Running Head: Develop and maintain robust sport-confidence

Effective ways to develop and maintain robust sport-confidence: Strategies advocated by sport psychology consultants.

Chris Beaumont, Ian W Maynard, and Joanne Butt.

Centre for Sport and Exercise Science, Sheffield Hallam University, Sheffield, UK.

All correspondence should be addressed to Mr. Chris Beaumont, 6 Kingfisher Court, Beamont Drive, Preston, Lancashire, PR1 8UG.

Tel: 07730588532

Email: CBeaumont@live.co.uk

Running Head: Develop and maintain robust sport-confidence

Effective ways to develop and maintain robust sport-confidence: Strategies advocated by sport psychology consultants.

Abstract

Based on recent evidence (Thomas, Lane, & Kingston, 2011), this study identified 10 strategies advocated by sport psychology consultants as effective at developing and maintaining robust sport-confidence in athletes. Due to the study's exploratory nature, qualitative interviews were conducted and content analyzed. Six themes emerged for developing robust sport-confidence and four emerged for maintaining robust sport-confidence. Findings suggest a need to develop an athlete's signature-strengths, increase pressure experienced in training and identify broad stable sources of confidence to develop robust sport-confidence. Consultants reported that maintaining robust sport-confidence occurs through constant development. Theoretical implications and future research directions are discussed.

Keywords: Robust sport-confidence; Sport psychology consultants; Signature-strengths; Pressure training; Stable sources of confidence

Effective ways to develop and maintain robust sport-confidence: Strategies advocated by sport psychology consultants.

Self-confidence is frequently cited as an important part of successful sport performance and has been shown to influence behaviors, attitudes, and sporting attainment (Cox, Shannon, McGuire, & McBride, 2010). The two theoretical frameworks that have predominantly been used to study self-confidence in sport are self-efficacy theory (Bandura, 1977, 1986, 1997) and sport-confidence (cf. Vealey & Chase, 2008).

Self-efficacy is defined as a judgment of one's ability to organize and execute specific actions needed to produce a certain level of performance, and is considered to be a fluctuating state rather than a fixed trait (Bandura, 1986). It is thought that efficacy beliefs influence one's behaviors (i.e., actions), cognitions (i.e., thoughts), and affect (i.e., feelings) and are predicted by six main sources of information (Maddux & Gosselin, 2003). These sources are enactive mastery experiences (i.e., gaining belief from mastery and successful experiences), vicarious experiences (i.e., gaining belief from observing the successful experiences of others), verbal persuasion (i.e., gaining belief from the support of significant others including themselves), physiological and emotional states (i.e., gaining belief from associations made between performance and our physiological arousal and emotions), and imaginal experiences (i.e., referring to people gaining belief from imagining themselves, or others, behaving successfully). While Bandura's (1977, 1986, 1997) theory of self-efficacy was not developed specifically for the context of competitive sport, it made an important contribution to the study of self-confidence in sport as it tended to be the focal theory underpinning suggested strategies for designing confidence interventions for athletes (Vealey, 2001).

In order to develop a framework that more appropriately captured the context of competitive sport, Vealey, Hayashi, Garner-Holman, and Giacobbi (1998) built on self-efficacy theory to develop the theory of sport-confidence. This term was defined as an

individual's belief in their ability to succeed in sport (Vealey, 1986, 2001). Specifically, Vealey et al. (1998) suggested that athletes would depend on further sources of confidence in the sporting setting as well as those identified by self-efficacy theory (Bandura, 1997), with social, cultural, demographic, and organizational factors also influencing the original sources. Accordingly, the reconceptualized model of sport-confidence (Vealey, 2001; Vealey et al., 1998) identified nine sources of sport-confidence under the three source domains of achievement (mastery and demonstration of ability), self-regulation (physical and mental preparation and physical self-presentation), and social climate (social support, coaches' leadership, vicarious experiences, environmental comfort, and situational favorableness). Initial research exploring the sources from which athletes derive their confidence identified mental/physical preparation, mastery, and demonstration of ability to be salient sources (Vealey et al., 1998; Wilson, Sullivan, Myers, & Feltz, 2004).

From a conceptual perspective, Vealey (2001) highlighted the need to identify a variety of sources of confidence to maximize the ability of the athlete to draw on a salient source at any given juncture. Vealey (2001) further suggests that the sources most important to an athlete should be targeted when designing interventions to enhance confidence. In addition to the sources of sport-confidence, Vealey (2001) proposed that the sport-confidence model is multidimensional in nature and that both sources and types (i.e., what an athlete is most confident about) of confidence should be considered. Vealey's model has received support (e.g., Hays, Maynard, Thomas, & Bawden, 2007; Wilson et al., 2004) most notably in suggesting the proposition that athletes' characteristics and organizational culture influence their sources of sport confidence. Indeed, Hays and colleagues (2007) conducted a study involving elite team and individual athletes and identified both types and sources of confidence. From the nine sources of confidence reported, there were some sources overlapping with those initially outlined by Vealey and her colleagues (1998), but also further

sources of confidence unique to the culture of world-class sport (e.g., trust, competitive advantage, and innate factors). Taken together, the findings support the proposition that sources and types of confidence will influence athletes' sport-confidence levels, and will also vary depending on the organizational culture of the sport.

The most recent model of sport-confidence (Vealey & Chase, 2008) retains the original nine sources of confidence and also includes three types which are particularly important for athletes: physical skills and training (i.e., the athlete's belief they can execute the necessary physical skills), cognitive efficiency (i.e., the athlete's belief they can mentally focus in competition), and resilience (i.e., the athlete's belief they can deal with a setback). The model also proposes that the organizational culture of sport (e.g., competition level) and the individual characteristics of the athlete (e.g., gender) will influence the sources and types of sport-confidence used.

Research findings continue to support the model of sport-confidence (e.g., Hays, Thomas, Maynard, & Bawden, 2009; Kingston, Lane, & Thomas, 2010). In particular, in their follow-up study with world-class athletes, Hays et al. (2009) explored the role of confidence in relation to the cognitive, affective, and behavioral responses it elicits in the organizational culture of elite sport. Findings indicated that high sport-confidence facilitated performance through its positive effect on athletes' cognitions, affect, and behaviors while low sport confidence was synonymous with negative affect, faulty cognitions, and ineffective behaviors. Factors responsible for debilitating athletes' sport-confidence (e.g., poor preparation, pressure, and expectation) were also found. Interestingly, these debilitating factors were directly related to the sources of sport-confidence initially identified by Hays and colleagues in their 2007 study and highlight the important role that sources play in athletes' confidence levels. While identifying multiple sources of confidence has been a key message from the research findings, it has also been suggested that deriving confidence from

uncontrollable sources (i.e., unstable sources such as outcome-related accomplishments and social support) will likely contribute to fluctuating confidence levels (Hays et al., 2009; Vealey, 2001). Research findings therefore emphasize the need to assess an individual's sources of confidence in order to design an appropriate intervention specific to their needs that helps build and maintain confidence. In response to this need, Hays, Thomas, Butt, and Maynard (2010a) introduced confidence profiling as a tool to explore an athlete's own sources and types of confidence, and then later used the profile to implement a unique cognitive-behavioral intervention (Hays, Thomas, Maynard, & Butt, 2010b).

