

# A Qualitative Evaluation of the Effectiveness of a Mental Skills Training Program for Youth Athletes

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The purpose of this investigation was to evaluate the effectiveness of a mental skills training (MST) program for male youth elite rugby athletes. Three focus groups were held with 21 under-16 male rugby athletes and four male coaches involved in the MST program to examine the quality of service delivery, athlete responses to the MST program, the mental qualities used by athletes, and its perceived influence on athlete performance. Following inductive-deductive content analysis, 40 subcategories and 16 categories emerged. Participants believed the MST program to be an interactive, well-planned program that increased athlete understanding of MST methods and awareness of MST strategies to manage rugby performance. Athletes thought it important that their coaches develop a greater knowledge and understanding of MST methods. Finally, athletes perceived the MST skills and methods they learnt through the MST program were transferable to other sports and areas of their life outside of rugby (e.g., school).

Research into the effectiveness of sport psychology interventions have supported the positive influence of mental skills training (MST) on enhancing sport performance (Tod & Andersen, 2005; Vealey, 1994; Weinberg & Williams, 2001). Vealey (1988) defined MST as the learning and implementation of cognitive behavioral techniques to assist sport participants in the development of mental skills to assess, monitor, and adjust their thoughts and feelings to achieve performance success as well as personal well-being. Further, Vealey (1988, 1994) believed that a well-rounded mental skills training program should include foundation, facilitative, and performance skills and techniques.

Following Vealey's recommendations, Holland, Woodcock, Cumming, and Duda (2010) and Woodcock,

Holland, Cumming, and Duda (2011) made clear distinctions between the mental skills used to regulate mental qualities and mental techniques. Mental skills represent a regulatory capability to maintain, for example, a state of optimal concentration or optimal emotional control. The resulting "outcomes" developed through these skills are considered to be mental qualities (e.g., self-confidence; Holland et al., 2010). Such qualities can be experienced to varying degrees (e.g., high and low self-confidence) and are psychological experiences or attributes that are the result of the regular, proficient use of specific mental techniques (Woodcock et al., 2011).

The majority of research investigating the influence of MST on athletic performance has centered on senior athletes competing at an elite level. It has been argued that psychological factors play a central role in impacting athlete performance at the highest levels, as these individuals are already physically well developed and trained (Vealey, 1988). MST programs for elite athletes have been developed in sports as diverse as Olympic wrestling (Gould, Petlichkoff, Hodge, & Simons, 1990), lacrosse (Brewer & Shillinglaw, 1992), and equestrian competitions (Blakeslee & Goff, 2007). These programs have also included a variety of psychological skills and methods/techniques (e.g., goal setting, self-talk, imagery, and relaxation), all of which demonstrated some positive

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influence on athlete performance. In addition, athletes have reported greater knowledge, perceived importance, and use of the psychological skills and techniques taught in their MST programs.

The literature has also acknowledged the need to nurture youth athletes through positive support and training opportunities in order for these individuals to reach their full potential and stay involved in their sport (Abbott & Collins, 2004; Côté, 1999). Vealey (1988) argued that while youth athletes are still developing physically and psychologically, it is also important to provide these individuals with MST. Well-planned MST programs are an opportunity to positively encourage the psychological development of youth athletes within the competitive sport environment, which in turn can aid personal growth in other areas of their life (e.g., school) by transferring use of the mental skills and techniques they have acquired (Tremayne & Tremayne, 2004).

Following the recommendations made by Vealey (1988), attempts have been made to expand the provision of MST programs to youth athletes (e.g., Fournier, Calmels, Durand-Bush, & Salmela, 2005; Sheard & Golby, 2006; Gucciardi, Gordon, & Dimmock, 2009a). For example, Gucciardi et al. (2009a) compared the effectiveness of two MST programs (one traditional and one aimed at developing mental toughness) with three teams of under-15 Australian football players. Both MST programs were found to be equally effective in developing youth athletes' mental toughness. Collectively, these studies indicate that MST can also positively influence youth athletes.

To assess the impact of MST programs on the youth athletes involved, it is important that thorough evaluation take place. Gucciardi et al.'s (2009b) evaluation of their MST programs focused specifically on the development of mental toughness and did not consider an overall evaluation of MST program effectiveness in terms of quality of service delivery, assessment of the mental techniques used, and perceived influence on athlete performance. There are many potential benefits to including rigorous evaluations of MST interventions and services in applied practice. Despite the need for increased accountability, Martindale and Collins (2007) argued that formal evaluation procedures are unable to comprehensively assess the work of applied sport psychologists. Specifically, assessment tools currently available to practitioners are often atheoretical and lacking in sensitivity to comprehensively assess and monitor the progress made by athletes on targeted skills throughout the course of MST interventions (Murphy & Tammen, 1998; Vealey & Garner-Holman, 1998).

Involving athletes and coaches in the assessment of the services provided, in addition to their opinion of the quality of services delivered, will help gain some insight into MST program effectiveness. Reinforcing this point, Andersen (2000) has claimed, "Even though performance improvements are definitely linked to happiness, the real measure of how we are doing our jobs is whether the athletes and coaches are happy with us and what we

offer and want to come back" (p. 19). Anderson, Miles, Mahoney, and Robinson (2002) described four specific areas that must be investigated to provide a complete evaluation of sport psychology services. These four areas included the quality of the service provided, assessment of the psychological skills used within the intervention, the responses of athletes to these services, and the resulting performance of the athlete. Incorporated within the area of service quality is assessment of the sport psychology consultant and social validation (e.g., assessing the goals, methods and outcomes of interventions) by the client group. Including the views of the athlete within this section of service evaluation is an essential method of determining the effectiveness of the services provided (Anderson, Miles, Robinson, & Mahoney, 2004). However, the views of other significant parties with whom the sport psychology consultant interacts (e.g., coaches) are often neglected.

Taking into account the recommendations made above, the purpose of the present investigation was to evaluate the effectiveness of a pilot MST program for athletes participating in an under-16 male rugby union regional development program using a qualitative approach and by examining the views of both the athletes and their coaches. Considering Côté's Development Model of Sport Participation (DMSP; Côté & Hay, 2002), participants in the present investigation would be in the specializing stage of development. It is during this stage that youth athletes begin to gradually focus on one or two specific sporting activities, and Côté (1999) recommends that these sporting experiences should be positive to encourage continued participation in the sport.

