperformance, she was able to positively reappraise her situation relatively quickly. One explanation for this finding is that Hazel's coping skills were highly developed and able to buffer the stress-generating effects of her strong and exclusive AI.

In sum, this study found that athletes with strong and exclusive AI appraised underperforming as a threat to their sense of identity, experienced intense emotional disturbance and implemented emotion-focused and avoidance coping styles. These findings are consistent with the proposal that the stronger one's commitment, the greater the potential for stress appraisals in the area of that commitment (Lazarus & Folkman, 1984; Lazarus, 1999), and suggest that the cognitive-transactional theory of stress is an appropriate framework on which to understand athletes' responses to events that disrupt the athlete role. Moreover, the findings of this study support previous research

documenting that individuals who over-identify with their athlete roles are at risk of psychological difficulties following identity-threatening events (Alferman, et al., 2004; Brewer, 1993; Brock & Kleiber, 1994; Cecic Erpic, et al., 2004; Grove et al., 1997; Lavallee, et al., 1997; Sparkes, 1998). As such, the findings stress the need for the development of intervention programs aimed at encouraging athletes to invest in non-sport sources of identification.

In addition to supporting the relationship between AI and adjustment to identity-threatening events typically evidenced in quantitative studies (e.g., Brewer, 1993; Grove et al., 1997), the findings of this study build on previous research in several important ways, and have implications from a practical perspective. First of all, the findings provide support for a relationship between AI level and adjustment difficulties following underperforming. This important finding suggests that levels of identification with the athlete role might influence how athletes respond to an array of stressors, extending beyond the more serious career-threatening events that have typically been investigated. Sport psychology practitioners may therefore need to become more sensitive to the scope of the risks associated with over-identification with the athlete role to enhance understanding of athletes' adaptive struggles and develop appropriate interventions.

According to the results of this study, one coping strategy that might have adaptive value was temporarily disconnecting from one's athlete role by diverting attention to alternative life domains. Interestingly, all participants who had experienced performance slumps eventually implemented this strategy. Such divestment of AI (Brewer, Linder, & Petitpas, 1999) may have allowed participants to devalue the self-threatening implications of their underperformances by retrieving positive experiences in

other life domains and subsequently initiating positive reappraisals (Rothermund & Meiniger, 2004). This finding adds support to reports that athletes who are deeply invested in their sport roles may cope with identity-threatening events by reducing their identifications with that role (Brewer, et al., 1999; Grove, Fish, & Eklund, 2004; Lavallee et al., 1997). Lavallee et al. (1997) found that divestment of AI was an adaptive coping strategy for retiring athletes. The results of the present study suggest that divestment of AI may also be an adaptive way of coping with performance stressors. Coping related decreases in AI have been reported over one week (Grove et al., 2004), 12 week (Brewer et al., 1999) and three year (Lavallee et al., 1997) time frames, but it is unknown whether athletes can implement this coping strategy efficiently in the immediate stages of the coping process. As addressing this question could advance understanding of how athletes might adaptively cope with events that threaten their self-identities, this is an important avenue for future research.

A further valuable contribution of this study includes the qualitative method employed. The in-depth interviews employed furnished rich descriptions of the nature of the emotional difficulties encountered and enabled a consideration of the complex and dynamic processes involved in defining participants' experiences. Related to this, by framing results in Lazarus and Folkman's (1984) theoretical perspective of stress and coping, the study promotes understanding of how athletes appraise underperforming, an approach that has not been adopted elsewhere. This theoretical approach facilitated an insight into the meanings participants ascribed to their performance decrements and enhances understanding of the cognitive processes that link AI with adjustment outcomes.

Finally, this study included certain shortcomings that might provide avenues for future research. Firstly, because the present study was limited to a small sample of athletes competing in a specific sport, generalizations to broader populations of athletes may not be warranted. Criticism may also be leveled at the retrospective research design employed, which involved retrospective verbal reports of the underperformance experience and the retrospective AIMS measure. In some cases participants recalled stressful events that had occurred at earlier stages in their careers and therefore the possibility of recall error and the influence of event outcome on their appraisals of their experiences cannot be ruled out. This potential problem could be addressed by using diaries in which athletes record their thoughts, feelings and actions relative to identity-threatening events as and when they occur.

To conclude, this study addresses an apparent gap in the literature by examining the influence of AI on athletes' stress and coping responses to underperforming and utilizing a cognitive appraisal framework to understand these responses. Findings suggest that AI may not just be a risk factor for psychological difficulties following the major career transitions faced by athletes, but also the less critically disruptive events that they routinely experience. These findings illuminate the magnitude of risks associated with strong and exclusive identification with the athlete role and the need for preventative programs. Sport psychology practitioners must be aware of these risks in order to fully understand athletes' adjustment difficulties and recommend appropriate intervention strategies.

References

Alferman, D., Stambulova, N., Zemaityte, A. (2004). Reactions to sport career termination: A cross-national comparison of German, Lithuanian, and Russian athletes. *Psychology of Sport and Exercise*, 5, 61-75.

Anshel, M.H., & Delany, J. (2001). Sources of stress, cognitive appraisals, and coping strategies of male and female child athletes. *Journal of Sport Behavior*, 24 (4), 329-353.

Anshel, M.H., Jamieson, J., & Raviv, S. (2001). Cognitive appraisals and coping strategies following stress among skilled competitive male and female athletes. *Journal of Sport Behavior*, 24 (2), 129-143.

Breakwell, G. (1995). Interviewing. In G.M. Breakwell, S. Hammond, and C. Fife-Shaw (Eds.), *Research Methods in Psychology*. London: Sage Publications.

Brewer, B.W. (1993). Self-identity and specific vulnerability to depressed mood. *Journal of Personality*, 61(3) 343-364.