It is clear that existing research and the subsequent intervention work has been driven by the need for athletes to build confidence prior to, and maintain it during, competition. Indeed, Hays and her colleagues (2009) reported that elite athletes struggled to regain confidence if it was lost in the pressurized environment of competition. This finding supports Vealey and Chase's (2008) suggestion that confidence remains a work-in-progress for athletes and is a fragile construct. It is this concept of stability that has, for the most part, led to researchers exploring what has been termed "resilient confidence" (Bull, Shambrook, James, & Brooks, 2005; Vealey, 2001) in the past, and more recently "robust sport-confidence" (Thomas et al., 2011). Specifically, in a study involving elite athletes, robust sport-confidence was defined as a multidimensional and stable construct that allows athletes to deal with setbacks and the constant psychological and environmental challenges that occur in sport (Thomas et al., 2011). In addition, the construct was found to have six key characteristics, these being multidimensional (i.e., made up of different types of confidence), malleable (i.e., responds and reacts to negative factors), durable (i.e., stable over time), a strong set of beliefs (i.e., the athlete truly believes in their ability), developed (i.e., not innate but developed over time), and protective (i.e., acting as a buffer against negative factors). Thomas and colleagues (2011) suggest that these characteristics may serve as a foundation

from which stable sport-confidence can be developed and have important implications for sport psychologists. However, while Thomas et al. (2011) suggest such a development can occur, specific strategies addressing how this can be achieved have not been identified. As noted earlier, previous research (Hays et al., 2007) suggests developing controllable sources of confidence may help athletes to sustain more stable levels of sport-confidence. Further, Machida, Ward, and Vealey (2012) found that athletes' use of controllable sources of confidence was predicted by personal characteristics such as adaptive perfectionism (i.e., a drive to succeed, do the best on tasks, and an ability to be flexible when failing), task-goal orientation (i.e., individuals are focused on mastery, personal improvement, and high levels of competence), and a task-involving motivational climate (i.e., where effort, mastery, and personal improvement are the focus). However, these factors also predicted the use of uncontrollable sources, thus indicating that while the development of a task-orientation in terms of the individual and the climate might help athletes focus on controllable sources these factors may not reduce or remove uncontrollable sources (Machida et al., 2012). It is therefore still unclear if developing these factors may contribute to the development of robust sport-confidence.

Furthermore, while there are intervention techniques aimed at increasing confidence, such as goal-setting (Kingston & Hardy, 1997), imagery (Garza & Feltz, 1998), self-talk (Hatzigeorgiadis, Zourbanos, Mpoumpaki, & Theodorakis, 2009), hypnosis (Barker & Jones, 2006), and modelling (McAuley, 1985), it is also unclear if these traditional techniques are effective at building and maintaining robust sport-confidence. Indeed, Thomas et al. (2011) suggest the need to shift from a traditional view that high levels of confidence should be developed to more of a focus on developing the strength of the belief across several sources, in order to maintain robust sport-confidence over time. While existing research has provided a solid foundation from which a sport-confidence intervention can be derived (e.g., salient,

controllable sources of confidence unique to each athlete and key psychological skills), it is clear that there is still a need to further explore how robust sport-confidence is grown and the strategies that sport psychologists use to develop and maintain the construct.

The purpose of this study was to explore how experienced sport psychology consultants (SPC's) would advocate developing and maintaining athletes' robust sport-confidence. Specifically, the study aimed to identify the strategies consultants perceived to be effective at developing robust sport-confidence and also how they would help athletes to maintain this form of confidence over time.

Method

Participants

Ten (four female and six male) practicing sport psychology consultants aged between 32 and 63 years (M_{age} = 41.4 years; SD = 8.43) voluntarily participated in the study. The SPC's were recruited via email and were a purposive sample (Patton, 2002) with specific criteria used to ensure participants were appropriately qualified and suitably experienced. First, SPC's had to be registered with both the British Psychological Society and the Health and Care Professions Council – the professional bodies that regulate the delivery of sport psychology in the United Kingdom. Second, SPC's had to have at least 10 years of experience working as a sport psychologist. In total the SPC's had 10-30 years of applied experience ($M_{experience}$ = 16.8; SD = 6.18). In addition to these pre-requisites all participants were also accredited by the British Association of Sport and Exercise Sciences and had completed a doctoral qualification.

Procedure

Due to the exploratory nature of the study, interviews were selected as the method of data collection and a semi-structured interview guide was developed based on existing literature (e.g., Hays et al., 2009; Thomas et al., 2011; Vealey & Chase, 2008). Following

institutional ethics approval, SPC's that met the criteria for inclusion in the study were identified and contacted via email by the primary researcher to explain the nature and purpose of the study. Following this initial contact and agreement to participate, follow-up emails were sent to arrange a date and time for interviews to take place. Participants returned consent forms prior to further contact and were then sent a set of standardized instructions including the main areas from the interview guide to be explored. All interviews were conducted over the phone by the first author. Telephone interviews have been used successfully in previous sport psychology research (e.g., Gould, Collins, Laurer, & Chung, 2007). While it is acknowledged that it may be difficult to establish rapport with participants when conducting interviews over the phone, pre-participation correspondence via telephone conversations and emails further helped to establish rapport before interviews were conducted. Before data collection began participants were read a set of standardized instructions informing them again of the nature of the study and stating that all data would remain anonymous and confidential. Pilot interviews were conducted with two SPC's who met the inclusion criteria and were critiqued by two experienced researchers. During this process some minor modifications were made to the content and structure of the interview guide.

Interview Guide

A semi-structured interview guide was developed to explore participants' views. The guide ensured that each participant was asked the same set of fundamental questions (Gould, Jackson, & Finch, 1993) while also allowing participants to lead the conversation, elaborate, and discuss their unique experiences as consultants (Patton, 2002). The interview guide comprised five main sections which covered the two broad areas of building and maintaining sport-confidence. The first section aimed to build rapport and covered introductory questions about each participant's background and experience working as a SPC. The second section

explored participants' views on the nature of confidence and why it is important; it asked participants to discuss confidence and how it influences sports performance. Participants were also asked to define sport-confidence. In posing this question the researcher purposely avoided using the term robust to prevent undue bias. The interview guide then moved onto questions that probed participants' understanding of how confidence is developed (e.g., what type of intervention work do you deliver to develop athletes' sport-confidence?). This was followed by questions that addressed how participants would advocate maintaining confidence over time (e.g., what strategies do you use to help athletes maintain sport-confidence over time?). The final section covered any challenges or difficulties participants have faced when working with athletes on the development of confidence (e.g., are there any lessons you've learned about working with athletes on confidence?). Participants were given an opportunity at the end of the interview to discuss anything they felt was relevant that had not already been previously raised or discussed.