Assessing the impact of MST interventions occurring in real-world settings is challenging, with many problems and obstacles to overcome—including how to measure the use, frequency, and effectiveness of techniques/interventions used by athletes in the sporting environment. But with advancing professional requirements and the need for quality assurance, there is an increasing obligation for applied sport psychology and its practitioners to be accountable for their practice (Martindale & Collins, 2007). The majority of investigations evaluating MST programs to date have adopted a quantitative approach to evaluate their findings. However, these methods fail to consider the views of the athletes and the coach(es) of the athlete with whom the sport psychology consultant is working. Incorporating the coaches of youth athletes into the qualitative evaluative process may lead to a more thorough assessment of sport psychology intervention effectiveness.

Brewer and Shillinglaw (1992) argued that qualitative methodologies are ideally suited for MST evaluation studies. Furthermore, Streat (1998) believed that qualitative methodologies lend themselves particularly well to the evaluation of performance enhancement interventions as these take place in the diverse and complex world of sport. However, to date, there have been a limited number of qualitative investigations evaluating the effectiveness of MST programs (e.g., Evans & Hardy, 2002; Fournier et al., 2005; Gucciardi, Gordon, & Dimmock, 2009b),

and with the exception of Gucciardi et al. (2009b), the qualitative methods employed were somewhat basic (e.g., informal feedback and open-ended questions at the end of questionnaires). Gucciardi et al.'s (2009b) qualitative investigation assessed athletes', parents' and coaches' perceptions of the results of a mental toughness intervention, and highlighted a number of qualities (e.g., quality of preparation, team cohesion, transferable skills) which had not emerged in their earlier quantitative program evaluation. Extending the work of Gucciardi et al. (2009b), the current study is one of very few study's employing a qualitative methodology when assessing the perceived effectiveness of a MST program specifically the quality of service delivery, athlete responses to the MST program, assessment of the mental qualities used by athletes, and perceived influence on athlete performance from the perspective of athletes and coaches.

## Method

### Participants

**Youth Athletes.** Twenty-one district-level male rugby athletes aged between 15 and 16 years of age participated in this investigation. Participants had all been selected to participate in the under-16 Scottish rugby union development program and had no previous exposure to MST. The purpose of the Scottish player development

program is to improve youth rugby athletes at a young age by ensuring athletes are identified and placed on a relevant development program. As members of the Scottish age group player development program, the participants of this investigation were exposed to specialist coaching support as well as competing within a national level competition for the first time (See Table 1 for an overview of the development program). The 2008–2009 rugby season was the first time athletes within this Development program were provided with the opportunity to participate within an additional MST program (See table one for details). In addition to their involvement in the development program, athletes also played rugby at school and club level ( $M = 96$  hr training during a rugby season). Participants had been playing rugby for between 5 and 10 years. At the time of the focus groups all participants were attending high school.

During the 2008–2009 rugby season, all athletes from one region of the development program ( $n = 49$ ) were given the opportunity to participate in the MST program. Throughout the course of the rugby season, two selection cuts were made to the development program in order for the final squad of 26 athletes to be named. Despite being dropped from the development program, deselected athletes were able to continue their participation in the MST program (See Table 1 for details).

**Coaches of Youth Rugby Athletes.** The four male volunteer rugby coaches exposed to the MST program

**Table 1 Overview of Rugby Development and MST Program**

Month	Rugby Development Program Sessions	MST Program Sessions (Number of athletes and coaches attended session)	MST team member interaction with athletes
October	2 × 1.5 hr physical training session with expert coaches	1. Introduction to mental skills training (44/49 athletes and 2 coaches attended)	1 × MST session 1 × Training support
November	2 × 1.5 hr physical training session with expert coaches 1 × Trial match	2. Performance profiling (30/49 athletes and 2 coaches attended) Parent and coach information session	1 × MST session 1 × Training support
December		3. Goal setting (no attendance data available)	1 × MST session
January		4. Self-talk (15/26 squad athlete, 15/23 de-selected athletes and 2 coaches attended) 5. Arousal control (15/26 squad athletes, 16/23 de-selected athletes and 2 coaches attended)	2 × MST session
February	4 × 1.5 hr physical training session with expert coaches 1 × Trial selection match	6. Imagery (13/26 squad athletes, 12/23 de-selected athletes and 1 coach attended)	1 × MST session
March	7 × 1.5 hr physical training session with expert coaches 1 × Match	7. Precompetition routines (15/26 squad athletes, 10/23 de-selected athletes and 2 coaches attended) 8. Preperformance plans (15/26 squad athletes, 9/23 de-selected athletes and 2 coaches attended) Coach education session (4 coaches attended)	2 × MST session 1 × Match support
April	8 × 1.5 hr physical training session with expert coaches 5 × Match	9. Review of performance profiling and MST program (15/26 squad athletes, 6/23 de-selected athletes and 1 coach attended)	1 × MST session 5 × Match support

agreed to participate in this investigation. All participants were aged between 32 and 45 years and had considerable experience playing rugby at County level competitions (13–33 years). All coaches had completed formal U.K. Coaching Certificates in rugby (3 completed Level 2 and 1 was completing Level 3 training at the time of data collection) and had youth rugby coaching experience ranging between 10 and 17 years. All coaches had the opportunity to attend MST sessions, but due to other commitments these volunteer coaches were unable to attend sessions regularly.

## MST Program

Work conducted by Holland et al. (2010) and Woodcock et al. (2011) provided the current study with insight into the psychological demands of youth rugby, the needs of the sport and recommendations for the delivery of a MST program for Under 16 youth rugby athletes from the perspective of youth athletes their parents, coaches and administration staff. The MST program consisted of nine 1-hr interactive sessions which included lectures, discussions, and practical tasks to learn and practice techniques; structured around the development program's rugby season (six months). Sessions were held on a separate day and location from physical training sessions. Along with an introductory session to MST and a review session at the end of the program, the following MST techniques were included: performance profiling, goal setting, self-talk, arousal control, imagery, precompetition routines, and precompetition plans (See Table 1). The personal strategies reported by athletes in Holland et al. (2010) and Woodcock et al.'s (2011) studies provide a basis for the content of MST sessions which build upon the experiences and skills the athletes have already developed through their rugby experience. Given the athletes' inexperience with MST, it was decided that all participants should be uniformly exposed to all the techniques within the MST program.