Brewer, B.W., & Cornelius, A.E. (2001). Norms and factorial validity of the Athletic Identity Measurement Scale. *Academic Athletic Journal*, 16, 103-113.

Brewer, B.W., Van Raalte, J.L., & Linder, D.E. (1993). Athletic identity: Hercules' muscles or Achilles heel? *International Journal of Sport Psychology*, 24, 237-254.

Brewer, B.W., Van Raalte, J.L., & Petitpas, A.J. (2000). Self-identity issues in sport career transitions. In D. Lavallee, & Wylleman (Eds.), *Career transitions in sport: International perspectives* (pp. 29-43). Morgantown, WV: Fitness Information Technology.

Brock, S., & Kleiber, D. (1994). Narrative in medicine: The stories of elite college athletes' career-ending injuries. *Qualitative Health Research*, 4(4), 411-430.

Carver, C. S. & Scheier, M.F. (1994). Situational coping and coping dispositions in a stressful transaction. *Journal of Personality and Social Psychology*, *66*, 184-195.

Cecic Erpic, S., Wylleman, P., & Zupancic, M. (2004). The effect of athletic and non-athletic factors on the sports career termination process. *Psychology of Sport and Exercise*, 5, 45-59.

Cox, T. & Ferguson, E. (1991). Individual Differences, Stress and Coping. In C.J. Cooper, and R. Payne. (Eds.), *Personality and Stress: Individual Differences in the Stress Process* (pp.7-30). Chichester: John Wiley.

Dugdale, J. R., Eklund, R. C., & Gordon, S. (2002). Expected and unexpected stressors in major international competitive: Appraisal, coping, and performance. *The Sport Psychologist*, 16, 20-33.

Eisenhardt, K.M. (2002). Building theories from case study research. In A.M. Huberman and M.B. Miles (Eds.), *The qualitative researcher's companion* (pp. 5-35). Thousand Oaks, CA: Sage.

Eklund, R.C. (1994). A season-long investigation of competitive cognition in collegiate wrestlers. *Research Quarterly for Exercise and Sport*, 65(2), 169-183.

Elliot, R., Fischer, C.T., & Rennie, D.L. (1999). Evolving guidelines for publication of qualitative research studies in psychology and related fields. *British Journal of Clinical Psychology*, 38, 215-229.

Endler, N. S., & Parker, J. D. A. (1990). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality and Social Psychology*, 58, 844-854.

Folkman, S., & Lazarus, R.S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 21, 219-239.

Folkman, S., & Lazarus, R.S. (1985). If it changes it must be a process: Study of emotions and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48, 150-170.

Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.

Green, S.L., & Weinberg, R.S. (2001). Relationships among athletic identity, coping skills, social support, and the psychological impact of injury in recreational participants. *Journal of Applied Sport Psychology*, 13 (1), 40-59.

Grove, J.R., Fish, M., & Eklund, R.C. (2004). Changes in athletic identity following team selection: Self-protection versus self-enhancement. *Journal of Applied Sport Psychology*, 16, 75-81.

Grove, J.R., Lavallee, D., & Gordon, S. (1997). Coping with retirement from sport: The influence of athletic identity. *Journal of Applied Sport Psychology*, 9, 191-203.

Lazarus, R.S. (1999). *Stress and emotion: A new synthesis*. New York: Springer

Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.

McKay, J. (2005). *Individual differences and the stress process: The experiences of UK athletes.* Unpublished doctoral dissertation, University of Strathclyde, Glasgow.

Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis: An expanded sourcebook.* Thousand Oaks, CA: Sage.

Patton, M.Q. (2002). *Qualitative Research and Evaluation Methods.* (3rd Edn.). Thousand Oaks, CA: Sage.

Rothermund, K., & Meiniger, C. (2004). Stress-buffering effects of self-complexity: Reduced affective spillover or self-regulatory processes? *Self and Identity,* 3, 263-281.

Rubin, H.J. & Rubin, I.S. (1995). *Qualitative interviewing: the art of hearing data.* California: Sage.

Shachar, B., Brewer, B.W., Cornelius, A.E., & Petitpas, A.J. (2004). Career decision-making, and adjustment difficulties among retired athletes: A comparison between coaches and noncoaches. *Kinesiologia Slovenica,* 10, 1, 71-85.

Smith, J.A. (1997). Semi-structured interviews and qualitative analysis. In J.A. Smith, R. Harre, & L. Van Langenhove (Eds.), *Rethinking Methods in Psychology* (pp. 9-26). London: Sage Publications

Sparkes, A.C. (1998). Athletic Identity: An achilles' heel to the survival of self. *Qualitative Health Research*, 8(5), 644-664.

Sparkes, A.C. (2002). *Telling tales in sport and physical activity: A qualitative journy*. Champaign IL: Human Kinetics.

Stake, R.E. (2000). Case studies. In N.K. Denzin and Y.S. Lincoln (Eds.), *Handbook of qualitative research* (2nd Edn., pp.435-454). London: Sage.

Stanton, A., & Snider, P. (1993). Coping with a breast cancer diagnosis: a prospective study. *Health Psychology*, 12, 16-23.

Werthner, P., & Orlick, T. (1986). Retirement experiences of successful Olympic athletes. *International Journal of Sport Psychology*, 17, 337-363.

Yin, R.K. (1991). *Applications of case study research*. Washington, DC: Cosmos Corp.

Author Note

The interview guide is available from the authors upon request.

Table 1

Modified AIMS scores showing AI at the time of interview and retrospective AIMS scores showing AI at the time of underperformance for each participant

Participant	Modified AIMS Score	Retrospective Modified AIMS Score
Scott	44	44
Amy	41	47
Tom	49	49
Anna	41	42
Hazel	47	47
Jamie	24	18