Data Analysis

Interviews were audio recorded and transcribed verbatim by the first author. Interviews lasted on average 50.68 min (*SD* = 7.89). Transcripts of each interview were content analyzed by three researchers adopting procedures outlined by Miles and Huberman (1994). Specifically, researchers individually inductively coded raw-data themes (i.e., quotes or paraphrased quotes representing meaningful thoughts) characterizing participants' views on the deductively selected two broad areas of developing robust sport-confidence and maintaining robust sport-confidence. The raw-data themes that were generated were organized into groups of like responses to create lower-order themes, and like-lower-order themes were then organized into higher-order themes. To ensure data trustworthiness, three researchers analyzed the data independently at each stage of the analysis (i.e., generating raw-data themes and the emergence of the lower and higher-order themes) and then reached

agreement during discussions that took place over a 6-week period. Engaging in this process has been reported as a common method to minimize potential bias that can occur with only one researcher analyzing the data (Leech & Onwuegbuzie, 2007). Finally, themes emerging from the data were presented to an experienced researcher who was not part of the research team (i.e., peer-reviewer). The role of the peer-reviewer was to probe for explanations of decisions made regarding grouping and themes (Lincoln & Guba, 1985).

Results

In accordance with the research question, the structure of the interview guide, and the analysis, the results are presented within the two broad areas of strategies to develop athletes' robust sport-confidence and strategies to maintain that sport-confidence.

Strategies to Develop Robust Sport-Confidence in Athletes

From a thorough review of the transcripts regarding strategies used by SPC's to develop athletes' robust sport-confidence 115 raw-data themes emerged and were organized into 18 lower-order themes. These lower-order themes were subsequently organized into six higher-order themes that represented the different strategies SPC's perceived to be effective for developing robust sport-confidence. These higher-order themes were categorized as developing understanding and awareness, logging evidence, manipulating the coaching environment, tailor for the individual, using psychological skills, and developing an athlete's signature-strengths (see Figure 1 for the full data tree of higher and lower-order themes). The number of SPC's cited in each of the higher- and lower-order themes is provided in parentheses. Each higher-order theme is discussed below with descriptive quotes used to provide context for the reader (Patton, 2002).

Developing understanding and awareness of confidence. This higher-order theme contained responses relating to SPC's helping athletes to develop a deeper level of understanding and awareness of themselves and of their confidence. This theme consisted of

three lower-order themes: education and awareness (e.g., understanding themselves and what confidence is), exploring sources of confidence (e.g., where their confidence comes from), and operationalizing confidence (e.g., what confidence looks like to them).

The lower-order theme education and awareness captured SPCs' views on the importance of increasing an athlete's awareness. These views were characterized by phrases such as "knowing their methods", "being aware of their thoughts and feelings", "understanding where they are", and "increasing their awareness of what confidence is". Therefore, SPC's were keen to use an educational approach to help athletes develop robust sport-confidence through becoming more aware of their own confidence. This theme was evidenced by one SPC who stated, "You can have an effect [positive] on someone's confidence without using any techniques as such but rather just talking to them about what confidence is".

Another lower-order theme, exploring sources of confidence, explained four SPC's views on the importance of breaking confidence down into different areas so athletes can gain belief from varied sources. In particular, it is having this wider array of sources that serve as a mechanism to build robust sport-confidence. One SPC explained this process in the following way, "You've got to try and create a broader base of where they can source confidence from, so if those dominos are knocked down their house of cards is not going to collapse". Similarly another SPC stated, "The wider the range of sources of confidence and the more things an athlete is confident about the more robust that confidence is likely to be".

Three SPC's also perceived that operationalizing confidence, or describing what confidence looks like to an athlete and what their desired behavioral outcome would be, was an effective strategy to develop robust sport-confidence. One SPC explained this theme, "My first job whenever someone says to me they want to work on developing confidence is to really clean-up what that looks like to them, what actually is that in behavioral terms".

Logging evidence. SPC's also described how recording evidence was an effective strategy for developing robust sport-confidence because it provides athletes with clear information about their performance that highlights they can succeed. Specifically this higher-order theme comprised five lower-order themes: reflecting (e.g., seeing the big picture), diaries (e.g., recording thoughts and statistics daily), monitoring improvements (e.g., tracking changes in performance), modelling/vicarious experience (e.g., seeing players who have left the academy and become professionals), and videos (e.g., a montage of their ability).

The lower-order theme of reflecting was discussed by five SPC's. In this theme SPC's referred to a variety of strategies effective for developing robust sport-confidence. These reflecting strategies included viewing "what went well in their performance as well as areas to improve on", "previous positive experiences", and "seeing the big picture". SPC's perceived these strategies to develop more robust sport-confidence because they encouraged athletes to focus on positive aspects of their performance and previous successful experiences rather than solely on aspects they can improve on. These strategies also developed robust sport-confidence by helping athletes to keep negative experiences in perspective by reflecting on how these individual incidents fit in with their overall performance. Thus, athletes were engaged in the reasons to believe why they can be successful. This was highlighted by one SPC who stated:

> I tend to do quite a few reflective exercises with people, reflecting on the bigger picture rather than getting too bogged down in any individual component…building those barriers up to that fluctuation in confidence by helping them to reflect upon the whole of their performance at that point in time.

Another lower-order theme, discussed by four SPC's, was the use of diaries to help athletes regularly record their feelings, thoughts, and performance data. Specifically, SPC's

perceived this strategy to help highlight "where the athlete is right now and how they have improved", and described this as an effective way to develop robust sport-confidence, as one SPC discussed:

> I like using diaries with performers. I like them to record performance statistics and their own thoughts on what's worked well, what's improved…that can be a really good mechanism to enable the athlete to understand the progress they are making.

Modelling/vicarious experience was a strategy discussed by four SPC's. Specifically, SPC's asked athletes to identify role models to help them develop their own belief that they can also achieve this level of performance. This theme is highlighted by one SPC:

> I've tried to utilize professional players who have come through the academy. I get them for just five minutes to talk… and hearing about some of those stories from others is quite powerful because these are people who have been through the process that the current academy players are working through.

Manipulating the coaching environment. This higher-order theme described how SPC's encouraged coaches and athletes to manipulate the training environment as an effective way to develop robust sport-confidence. This theme comprised of two lower-order themes: working with/through coaches (e.g., getting the coaches to implement the interventions) and manipulating the training environment (e.g., training under pressure).

Six SPC's discussed the lower-order theme of working with/through coaches. This theme captured the view that an effective way to develop robust sport-confidence is to first educate the coaches, which then enables coaches to deliver the interventions to the athletes, as one SPC stated:

> Often the best work you do is if you work with the coach and the coach delivers the information…what I spend more time doing is talk to coaches about these sorts of ideas and then often the coach might go away and work out how to put it into practice,

because they know the athlete better and they see the athlete more.

The lower-order theme of manipulating the training environment was discussed by six SPC's and referred to creating pressure situations in training by "creating challenging environments within training" and "testing athletes' skills using repetition". Manipulating the training environment also involved developing a mastery-oriented climate where athletes could acquire new skills and refine existing ones to help develop robust sport-confidence, as highlighted by the following quote:

> If an athlete is confident then they don't experience that same feeling of threat [that they do in competition] and they're able to perform, so it's very important that athletes are systematically introduced to pressure in the training environment so they learn how to execute a skill under the similar constraints or demands that there will be in competition.