In addition to the MST sessions, the three researchers (first three authors) delivering the MST program attended all of the squad's competitive matches to provide match specific support if and when required by the participants. A 1-hr introductory information and education session was provided for the parents/caretakers and school and club coaches of these youth athletes to ensure they were aware of the content and purpose of the program delivered to the athletes. The aim of these sessions was to encourage parents/caretakers and coaches to support the use of the MST techniques with the athletes. Furthermore, all coaches involved in the rugby regional development program attended a 1-hr coach education session early in the MST program—the focus of which was to provide coaches with an overview of the MST program sessions' content and structure in addition to encourage discussions on how coaches could support and encourage athlete use of these techniques at training and matches. Development program coaches were also given the opportunity to attend MST program sessions. Considering the already

substantial time commitment required from the voluntary coaching staff, these individuals were only able to attend at least one of the MST sessions.

## Data Collection

Following ethical approval, and the completion of the rugby season, athletes and coaches of the National age group Player Development program were invited to participate in a number of focus groups investigating the perceived effectiveness of the MST program, the quality of the service delivery, assessment of the psychological techniques used as well as the possible influences these individuals believed it had on athlete performances. Focus groups were employed within this investigation, as it was believed gaining access to the athletes for individual interviews following the end of the rugby season would be an issue as athletes were all undertaking National School Exams. Rabiee (2004) described focus groups as a technique involving the use of in-depth group interviews. Participants were purposively sampled from those individuals who attended at least six of the nine MST sessions to discuss and evaluate the program (21 of the 49 development program athletes). It was believed that by attending at least six sessions, athletes would have gained a detailed understanding of the MST program and be able to provide their perceptions of the effectiveness of the program. Rabiee (2004) argued that the type and range of data gained through the interactions within focus groups are often deeper and richer than obtained from one on one interviews. While focus groups can highlight the range of ideas participants may have on a topic, they can also emphasize any differences in perspectives between individuals within groups.

Parental and athlete consent were gained before the start of the MST, and included participation in evaluative follow up focus group interviews. Three focus groups were conducted and consisted of 12 athletes who made the final pathway squad and took part in MST sessions (two focus groups had been scheduled by the researchers, but all squad athletes attended one focus group as they believed it would be more effective to discuss questions as a squad); nine athletes who had been de-selected from the development program and who did not make the final pathway squad but continued to attend MST sessions and play for their own club or school team; and four coaches of the under-16 development program. A fourth focus group had been scheduled for de-selected athletes who did not make the final pathway squad and did not take part in all MST sessions; however, no athletes volunteered to participate in this focus group. Following Krueger's (1994) recommendations, the participants within each focus group shared similar characteristics—specifically, gender, age range, and sporting experiences. Furthermore, basing the focus groups on preexisting groups (i.e., squad athletes, de-selected athletes, and coaching staff) would enable participants to relate to each other more easily while also being prepared to challenge one another (Kitzinger, 1994).

All focus groups were led by the same facilitator experienced in conducting focus groups and included a notetaker to observe verbal and nonverbal interactions and a video camera operator. Participants were informed of the purpose of the focus group and assured that their responses would remain anonymous and confidential. A guide to question topics was developed to ensure the smooth running of each focus group and consisted of open-ended, probing questions that allowed each participant to feel comfortable sharing their views and perceptions with the group. Question topics included evaluation of the MST program (How effective do you think the MST program was?); application and use of MST methods (What MST methods did you find most helpful to your rugby performance?); and (coach involvement and support of the MST program (What if any support of MST techniques did your coach's provide at training?; a copy of the interview guide can be obtained on request from the first author). All focus groups were audio and video recorded and lasted between 50 and 85 min in duration. Inclusion of video evidence allowed the researcher to continually refer back during analysis to the interactive processes that occurred among participants during the focus groups (Madiz, 2000).

## Analysis

All focus groups were transcribed verbatim and yielded 90 pages of data. The data analysis procedures employed commenced shortly after each interview to establish if any emergent categories warranted further exploration in the group interviews which followed. Given that the primary purpose of the analysis was to gain an understanding of how effective athletes and coaches believed the MST program to be in addition to investigating what these individuals perceived the influence of the MST program to be on athlete mental skills and sporting performances, a thematic content analysis approach was employed to search for common themes across all data (Weber, 1990). This approach involved a data driven inductive approach while also employing a deductive analysis based on the four evaluation categories of Andersen et al. (2000; Fereday & Muir-Cochrane, 2006). These categories were used as a guiding framework to classify the information from the focus group interviews, reducing it to more relevant and manageable information units to form explanations that reflect the detail, evidence, and examples of the participants.

A number of procedures were used during the analysis process, specifically open coding, line by line coding, constant comparison methods and memo writing, until saturation (i.e., when no new subcategories, categories or themes emerge) was achieved (Corbin & Strauss, 2008). The analytic procedures used within this investigation should not be regarded as structured, rigid, or static. As Strauss and Corbin (1998) explained, the qualitative analysis process is a "free-flowing and creative process, in which analysts move quickly back and forth between types of coding, using analytic techniques and

procedures freely and in response to the analytic task before analysts" (p. 58).

## Trustworthiness

A number of techniques were used in an attempt to ensure accurate and rigorous findings. First, the primary researcher independently analyzed the data and in an attempt to avoid researcher bias, presented her analysis to the larger research group including two experienced researchers for discussion and verification of the emergent concepts and categories. Secondly, an audit trail of all raw data quotes and interpretations was carried out by a third party independent of the present investigation. Finally, following the recommendations made by Sparkes (1998), extensive participant quotations are reported in the following results sections for readers to judge for themselves the accuracy and trustworthiness of conclusions.

## Results and Discussion

As often is the case in qualitative investigations, the description and interpretation of data are closely related. With the aim of avoiding repetition, and guided by Anderson et al.'s (2002) recommendations for evaluation of MST programs, the results and discussion sections are integrated and incorporate the 40 subcategories and 16 categories into the following subsections based on the themes emerging from the athletes and coaches perceptions: (a) athlete understanding of MST skills and techniques; (b) expectations of the MST program; (c) perceived effectiveness of the MST program; (d) perceived influence of the MST program on athlete performances; (e) coach knowledge and support of the MST program; (f) recommendations for MST program change; and (g) advice for athletes and coaches about MST. For consistency quotes from deselected athletes are noted with (DA) and selected squad athletes are noted with (SA).

### Athlete Understanding of MST Skills and Techniques

Looking back on their perceptions before participating in the MST program, athletes indicated in hindsight to have had a lack of understanding of what is MST and what would be incorporated in the MST program. With an uncertainty of what would be involved in the program, one athlete said, "I was a bit well apprehensive, kinda unsure [about what would be involved]" (DA). Considering the lack of MST experience of the athletes participating in the MST program, these responses are unsurprising. Athletes commented that the mental components of their performance were not something they had ever considered before. However, a number of athletes also indicated that they viewed the program as an opportunity to learn more about MST. Specifically, "I thought it was going to be interesting", "[I] thought it was an opportunity to learn new things" (SA).

## Coach Perceptions of MST

In addition to considering athlete perceptions of MST, it is also important to gain an understanding of the perceptions of those significant others who are close to the athletes. In this case, we interviewed their coaches, whose opinions may possibly create, develop, and influence those of the athlete toward MST (Anderson et al., 2004). In the present investigation, the coaches perceived the MST program positively and viewed it as, “a valuable addition to the [rugby development program]”. In addition, coaches believed the MST program to be “important and quite current... it’s something that the pro teams use”. These positive views were formed as a result of the experiences these coaches had while playing rugby and the lessons they had to learn themselves as they viewed the mental aspects of rugby, “as key to performance as [the] physical”. Furthermore, the positive endorsement and support of the MST program by the wider rugby National Governing Body in which these coaches are involved further reinforced the importance of MST for rugby performance. These findings are consistent with other studies wherein coaches from a variety of sports indicated considerable interest in the application of sport psychology techniques within their sport (Pain & Harwood, 2004; Partington & Orlick, 1987). Yet, in contrast to the current group of developmental rugby coaches, Pain and Harwood (2004) reported a lack of coach knowledge and awareness of sport psychology in English soccer academies. These authors warned that the influence of the coach over the athlete should not be ignored, as it is often the coach who spends the most time with the athletes, helping them develop and improve their performance. The coaches of the athletes involved in the present investigation demonstrated positive views of MST and this may be one explanation for the positive perceptions also indicated by athletes in the following section. The impact of the coaches’ positive views of MST on their athletes could be viewed as a case of social desirability (E.g., the athletes responding how they think the coaches would want them to) and therefore a potential limitation of the current investigation. However, this also highlights the need for practitioners to consider the involvement and support of the coaches of the youth athletes they are working with to ensure their positive support and encouragement of the use and application of MST skills and techniques in training and competition.

## Expectations of the MST Program

Martin et al. (2001) have argued that client expectations of sport psychology sessions remain unclear, which in turn impacts on the individual’s ability to commit to participating in MST. Considering this point, analysis of athletes’ discussions indicated mixed views regarding what they hoped to gain from participating in the MST program at the outset. Athletes’ and coaches’ responses highlighted three supporting subcategories; (a) low expectations of the MST program (1SA & 1DA); (b) gain an understanding of MST skills and techniques (2SA, 6DA & 3

coaches); and (c) prepare for and deal with competition (8SA, 3DA & 1 coach).

**Low Expectations of the MST Program.** Considering the lack of athlete understanding regarding MST and what the program would involve, athletes indicated low expectations of the MST program; specifically, “At the start I didn’t think I’d really benefit much from it [MST] because I wasn’t really into it because I thought it was just goal setting and that would be it” (SA).

**Gain an Understanding of MST Skills and Techniques.** Athlete and coach responses indicated that they expected athletes to gain a basic understanding of MST skills and techniques and when to effectively apply them. As one athlete commented, he hoped to, “learn the basics of mental skills so you at least have a basic understanding of it, even if you’re not pro at mental skills” (DA). In addition a coach expected athletes to gain, “an understanding that the mental side of the game, and awareness of the importance of this side of the game and that it could be the difference between getting the edge winning or losing.”

**Prepare for and Deal With Competition.** Responses also highlighted that athletes and coaches wanted athletes to learn how to prepare for and deal with the challenges of competition. A coach commented “The ability to cope with the pressure at a higher level of rugby, because they’re under pressure training and playing and I hoped this [MST program] would help prepare them for the intensity of these situations”. In addition, an athlete believed that the MST program, “definitely helps me prepare better for a game as well. Before, the day of the game as well, just thinking about what I’m going to do” (SA). This is not surprising as performing to the best of their ability is a major concern for athletes of all abilities and competitive levels, and any issues or struggles that may affect this must be dealt with to ensure optimal performance (Morris & Thomas, 2004). Specifically, athletes in the present investigation wanted to learn how to prepare for, deal with, and regulate their thoughts and emotions during competition. In addition, athletes commented that, as they progressed through the program, their expectations did change as their knowledge and understanding increased.

The expectations expressed by the youth rugby athletes in the present investigation are in contrast to the results of Martin et al.’s (2001) investigation of collegiate athletes and students. The youth male athletes who participated in the present investigation indicated that they expected a more positive outcome from participating in the MST program than the older male athletes. One possible explanation for this difference is that the youth male rugby athletes indicated no initial negative perceptions associated with the term ‘sport psychology’ (Ravizza, 1988). This MST program was the first time these athletes were exposed to any structured psychological input in their rugby performance and these athletes therefore could be considered a blank canvas, enabling the researchers to deliver the MST program to receptive participants (Harwood, 2008).