Tailor for the individual. This higher-order theme related to SPC's discussing the importance of considering the individual needs of each athlete for robust sport-confidence to be effectively developed. This higher-order theme consisted of two lower-order themes: consideration of individual differences (e.g., understand the person in front of you) and relationship development (e.g., having a good sport psychologist-athlete relationship).

Consideration of individual differences was a lower-order theme discussed by nine SPC's in which it was emphasized that when developing robust sport-confidence it is important to think about the characteristics of each athlete because different strategies work with different athletes. This was characterized by one SPC who explained, "It's about having a very solid understanding of the person in front of you and developing an intervention with them that's most suited to help them move forward", and another who stated "I think depending upon the client and understanding their particular strengths leads you towards using different strategies".

Using psychological skills. This higher-order theme described how SPC's used different psychological skills to develop athletes' robust sport-confidence. This theme consisted of five lower-order themes: goal-setting (e.g., setting specific realistic targets), imagery (e.g., seeing yourself be successful), reframing/restructuring (e.g., reframing cognitions), process focus (e.g., focusing on the processes under the athlete's control), and psychological competition plans (e.g., race day plans).

In the lower-order theme of goal-setting SPC's highlighted the need for an athlete to "know what you're trying to achieve" as an important element of building robust sport-confidence. One SPC talked about helping athletes "regulate expectations" so that they are not trying to achieve unrealistic goals. Further, four of the SPC's noted the importance of using all goal types (outcome, performance, and process) at certain times depending on the athlete's competition cycle, but tended to emphasize the importance for athletes to have specific training goals when working to build robust sport-confidence as well as "process goals" relating to the procedures they have to go through to achieve success.

SPC's referred to reframing/restructuring as an effective strategy to develop robust sport-confidence and highlighted that it is effective because it enables athletes to rationalize what they are experiencing and to rethink the way they approach varying situations. One SPC talked about "using evidence to reframe their thinking" (e.g., using performance statistics and evidence of successful performances) as a way to help the athlete develop a more robust sport-confidence in their own abilities based on objective, real data.

The lower-order themes of imagery, process focus, and psychological competition plans were discussed primarily in relation to SPC's preparing athletes for competition. SPC's taught athletes to use imagery to build robust sport-confidence and talked about this skill being effective to help athletes believe in themselves (e.g., viewing the past good performances/skills) in the build-up to competitions. In the lower-order theme of process

focus SPC's perceived this to build robust sport-confidence because it enabled athletes to focus on the task at hand in training and competition. This process focus was linked to performance outcomes, as one SPC discussed:

> I try to get the athlete away from preoccupying their thoughts on the outcome of a competition or an event and try to get them to focus on the processes of their performance that will enable them to achieve that overall performance outcome.

Similarly, having a psychological competition plan was viewed as enabling athletes to arrive at competition feeling most confident, as one SPC discussed:

> Trying to develop reasonably effective, yet flexible, race day plans, so it's along the idea that "If I do these things then I've got the best chance possible of having a good race",…if you've got these things down in terms of plans for the day, if you tick them off, then you might be in a position to think on the start line "I've done the things I need to do and I know if I do these things regularly I usually perform well".

Developing an athlete's signature-strengths. This higher-order theme was comprised of one lower-order theme categorized as developing an athlete's signature-strengths. SPC's stated that getting athletes to understand and develop their own strengths ensures they are focusing on the positive aspects of their own performance. In describing this approach it was clear that having a signature-strength, or strengths, allowed each athlete to know what they do well and how they can influence performance on competition day, thus helping develop a competitive advantage and a more enduring level of confidence. This was evidenced by two SPC's who stated:

> I really am focused now on strengths and trying to get people to be aware of the good attributes they have. Sometimes we forget to focus on the really good things and that for me is where a lot of the confidence-related work that I do is now focused.

> The approach that I take is that they're working on their strengths at least equally to

their development areas. I think it's very important for all athletes to have absolute clarity on the things that they're really good at, that set them apart, that enable them to do what they do, and then make sure that they're able to bring that to competition.

Strategies to Maintain Robust Sport-Confidence in Athletes

In response to interview questions related to maintaining robust sport-confidence 38 raw-data themes were generated. These raw-data themes were organized into 13 lower-order themes which, in turn, were then organized into four higher-order themes that represented the different strategies SPC's perceived were effective at maintaining robust sport-confidence. These themes were labelled as continuation of the development process, influence the athlete's environment, stable beliefs, and reinforcing abilities, and are presented in detail below (see Figure 2 for the full data tree of higher- and lower-order themes). The number of SPC's cited in each of the higher- and lower-order themes is provided in parentheses.

A continuation of the development process. This higher-order theme contained responses relating to SPCs' views that maintaining robust sport-confidence over a period of time is about continuing the work completed to develop confidence. Within this higher-order theme there were three lower-order themes: continuing the strategies used to develop confidence (e.g., further use of the development strategies for maintenance), continuous monitoring of performance (e.g., looking at how the athlete can constantly develop), and continuation of goal-setting (e.g., constantly re-evaluating and setting goals).

Continuing the strategies used to develop robust sport-confidence was a lower-order theme in which SPC's discussed that the strategies used to maintain robust sport-confidence over time do not differ to the strategies used to develop it. This view was captured by the quote "I don't think that's any different really, I think all those strategies are set up to enable the client to start to maintain robust sport-confidence". Similarly, another SPC stated "I think the underlying principles of what you work on are essentially the same thing…the

processes that you are using to either gain or maintain strong belief are relatively consistent".

The lower-order theme of continuous monitoring of performance was discussed in terms of helping athletes to consistently reflect on what is "good in their game", to critically analyze successful performances, as well as "helping somebody explore where they might need to improve, where they might need to change, and where they might need to tinker". In the lower-order theme of continuation of goal-setting SPC's discussed a need to make sure goals are set so that athletes "continue to have something to work towards" and as a strategy to "remind them where they're going with what they're doing", which SPC's felt would help maintain robust sport-confidence.

Influence the athlete's environment. This higher-order theme comprised responses from SPC's stating that influencing both the training and competitive environment within which the athlete operates is an effective way to maintain robust sport-confidence. Specifically, this theme comprised three lower-order themes: manipulating training (e.g., creating an environment to foster belief), environmental cues (e.g., having triggers in the environment that are always there), and working through others (e.g., working alongside the coach).

The lower-order theme of manipulating training was discussed by four SPC's who highlighted the importance of developing a training environment that allows athletes to experience success, and one that gives them appropriate feedback for maintaining robust sport-confidence over time. One SPC discussed using the training environment in the following way:

> Are they [athletes] getting feedback from practice in terms of executing their skills so they've got reason to believe they can go out and know "I can do this because I've been doing it all week at the level which I know is required to succeed". So a lot of it is that you're getting the right kind of feedback from practicing your skills.