## Perceived Effectiveness of the Program

In relation to the perceived effectiveness of the MST program, responses of the athletes and coaches were positive as participants believed the program to be valuable for youth athletes. Three categories emerged highlighting the perceived reasons for, and indicators of, the effectiveness of the program. These were: (a) interactive, well-planned program; (b) increased athlete knowledge of MST skills and techniques; and (c) MST aided team cohesion.

**Interactive Well-Planned Program.** The athletes described the MST program as an interactive program and that, “there was always a plan for the sessions, so it meant it never ran on and always met the time” (SA). In addition, athletes reflected, “you [MST team] gave us a few different ways [techniques to use] cause no one’s the same so you gave us different ways. If someone does it this way but then you might not like it that way” (SA). The MST sessions were also perceived to be interactive with athletes commenting that sessions “weren’t just sitting around and you [MST team] telling us stuff” (DA) but rather involved, “practical things and working in groups, just having a laugh but we’re still learning stuff” (SA). As a consequence of these interactive activities, athletes were able to engage with other members of the group and discuss their use and application of MST techniques.

Athletes’ responses indicated that the atmosphere of program sessions “was good fun” and relaxed. In addition, the coaches commented, “once you took the chairs away, what a difference that made they knew they weren’t in a classroom environment, they got to sit on the floor and chat that made a huge difference”. The rationale behind creating this relaxed, fun atmosphere was to encourage open and honest discussions with and between athletes on their use and application of MST techniques. Gould (2001) commented that conducting team consulting sessions in this manner would help athletes to feel more comfortable.

## Increased Athlete Knowledge of MST Skills and Techniques

It emerged that, as a result of participating in the MST program, athletes and coaches believed that athletes developed an increased knowledge of MST skills and techniques. One athlete said, “I thought it [MST program] was good I felt that we learnt the stuff well in the time that was provided and then you helped us to put it into practice by giving us the choice to go home and develop the skills” (SA). Moreover, coaches commented that, “you can clearly see that the boys themselves have got something...to see them do it on the track is something different”.

In addition, participants believed that athletes developed an increased awareness of the importance of the mental aspects of their performance. The MST program assisted athletes in reflecting on all the components necessary to perform optimally in their sport, including

the mental aspects of their performance, and what MST techniques they already used within their performance and how to effectively develop and improve upon these. As one selected athlete explained:

It [MST program] helped me to understand that actually there is another side [to rugby]. You don’t have to be big or you don’t have to be really fast to be good at rugby. If you have the mental understanding or the capability to change what you think or need to do... When you showed us that [that graph, that MST] did kind a matter and that you really needed to mentally prepare to achieve more, achieve greater things, and that helped a lot.

The MST program was the first structured opportunity athletes had been provided to work on and develop the mental side of their rugby performance therefore education was a central feature of the MST program. Educating athletes about MST skills and techniques has been argued to be key to the development of athlete awareness of the importance of the mental aspects of their performance. This in turn will encourage athletes to continue to monitor their mental skills and the techniques they use and seek further assistance when needed (Sharp & Hodge, 2011).

## Aided Team Cohesion

Athletes indicated that MST sessions helped them to get to know other members of their MST group. As one athlete explained, “I thought how we [worked] in groups helped the team to start to bond together even putting us in groups that we didn’t know from school that helped” (DA). Although research has argued the ideal delivery of a MST program to be on an individual one-on-one basis, various constraints (e.g., monetary, participant and sport psychology consultant availability) meant that the current MST program was delivered in a group setting (Brewer & Shillinglaw, 1992). Results from the present investigation, along with those of Gregg, Hrycaiko, Mactavish, and Martin (2004), provide support for the delivery of multimethod packaged MST programs to small groups of athletes. Small group environments can facilitate group cohesion, provide athletes with a shared sense of experience and a community of learning, and offer opportunities to discuss a variety of solutions to address potential issues.

Halliwell (1989) discussed how the sport psychology consultant is often called upon to develop team cohesion and build a team spirit. This was not an explicit focus of the present MST program, which aimed to develop individual athletes’ use and application of MST techniques. These techniques though were taught in a team environment. As one athlete explained, “Bringing the team together...not just on the pitch...it helped us bond. Bond the team together; you get to know each other better” (SA). The ‘team bonding’ that was highlighted by athletes emerged as a by-product of the interactive activities, discussions and the incidental conversations

that arose during sessions. Similar results were found in Gucciardi et al.'s (2009b) who found that the unexpected team cohesion emerged as a result of the mental toughness-training program.

In their meta-analysis of cohesion and performance in sport, Carron, Colman, Wheeler and Stevens (2002) discussed how, within team sports, both task and social cohesion can be associated with performance. In view of this, reported cohesion in the present investigation emerged as a consequence of athlete interaction away from the pitch in a different environment separate from physical training sessions. These additional opportunities helped to develop task cohesion, group integration, and interpersonal communication skills that aided the group process. One coach commented:

When you compare that group of boys that walked in that 1st [MST] session to that group of boys that walked out of session [nine], they're hugely different. I guess they're a lot more comfortable being in there working with each other and they're now a team if you like rather than a bunch of guys just thrown together at the beginning.

### Perceived Influence of the MST Program on Athlete Performances

Analysis of the reported influence of the MST program on athlete performances revealed that the program was perceived to have had a positive impact. Two subcategories emerged in support: (a) athletes perceived effective application of MST techniques and (b) openness, honesty and self-regulation.

**Athletes Perceived Effective Application of MST Techniques.** Athletes and coaches perceived athletes to effectively apply the MST techniques addressed to their rugby performance. Discussions indicated that athletes self-selected what techniques they believed would work best for them from the variety included within the MST program and were able to effectively apply the specific methods they chose. As one athlete explained, "I've a bit more control over my anger, cause I used to get quite angry but I kind of stay in cool a bit more now, cause I use self-talk and some centering when I need them" (SA). By educating the athletes on a number of MST techniques and thus allowing for individual sporting needs and technique preferences, the MST program avoided a frequently given fault of MST programs. That is, MST programs are often limited by focusing attention only on one isolated skill or strategy while neglecting to understand where this fits into the athletes' psychological whole (Hardy, Jones, & Gould, 1996).