Environmental cues was a lower-order theme in which two SPC's discussed the importance of developing cues/triggers that are always present, hence are an effective way to maintain robust sport-confidence over time. One SPC explained this theme in the following way:

> There needs to be triggers in the environment that are always there. It might be a trigger of a bowler at the top of his run where he looks down at his mark, a trigger that makes him get into the right mind-set or emotional state to bowl well, but that marker must always be there. It helps him [the athlete] maintain that robust confidence, knowing that he has that.

Stable beliefs. This higher-order theme contained responses relating to SPC's confirming that helping athletes develop more stable confidence beliefs will help in the maintenance of robust sport-confidence over time. This higher-order theme comprised of three lower-order themes: restructuring/reframing (e.g., changing cognitions), multiple sources (e.g., increasing an athlete's sources of confidence), and continual awareness (e.g., continuing to be aware of their own confidence needs).

The lower-order theme restructuring/reframing captured the views that getting athletes to change their thoughts in terms of "shifting from an outcome to a process focus", or in terms of "changing an athlete's attributions of success and failure", were important factors in the long-term maintenance of robust sport-confidence, as highlighted by two SPC's:

> A lot of it is to do with looking at the attributions the athlete gives for their performance successes or failures and being able to rationalize them is quite important so that the athlete is consistently developing more functional attributions.
>
> Helping people to reframe their thinking in the sense of "I haven't got the outcomes that I want but my processes and my performances are good…if I keep doing the things I'm doing there's every reason to believe I'll get the results I want".

Two SPC's discussed the lower-order theme of multiple sources. This captured the view that for robust sport-confidence to be maintained it needs to be more multi-dimensional and sourced from both a broader range of different areas and from more internal sources. The use of multiple sources was explained by two SPC's:

> One of the things important for athletes to be able to maintain robust sport-confidence is to develop internally derived sources of confidence, because if they're constantly deriving it externally then it won't be maintained because those sources won't always be there.

> What you're hoping to see is that they [athletes] are showing more types [of confidence] so their confidence is becoming more multi-dimensional and they are demonstrating that they are sourcing their confidence from a broader range of areas so if some aspects are removed they have other aspects to fall back on.

Reinforcing abilities. This higher-order theme encompassed responses from SPC's that centered on reinforcing an athlete's abilities to help maintain robust sport-confidence over time. This higher-order theme is comprised of three lower-order themes: reminders (e.g., reminders of their accomplishments), strengths (e.g., reinforcing their strengths), and improvements (e.g., seeing long-term improvements).

These lower-order themes were all focused on helping athletes to remember their accomplishments, what they have done well, and the positive qualities that they possess as a way of reinforcing their ability. The strategies relating to these three themes were often used in combination by the SPC's. One SPC explained how they encouraged athletes to engage in the process of reminders and strengths in the following way:

> Often I'll use reminders that direct the athlete's attention towards things that they're good at, that they've accomplished, and that they can achieve. Little laminated reminder cards that reinforce their key strengths, what they've done in the last month

526 that has enabled them to be in the position that they are, or that reinforce the
527 performer's performance statistics…that can be a very powerful thing for them.

528 **Discussion**

529 The purpose of the current research was to explore the different strategies experienced
530 SPC's would advocate to develop and to maintain robust sport-confidence in athletes. The
531 strategies SPC's felt were effective were discussed in detail and recorded to enable other
532 practitioners to understand how they may be able to help athletes develop, and maintain,
533 robust sport-confidence.

534 SPC's identified six key strategies they would advocate to develop robust sport-
535 confidence (i.e., logging evidence, developing understanding and awareness, manipulating
536 the coaching environment, tailor for the individual, using psychological skills, and
537 developing an athlete's signature-strengths) and four key strategies they would advocate to
538 maintain robust sport-confidence (i.e., a continuation of the development process, influence
539 the athlete's environment, stable beliefs, and reinforcing abilities). The findings support
540 several strategies found in recent sport-confidence literature. Specifically, logging evidence,
541 using psychological skills, and reinforcing abilities support previous suggestions that
542 interventions based on key sources of confidence such as performance accomplishments,
543 demonstration of ability, and preparation might help develop and maintain robust sport-
544 confidence. The findings are also consistent with previous research emphasizing the need to
545 increase self-awareness (Hays et al., 2007) and to identify and broaden athletes' sources of
546 confidence in order to develop and maintain robust sport-confidence (Thomas et al., 2011).
547 Furthermore, the strategy of tailoring to the individual demonstrates the importance of
548 adopting idiographic methods to assess and understand an athlete's own confidence prior to
549 offering unique confidence enhancing intervention solutions. Confidence profiling is one
550 such method that has been developed and successfully used to design and implement a

551 cognitive-behavioral intervention focusing on sport-confidence enhancement (cf. Hays et al.,
552 2010a; Hays et al., 2010b). Importantly, however, findings from the current study also offer
553 some unique insights into how robust sport-confidence may be developed and maintained.
554 The finding of developing an athlete's signature-strengths as a strategy to develop robust
555 sport-confidence suggests a potential source of confidence not outlined previously in the
556 literature. Interviewed SPC's referred to this strategy as an approach to consultancy within
557 which one of the outcomes is to build robust sport-confidence. Specifically, this strategy
558 involved helping athletes focus on developing aspects of their performance that they excel at
559 and that set them apart from other athletes. While there is a lot of literature around strength-
560 based approaches in mainstream positive psychology (e.g., Biswas-Diener, 2010) little
561 knowledge exists on applying this approach in a sporting context (Gordon & Gucciardi,
562 2011). Furthermore, the theme of developing an athlete's signature-strengths went beyond
563 merely developing a strength. Consultants emphasized that the actual process for athletes to
564 understand their strengths and how to develop and use these strengths to gain a competitive
565 advantage was important and part of the approach. While seemingly analogous to the
566 competitive advantage source of confidence found in Hays et al.'s (2007) study, that
567 particular source referred to athletes gaining an advantage from seeing their opponents
568 cracking under pressure rather than focusing on an individual's own, controllable,
569 performance characteristics to gain an advantage. This finding on the use of strengths
570 therefore suggests a potential new strategy for developing robust sport-confidence and further
571 research is required to explore strategies and techniques that may allow the development of
572 athletes' strengths to occur.

573 The present findings also identified that manipulating the coaching environment was a
574 potentially effective way to develop and maintain robust sport-confidence. Creating optimal
575 environments is a line of research receiving increasing attention through the influx of talent

development and mental toughness research. Interestingly, the themes that emerged in this study indicated the need for a challenging/pressure training environment in addition to developing a mastery-oriented environment. These findings echo some of the research exploring how to build mental toughness which has highlighted the need to create a harsh practice environment together with a positive training environment (e.g., Weinberg, Butt, & Culp, 2011).