All techniques that had been used were discussed and believed to be effective by those who agreed to participate in the focus groups. For example, one athlete explained how self-talk positively influenced his performance, "Self talk helped me the most. I never used to talk to myself before a game but now I do...depends on the situation like scrummaging it's just to 'be calm' and lineouts to

'be calm' but in the tackles just to be hard" (SA). Furthermore, coach discussions highlighted how they were able to employ techniques as a team, "One of the things that we asked them to do based on the [MST] stuff was, when they felt the game was getting away from them was to stop, take a breath, sort of just chill out a little bit and try and do some of the centering work. You can actually see them physically doing that as a group".

Weinberg and Williams (2001) argued that although MST skills and techniques do not directly ensure improvements within sporting performance, once learned they could also aid the individual outside of the sporting arena. Athletes in the present investigation discussed how they were able to use the MST techniques beyond sport in other areas of their lives. If one considers Orlick and McCaffrey's (1991) argument that sport skills and life skills are learned in the same way (i.e., through demonstration, modeling and practice) these athlete perceptions are unsurprising. Discussions provided examples of athletes' perceived application of MST techniques to their school life: "Because it's helped you in rugby... [when] you set goals in rugby like [it] motivates you to do it. Because you know it works then [I've] moved it on to use it in school and then set goals for exam grades...I know well if it works in rugby then it'll probably work in school as well" (SA).

It is often assumed that many of the skills learned in sport are transferable to other life domains. Indeed, Petitpas, Cornelius, Van Raalte and Jones (2005) noted that, "youth sport programs that promote psychosocial development are those that use sport as a vehicle to provide experiences that promote self-discovery and teach participants life skills in an intentional and systematic manner" (p. 66). Although not planned components of the MST program or purposefully reinforced by the coaching staff, the present results highlight that once athletes had a clear understanding of MST techniques, they believed they were able to employ them successfully within their rugby performance as well as make use of them in other sports and in other areas of their lives. Gould and Carson (2008) believed that life skills will help a youth athlete not only succeed in the sport in which they are participating, but will also assist them once the skills are successfully transferred to nonsport settings. Furthermore, these authors argued that in order for something to qualify as a life skill, athletes must make efforts to effectively transfer the skills to other life situations. The present investigation provides novel support for, and clear examples of the transference of MST techniques, to other areas of these youth athletes lives outside of the developmental rugby program.

**Openness, Honesty, and Self-Regulation.** Athletes and coaches specified that athletes demonstrated increased openness, honesty, and self-regulation within their performances as a result of the MST program. Specifically, participating athletes were open to honestly discussing the strengths and weaknesses of their individual performances as well as the team's performances, in addition to their use and application of

MST techniques and their perceived influence on their performance. A coach explained:

[One of the coaches] had asked [the athletes] how do you deal with arousal. One athlete said I'd been in the rugby changing room a thousand times before so I went back to my routine that I followed to get myself ready for the game. And another athlete said I just wanted to focus on my role within the team... two separate boys stood up and gave two separate answers and they were pretty genuine...I've not seen a squad after one game open up like that.

Furthermore, responses indicated that the MST program assisted athletes to regulate their behaviors and emotions during rugby. Demonstrating this point, an athlete explained, "I just like the fact I got to understand what was going on in my head; I do think it [MST program] did add a lot" (DA). Another athlete gave the following example: "I like the arousal level stuff. When you get wound up, then you can kind of use self-talk and use that to calm yourself down and get you into the right frame of mind to play at your best" (SA). Duda, Cumming, and Balaguer (2005) argued that the demonstration of positive self-regulatory processes contribute to and are suggestive of athletes experiencing more self-determined and task-centered states of involvement in training and competition. Furthermore, the following coach quote highlights that as a result of the MST program, athletes developed an awareness of what they needed to do on an individual level to ensure they were fully prepared for competition:

"Probably the best start to a game we've had in the whole program. They just quietly went about their business, got themselves sorted out. When we wanted them together they were together, they did what they needed to do and they went out. . . If you want to see evidence of them using it [MST techniques] or that it's worked, then you could argue then it did work before that game."

### **Coach Knowledge and Support of the MST Program**

During discussions of coach support of both the MST program and athlete use and application of MST techniques, athletes were unanimous in their belief that coaches' knowledge and support should be improved. Two emergent subcategories captured athletes' views on coach support of the MST program: increase coach knowledge and understanding of MST techniques, and increase coach support and application of MST techniques in their coaching.

**Increase Coach Knowledge and Understanding of MST Techniques.** Athletes believed that the coaches, "don't know how [MST techniques] can affect the team in a positive way—how it can improve their team's performance, and I'm sure if the coaches properly understood what it meant, then I'm sure that's what they want" (SA). Furthermore, another athlete believed coach knowledge must be developed, "[They need to] know a bit

more about it [MST]. Like they may know some things about it, like we did at the beginning, but then now we know a lot more about it [MST]" (SA).

Coach discussions highlighted that the MST program and the additional coach education session provided them with confirmation that the MST techniques they had been using in their coaching were relevant. As one coach stated, "I viewed it [MST program] as a way of formalizing a lot of stuff that we think we were doing or we thought we were doing previously, sometimes subconsciously". However, the coaches indicated that there was a need for further coach education sessions: "It's highlighted to me to learn more about the techniques. I've learnt a lot being at the sessions, but I think I need help making it specific. . . because the last thing you want to do as a coach is get it wrong". Similar results were found in Gould, Damarjian, and Medbery's (1999) investigation into MST in junior tennis coaches. In their study, coaches were also found to have a basic understanding of MST techniques but did not use these with their athletes as they lacked the process knowledge of how to actually conduct practices which included and encouraged MST technique use with their athletes.

Within the present investigation, differences in perceived knowledge and understanding did emerge between athletes' school and club coaches and the coaches of the development pathway program. Athletes believed that although the development pathway coaches demonstrated a basic understanding of MST techniques, their school and club coaches demonstrated a lack of understanding. One athlete believed this was as a result of, "because obviously they didn't do this when they were doing their sports that they think... We didn't need it so why do they have to waste their time doing it. So, yeah—they don't understand it, and they just take that as it just being nonsense" (DA). Furthermore, athletes' responses highlighted that some of their school and club coaches adopted a negative view of MST and the MST program. One athlete stated, "Our club coach thinks this [the MST program] is bollocks. His son doesn't come here because he thinks its crap" (DA).

Athlete responses were mixed regarding coach attendance at MST program sessions as a method of increasing coach knowledge and understanding of MST skills and techniques. Athletes were assured throughout all sessions that the MST was not part of the selection process and that their participation within sessions was not being judged. Some athletes believed coaches attendance at sessions would help coaches to "know what we were doing [in MST sessions] as well, which might be quite important to them" (DA), which in turn would help them to "advise you when to use certain techniques [on the pitch]" (SA). However, a number of athletes argued that coach attendance would limit athlete openness in sessions and athletes worried that what they discussed within MST sessions would influence selection procedures; "You didn't really want to admit something when the coaches were there that you might have said if they weren't. Cause you might have thought it affected their decision on you in the squad" (SA). These mixed findings could be viewed as a limitation of the present

MST program; therefore, when delivering future MST programs, practitioners should consider the inclusion of separate athlete and coach MST sessions to ensure both athletes and coaches feel comfortable and secure being open and honest within sessions.

All four coaches of the rugby development program attended the 1-hr coach education session early in the MST program. Although this provided confirmation for the coaches on the techniques they may already have been using in their sessions, more specific and in-depth educational sessions about the process of how to implement these techniques into training sessions were required. As Gould et al. (1999) argued, there is a need to provide coaches with concrete, hands-on examples and activities for developing and encouraging MST use in training sessions while also highlighting the need to develop and encourage the use of MST techniques in a more in-depth and structured systematic manner (Pain & Harwood, 2004).

***Increase Coach Support and Application of MST Techniques in Their Coaching.*** The only differences in participant responses to emerge between athletes who made the final age group development program squad and those deselected were in their perceptions of coach support and encouragement of MST methods. Squad athletes perceived the pathway coaching staff to be supportive and encouraging of athlete involvement in the MST program, as one selected athlete stated, “They [coaches] referred to it [MST] quite a lot the first few weeks we were together as a team. When we watched the video back of the [first game], MST was quite heavily involved in what the coaches were trying to say to us”. This was mirrored in coach discussions that indicated that they believed themselves to be, “pretty positive, very positive in supporting it [MST use] and you know we do support it.” Once deselected from the development program, athletes believed that because of a lack of knowledge and understanding, their school and club coaches did little to support and encourage the use and application of the MST methods the athletes had learnt during the program at both training and matches. As one athlete reflected, “I think they don’t really know much so they can’t really like guide you” (DA).

Within the sport psychology literature, coaches are considered influential individuals in athletes’ lives. Coaches can positively affect athletes’ performance, behavior, and psychological and emotional well-being (see Horn, 2002). The main medium through which coaches exert this influence on athletes is via their own behaviors. That is, coaches who are seen to have a positive influence on athletes engage in effective behaviors. By demonstrating support for the MST program and encouraging athletes to use and apply MST techniques, coaches were overtly helping to develop positive psychological outcomes in their athletes.

Relatively little is known about how coaches encourage and support MST techniques with their athletes (Gould et al., 1999). Athletes in the present investigation were able to give the following examples of how the

coaching staff were able to encourage athlete use of MST methods during matches, “Before the [first] game they [the coaches], told us to think of a physical and a mental goal [for the game]” (SA), “We had the word center. Like in a match, if someone shouted it we had to center ourselves... Like at a lineout or scrum or something” (SA). In support coaches commented, “There was that availability to just say a key word from the touchline and you kinda knew that everyone knew what you were trying to put across without shouting at a group of kids. You knew you had a captive audience and hopefully they were going to respond”. The coaches also discussed situations in which they were able to support and encourage athletes with prematch routines, performance profiling, and goal setting.

Athletes believed coach support of the MST program and encouragement for the use and application of MST techniques helped athletes to realize the importance of the mental aspects of their performance. As one athlete explained, “I suppose if they’re [coaches] involved in it, it makes you feel like this is a proper program... like it’s actually part of the rugby set up. This is as important as going to training so that’s probably quite good” (SA). Although there was extensive discussion on pathway coach support and encouragement of MST techniques at matches, there was a notable lack of examples of coach support and encouragement at training sessions. Athletes indicated that coaches need to employ more MST methods during training situations, “So you are practicing the skills that you are going to use in a match” (SA). If athletes are to be expected to implement techniques effectively within competitive situations they need to be provided with the opportunity to develop these techniques in a training environment in creative and friendly ways (Vealey, 1988). Although the present investigation provides a number of examples of coach support, further research is required to ascertain the most effective structure and method of delivery of this support for athletes.

## Recommendations for MST Program Change

Despite the feedback on the MST program being very positive, athletes and coaches provided a number of recommendations on how they believed the MST program for Under 16 youth athletes could be improved. These included; (a) MST taught and practiced in the competitive environment, and (b) changes to the number and frequency of sessions.

***MST Taught and Practiced in the Competitive Environment.*** Participants believed it essential that the MST skills and techniques were taught and practiced in the competitive environment, specifically, “they need to do it in the environment where they need to reproduce it, so on the pitch”. The coaches believed that although the MST program assisted the athletes in developing an understanding of MST skills and techniques, support and practice of these techniques on the field was lacking. As one coach explained, “They’ve got an understanding. There’s no doubt about that the 1-hr classroom sessions

gave them that. We probably saw the end bit in the last game, but did they have a real chance to practice it with support on the pitch?" As with physical training sessions, the coaches believed it important that athletes train MST techniques in practice, "like you play, you want to have that same skill level, I'm not saying always the same intensity but you want to take what you transfer from the training pitch onto the [pitch] and vice versa". Discussions indicated that this would enable athletes to apply the techniques with confidence knowing that they had implemented them successfully in similar practice situations. Vealey's (1988) commentary on the future directions of mental skills training indicates the need for sport psychology practitioners to move beyond the education phase and assist consumers in the implementation of specific techniques.