While previous research has noted the importance of developing mastery-oriented climates to help develop controllable stable sources of confidence (i.e., Machida et al., 2012), the present study also identifies creating a challenging practice environment (e.g., putting athletes in pressure situations) to build robust sport-confidence as an additional strategy. Future research is warranted to fully explore the role of pressure training for building robust sport-confidence. That said, it is plausible, because of how SPC's described using this strategy, that it could be part of athletes' feeling fully prepared for competition and experiencing accomplishments in training, which have previously been identified as salient sources of confidence (Hays et al., 2007; Vealey et al., 1998). Specifically, SPC's in this study referred to adding pressure to training as a way to remove feelings of threat from the competitive environment so athletes could execute their skills in similar situations to those experienced in competition, and hence could be comfortable in their environment. The elite athletes in Hays et al.'s (2009) study indicated that if confidence waivered in the pressure-inducing environment of elite competition it was difficult to regain it, and thus emphasized the importance of building robust sport-confidence prior to entering the competitive environment. Taken together, the research findings point towards the use of athletes experiencing training accomplishments and engaging in skill repetition as part of preparations for feeling confident. This pressure training theme found in the present study offers a practical recommendation for how to further athletes' training preparations as a source of

robust sport-confidence for competition.

It has been suggested that athletes need to constantly work on developing and maintaining sport-confidence (Vealey & Chase, 2008). Similarly, research findings focusing on robust sport-confidence support this notion that sport-confidence is not fully developed but it needs to be constantly worked upon (Thomas et al., 2011). Strengthening this support, the SPC's in the present study perceived that robust sport-confidence was effectively maintained primarily through the continuation of the same processes that were used in the midst of its development. This therefore implies a need for SPC's to be constantly working with athletes on the development of robust sport-confidence. Furthermore, educating athletes around the importance of continuing to monitor and develop their confidence is required to ensure robust sport-confidence can be effectively maintained. Developing an athlete's self-regulation and awareness skills are reported to be key attributes associated with the successful development of talented athletes (e.g., MacNamara, Button, & Collins, 2010). It remains crucial for SPC's to continually help athletes to become self-regulated and provide them with strategies to help adhere to psychological skills training. Findings of this study highlight the important role SPC's can have in building and maintaining athletes' robust sport-confidence. Specifically, SPC's need to be given adequate time when working with athletes to ensure development strategies can be implemented, reassessed, and continually used over a long-period to allow robust sport-confidence to be maintained.

Limitations and Future Research Directions

One potential limitation of this study is the small sample size with only ten SPC's interviewed. It was, however, felt that the extensive applied experience of these consultants offset the small sample size. A second limitation of this study is that it does not provide strategies that might be more tailored to male or female athletes. Previous research has documented gender-based differences in confidence sources (e.g., Hays et al., 2007; Vealey

et al., 1998) and debilitating confidence factors (Hays et al., 2009). While the SPC's in this study had a broad range of experiences (i.e., working with individuals, teams, males and females) it is important for future research to consider effective strategies for building robust sport-confidence specific to male and female athletes. It is also important to consider that while all SPC's had over 10 years applied experience they were not all full-time consultants and often had a split role working in academia. The various roles of SPC's might influence their experiences in how they consult with athletes, teams, and/or working through coaches (Anderson, 2000). Furthermore, it must also be noted that the strategies discussed here for developing and maintaining robust sport-confidence are strategies advocated by SPC's. Before these strategies can be said to be effective at building and maintaining robust sport-confidence empirical research is required to test these strategies, both individually and when delivered as part of confidence-intervention programs.

The present study therefore has implications in terms of potential future research. As stated previously, the strategies outlined in the present study need to be tested to ensure they are effective at developing and maintaining robust sport-confidence. It is also plausible that certain strategies might be more effective for male or female athletes. Based on the findings of this study, research could assess techniques that allow the development of signature-strengths to assess how this strategy can be effectively implemented into training and competition preparations and the effect it has on robust sport-confidence. Also, while previous research has noted the importance of training accomplishments, physical conditioning, and skill repetitions as part of athletes feeling fully prepared for competition, findings from the present study indicate that SPC's are utilizing pressure training as one way to help athletes build and maintain robust sport-confidence. Future research is warranted to identify and develop the mechanisms that underpin pressure training and the subsequent effectiveness of these interventions on developing and maintaining robust sport-confidence.

In addition, when viewing the results from the present study in conjunction with Machida et al.'s (2012) finding that task-orientation (i.e., focusing on personal improvement and mastery) predicted the use of controllable sources of confidence, this suggests the need to help athletes develop internal sources in the form of a task-goal orientation, which may help develop and maintain robust sport-confidence. Further research could therefore be conducted to assess if there is a connection between robust sport-confidence and either internal sources of confidence or task-goal orientation, or if developing a task-goal orientation allows for robust sport-confidence to be better maintained over time.

Practical Implications

The findings also have applied implications for SPC's, coaches, and athletes. One potential strategy to build and maintain robust sport-confidence is to help athletes become aware of, and develop, their own unique strengths. Knowledge of a unique strength and how it can be used appears to help athletes enter competition with a perceived competitive advantage. For this to happen most effectively it will require the integration of the athlete, the SPC, and the coach because unique strengths were not described as solely psychological but related to athletes' tactical, technical, and physical conditioning elements of performance. It is possible that current knowledge on types of sport-confidence (i.e., Hays et al., 2007; Vealey & Chase, 2008) can be expanded to incorporate signature, or unique, strengths, and confidence profiling (Hays et al., 2010a) might be one method that could be used to help athletes develop this awareness, and these strengths.

It is also advantageous for SPC's, coaches, and athletes to understand the importance of continuously engaging in strategies to maintain robust sport-confidence. SPC's in this study suggested a variety of logging evidence type strategies (e.g., use of video, modeling, or diaries to monitor improvements) to help athletes think about their confidence longer-term rather than building confidence as a quick-fix solution. SPC's also taught athletes a variety of

676 psychological skills such as imagery, goal-setting, and cognitive restructuring to facilitate
677 building and maintaining robust sport-confidence.
678 Confidence in sport has traditionally been associated with positive psychological
679 strategies such as positive self-talk, previous performance accomplishments, and positive
680 outcomes (e.g., demonstrating ability and winning successful performances). This study also
681 highlighted that SPC's regularly advocated pressure training and putting athletes into
682 challenging situations in training to build robust sport-confidence. Thus, for coaches, finding
683 a balance between building a positive environment and a pressure-experiencing training
684 context environment is important and might help athletes feel more fully prepared for
685 competition, which again may strengthen preparation as a source of confidence. Finally,
686 findings may also have implications for the training of sport psychology consultants that go
687 beyond using traditional psychological skills training to build robust sport-confidence. As
688 part of supervised experiences trainee SPC's should be equipped with new knowledge on
689 strength-based approaches to consultancy and also in the use of pressure training.
690 To conclude, given the importance of confidence in sport performance and the
691 difficulty of increasing confidence once involved in a competition (Hays et al., 2009), the
692 development of robust sport-confidence is critical. Findings of this study begin to highlight
693 some key strategies that can be used, and emphasize the need for continuous engagement in
694 building confidence in order to maintain robust sport-confidence. In particular, influencing an
695 athlete's environment, developing stable beliefs across multiple sources of confidence, and
696 reinforcing positive abilities appear to remain central to SPC's work with athletes and
697 coaches in building and maintaining robust sport-confidence.