Coaches believed that guiding athletes through role-plays of competitive situations and the possible MST techniques they would employ in these situations would enhance their application of the mental techniques. A coach explained, "Putting them into scenarios... right this is what's happened... what tools are we going to use to cope with it and how are we going to cope?" Similarly, Gould et al. (1999) reported tennis coaches believed there was a need for practical mental skill drills, forms and exercises to enhance the subtle implementation of mental techniques into training practices.

**Change in Sessions.** In addition, participants suggested that sessions should include more fun, practical and rugby specific activities. Coaches also raised concerns about the amount of sessions in the program. They believed that, in addition to the physical training sessions, requiring athletes to attend the MST program added further time pressures on these youth athletes (see Table 1). Coaches suggested, "To pick four or five things [techniques] and half the amount of sessions so there are not so many sessions basically and change it from a one year program to a two year program". In contrast, athletes wanted to see a change in the frequency of MST sessions, with shorter time between MST sessions. Athletes indicated that, "the length between sessions [needs to be changed] because you found yourself forgetting the stuff [taught in the previous session]" (DA). The present offering of the MST program was based around the structure of the rugby development program governed by the National Governing Body. McCann (2000) argued the importance of working closely with sport governing bodies and being adaptable to athlete schedules and procedures. In the present investigation the researchers worked closely with the relevant National Governing Body to ensure the frequency and structure MST sessions were adapted to match changes to physical training sessions as a consequence of weather and training schedule issues.

### **Advice for Athletes and Coaches About MST**

Finally, athletes and their coaches were asked to provide advice to other athletes and coaches who may possibly

participate in future MST programs. Three subcategories captured participant responses: (a) don't judge it, (b) participate fully in sessions, and (c) practice the techniques. Coaches' responses advised future MST participants to be nonjudgmental about MST programs as it is a, "valuable process that is key to athlete development". Athletes commented that it was important to come to MST sessions with no preconceptions about what would be discussed within sessions, as one athlete stated; "[You] have to just come and actually give it a chance and come every week and not come in the first week thinking [you'd not] enjoy it and then never come again" (DA).

Athletes and coaches also believed to "get the most from it [MST program]," athletes must participate fully during sessions. Athletes' responses included "answering questions when asked" (SA), and "put forward your ideas, because it might be what other people are thinking and no one else has said it" (SA). Athletes also recommended that "if you are confused just ask because it is not like you [sport psychology consultants] are going to bite our heads off or anything" (DA). Similarly, coaches recommended, "Use the MST team, I feel that I have an expert on call, another set of eyes or ears support wise... if we have new ideas we use them to bounce ideas off". The final piece of advice participants provided fellow athletes taking part in future MST programs was to practice the MST techniques they had learnt. "Actually practice the mental skills as well to like improve them 'cos like if you don't practice them you forget them".

## **Strengths and Limitations**

The present investigation had a number of strengths. First, it was a comprehensive evaluation of a pilot MST program from the perspective of both the elite youth athletes participating in the program and the coaches who worked closely with them. This provided novel insight into elite youth athlete and coach perceptions of MST program effectiveness. A further strength lay in employing a qualitative focus group methodology, which enabled the focus group facilitator to probe and ask for further clarification and examples from participants throughout the course of focus group discussions. This allowed a comprehensive understanding which would not have been gained if alternative quantitative assessment methods had been employed. However, readers should be aware of a potential selection bias; those athletes who volunteered to take part in the focus groups had participated in at least 6 MST sessions and may have had a more positive view of MST and sport psychology in general than other athletes who did not participate in the focus groups. Finally, a number of procedures were followed to ensure the trustworthiness of the results presented.

The current study also has a number of limitations that must be considered. The MST program was designed specifically for youth male rugby athletes and as such caution should be taken in generalizing the results to other sports and age groups. The effectiveness of the MST program may be strengthened once athlete and coach

recommendations are included in a revised program. Indeed, subsequent applied research is warranted to build on the positive progress of this investigation to improve the implementation and impact effectiveness of MST programs with youth athletes. Readers should be aware of a potential selection bias in the current investigation; those athletes who volunteered to take part in the focus groups had participated in at least 6 MST sessions and may have had a more positive view of MST and sport psychology in general than other athletes who did not participate in the focus groups. The focus groups were conducted by the researchers who also delivered the MST program and therefore social desirability may impact on the positive responses of participants. In addition, only three focus groups were conducted with the volunteer participants and therefore a number of emergent categories and concepts may not have been fully explored due to a lack of response saturation. In the future, researchers would benefit from conducting focus groups both before and after an MST intervention to gain a more detailed overview of any potential athlete changes over the course of the intervention.

## Summary

In conclusion, results from the present investigation provide researchers and practitioners with a detailed qualitative evaluation of a MST program designed for youth athletes. The four areas recommended by Anderson et al. (2002) for evaluation of sport psychology services provided a framework for the evaluation conducted within the current investigation. However, researchers should be cautious of limiting evaluation to only these four areas as the current investigation included additional exploration of expectations of the MST program, coaching support of MST skills and techniques while also highlighting the need to include different program users in the evaluation and assessment of intervention studies. The multimethod MST program which was delivered in a group environment was perceived to be a developmentally appropriate, interactive, well-planned program by participants that positively influenced their sporting performance. Furthermore, results indicate that through the MST program, the youth athletes in question were provided with support and training opportunities to nurture their sporting talent (Abbott & Collins, 2004; Côte, 1999; Vealey, 1988). In the view of the athletes and coaches, the MST program was believed to increase athlete knowledge of MST skills and techniques, aid team cohesion and increase athlete openness, honesty and self-regulation. A number of unique results emerged, giving novel insight into how elite youth athletes view and perceive MST, the positive impact participation in a MST program has on youth athletes, and how such athletes are able to transfer MST techniques to areas of their lives outside of sport. The findings highlighted the need to tailor MST programs to meet the specific needs of youth athletes, while also emphasizing the need to educate coaches of youth elite athletes to ensure they develop a clear knowledge of how

to support and encourage athlete use of MST techniques in their sport.

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