698 References

699 Anderson, M. (2000). *Doing sport psychology.* Champaign, IL: Human Kinetics.

700 Bandura, A. (1977). Self-efficacy: Towards a unified theory of behavioral change.
701 *Psychological Review, 84,* 191-215.

702 Bandura, A. (1986). *Social foundations of thought and action*. New Jersey: Prentice-Hall.

703 Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: W.H. Freeman.

704 Barker, J., & Jones, M. (2006). Using hypnosis, technique refinement, and self-modelling to
705 enhance self-efficacy: A case study in cricket. *The Sport Psychologist, 20,* 94-110.

706 Biswas-Diener, R. (2010). *Practicing positive psychology coaching: Assessment, activities,*
707 *and strategies for success.* New Jersey: Wiley.

708 Bull, S. J., Shambrook, C. J., James, W., & Brooks, J. E. (2005). Towards an understanding
709 of mental toughness in elite English cricketers. *Journal of Applied Sport Psychology,*
710 *17,* 209-227.

711 Cox, R., Shannon, J., McGuire, R., & McBride, A. (2010). Predicting subjective athletic
712 performance from psychological skills after controlling for sex and sport. *Journal of*
713 *Sport Behavior*, *33* (2), 129-145.

714 Garza, D., & Feltz., D. (1998). Effects of selected mental practice on performance, self-
715 efficacy, and competition confidence of figure skaters. *The Sport Psychologist, 12*, 1-
716 15.

717 Gordon, S., & Gucciardi, D. (2011). A strengths-based approach to coaching mental
718 toughness. *Journal of Sport Psychology in Action, 2,* 143-155.

719 Gould, D., Jackson, S., & Finch, L. (1993). Sources of stress in national champion figure
720 skaters. *Journal of Sport and Exercise Psychology*, *15*, 134–159.

721 Gould, D., Collins, K., Lauer, L., & Chung, Y. (2007). Coaching life skills through football:
722 A study of award winning high school coaches. *Journal of Applied Sport Psychology,*

19 (1), 16-37.

Hatzigeorgiadis, A., Zourbanos, N., Mpoumpaki, S., & Theodorakis, Y. (2009). Mechanisms underlying the self-talk-performance relationship: The effects of motivational self-talk on self-confidence and anxiety. *Psychology of Sport and Exercise, 10* (1), 185-192.

Hays, K., Maynard, I., Thomas, O., & Bawden, M. (2007). Sources and types of confidence identified by world class sports performers. *Journal of Applied Sport Psychology, 19* (4), 434-456.

Hays, K., Thomas, O., Maynard, I., & Bawden, M. (2009). The role of confidence in world-class sport performance. *Journal of Sports Sciences, 27* (11), 1185-1199.

Hays, K., Thomas, O., Butt, J., & Maynard, I. (2010a). The development of confidence profiling for sport. *The Sport Psychologist, 18*, 373-392.

Hays, K., Thomas, O., Maynard, I., & Butt, J. (2010b). The role of confidence profiling in cognitive-behavioral interventions in sport. *The Sport Psychologist, 24* (3), 393-414.

Kingston, K., & Hardy, L. (1997). Effects of different types of goals on processes that support performance. *The Sport Psychologist, 11* (3), 277-293.

Kingston, K., Lane, A., & Thomas, O. (2010). A temporal examination of elite performers sources of sport-confidence. *The Sport Psychologist, 18,* 313-332.

Leech, N., & Onwuegbuzie, A. (2007). An array of qualitative analysis tools: A call for data analysis triangulation. *School Psychology Quarterly, 22* (4), 557-584.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic enquiry.* London: Sage.

Machida, M., Ward, R., & Vealey, R. (2012). Predictors of sources of self-confidence in collegiate athletes. *International Journal of Sport and Exercise Psychology, 10* (3), 172-185.

MacNamara, A., Button, A., & Collins, D. (2010). The role of psychological characteristics in facilitating the pathway to elite performance part 1: Identifying mental skills and

748 behaviours. *The Sport Psychologist, 24,* 52-73.

749 Maddux, J. E., & Gosselin, J. T. (2003). Self-efficacy. In M. R. Leary, & J. P. Tangney

750 (Eds.), *Handbook of self and identity* (pp. 218-238). New York: Guildford Press.

751 McAuley, E. (1985). Modelling and self-efficacy: A test of Bandura's model. *Journal of*

752 *Sport Psychology, 7* (3), 283-295.

753 Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand

754 Oaks, CA: Sage.

755 Patton, M.Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). California: Sage.

756 Thomas, O., Lane, A., & Kingston, K. (2011). Defining and contextualizing robust sport-

757 confidence. *Journal of Applied Sport Psychology, 23,* 189-208.

758 Vealey, R. (2001). Understanding and enhancing self-confidence in athletes. In R. Singer, H.

759 Hausenblas, & C. Janelle (Eds.), *Handbook of sport psychology*. New York: Wiley.

760 Vealey, R., & Chase, M. (2008). Self-confidence in sport. In T. S. Horn (Ed.), *Advances in*

761 *sport psychology* (3rd ed.) (pp. 65-98). Champaign, IL: Human Kinetics.

762 Vealey, R., Hayashi, S. W., Garner-Holman, M., & Giacobbi, P. (1998). Sources of sport

763 confidence: Conceptualization and instrument development. *Journal of Sport and*

764 *Exercise Psychology*, *21,* 54–80.

765 Weinberg, R., Butt, J., & Culp, B. (2011). Coaches' views of mental toughness and how it is

766 built. *International Journal of Sport and Exercise Psychology, 9,* 156-172.

767 Wilson, R., Sullivan, P., Myers, N., & Feltz, D. (2004). Sources of sport confidence of master

768 athletes. *Journal of Sport and Exercise Psychology, 26* (3), 369-384.

769 Figure Captions

770 *Figure 1.* Strategies identified by sport psychology consultants to develop robust
771 sport-confidence.

772 *Figure 2.* Strategies identified by sport psychology consultants to maintain robust
773 sport-confidence.

774

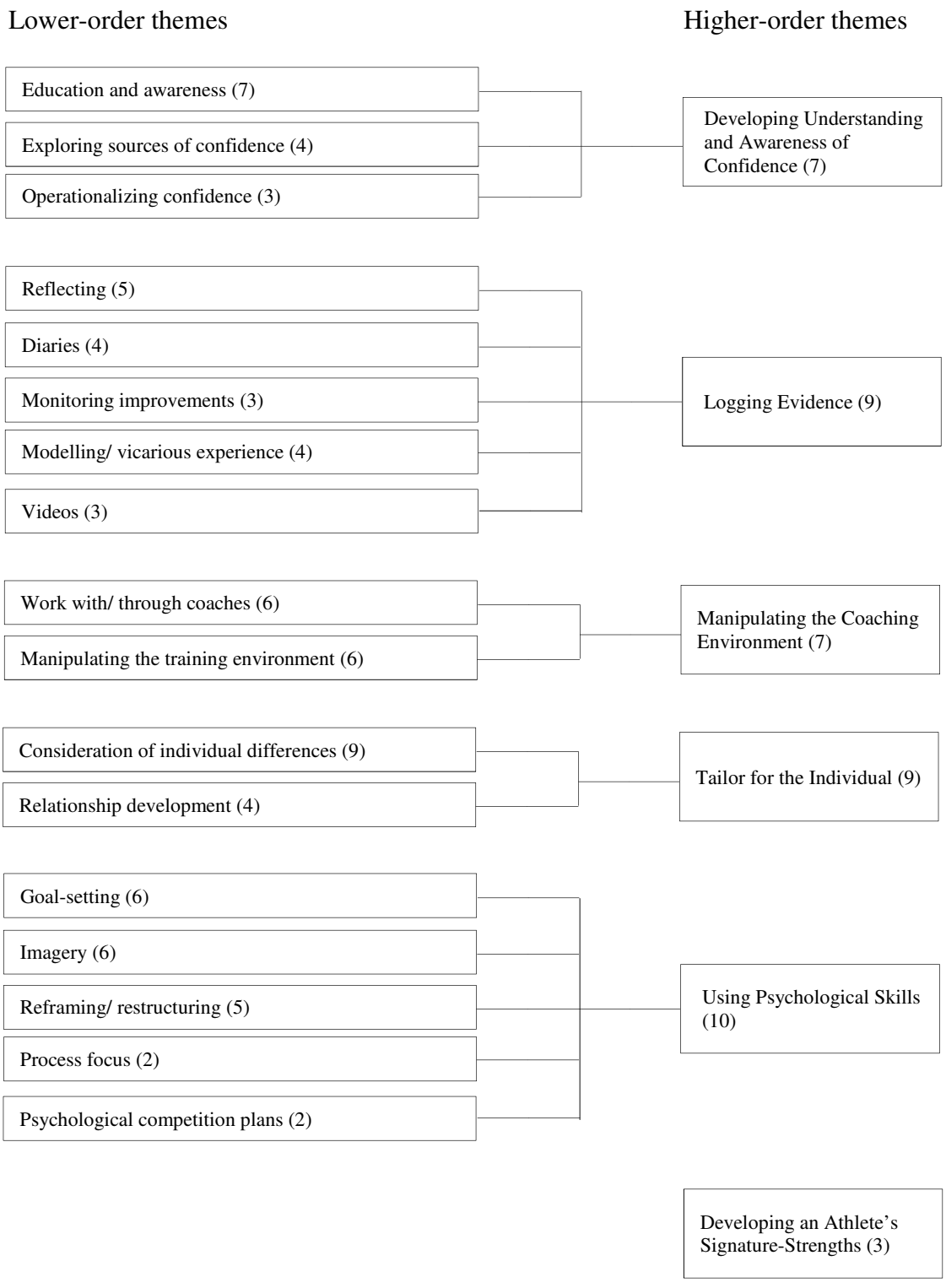

Figure 1. Strategies identified by sport psychology consultants to develop robust sport-confidence.

Note: The number of sport psychology consultants cited in each of the higher- and lower-order themes is provided in parentheses.

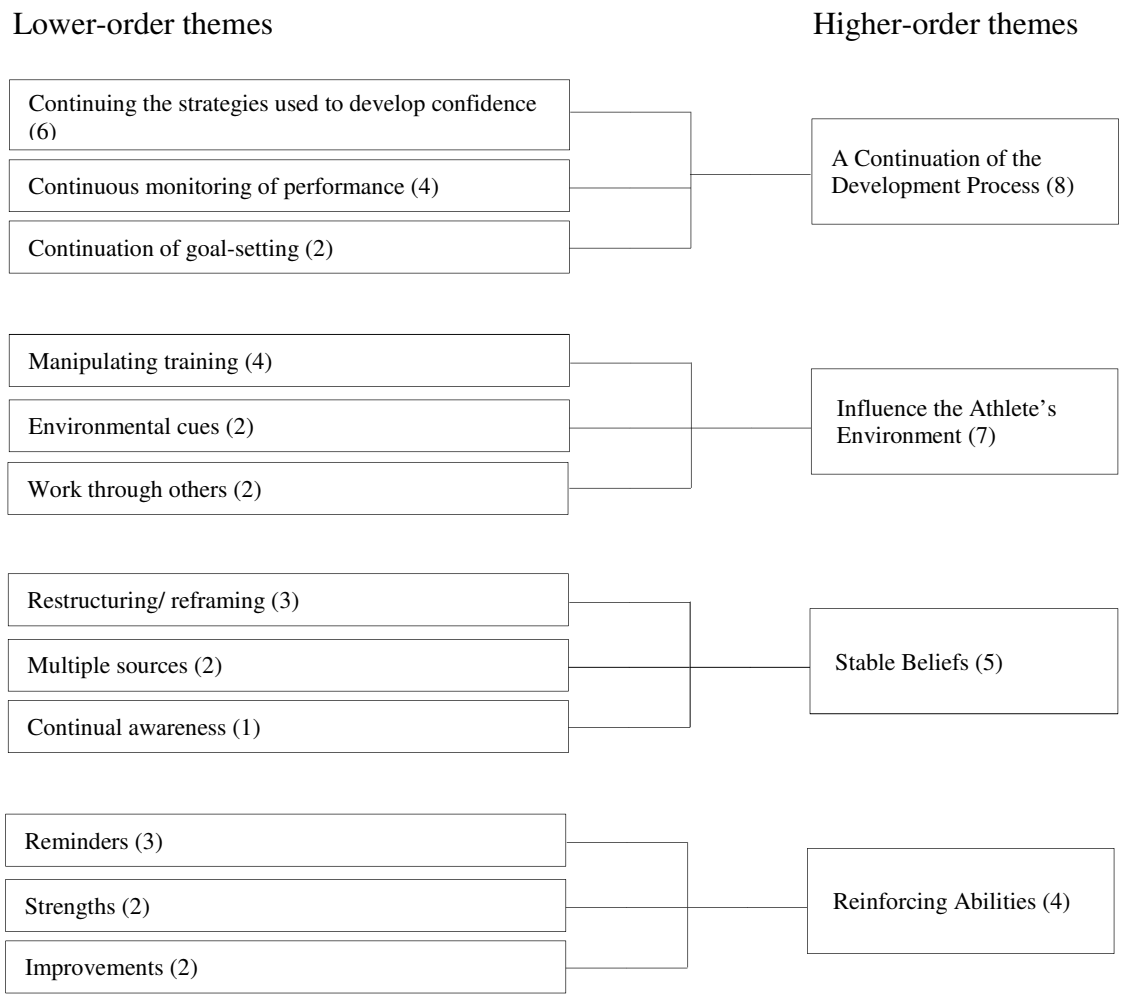

Figure 2. Strategies identified by sport psychology consultants to maintain robust sport-confidence.

Note: The number of sport psychology consultants cited in each of the higher- and lower-order themes is provided in parentheses.