Effectiveness of Behavioral vs. Cognitive Sources of Sport-Confidence in Athletes



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Abstract

Sport-confidence is defined as "the belief or degree of certainty individuals possess about their ability to be successful in sport" (Vealey, 1986 p.222). The factors that influence sport-confidence as well as the strategies used to improve it can essentially be viewed through two psychological lenses, behavioral and cognitive. Despite this, there are many factors that affect sport-confidence and strategies to improve it that are a combination of both of these approaches. In the present study, 51 varsity athletes at Allegheny College took two surveys. The first was the Trait Sport Confidence Inventory developed by Vealey (1986), which measured how confident an athlete is in their sport. The second was a sources of sport-confidence survey which measured whether an athlete prefers more cognitive or behavioral sources of sport-confidence. The purpose of these surveys was to determine whether the type of strategy used to gain sport-confidence has any effect on how confident an athlete is, as well as whether different types of sport-confidence are used more by individual or team sport athletes. The results of this study showed no effect between types of confidence preferred and level of confidence or type of sport an athlete plays. These results suggest that individual differences are the most influential factor for sport-confidence.

Introduction

Each year the National Football League holds a scouting combine for players who hope to be drafted to a team. The combine consists of several measures of speed, strength, agility, and skill, such as the forty yard dash and bench press. Although the physical attributes of athletes is obviously the focus, players have also been required to take some sort of mental evaluation since the 1970's, first in the form of an intelligence test. In 2013, in order for talent scouts to have a better measurement of athletes' psychological strengths and weaknesses, Harold Goldstein, an organizational and industrial psychologist, developed the Player Assessment Tool. It is a sport-specific personality test that is designed to measure players' motivation, competitiveness, passion, learning styles, and overall mental toughness (Battista, 2013). These measures are meant to address the mental side of sports that, along with the physical, determines an athlete's success. When discussing mental aspects of their sport, athletes often identify the development of confidence as needing the most work (Vealey, 2009). Due to the influence of confidence in determining an athlete's success, a specific definition of sport-confidence was developed in order to better conceptualize and measure confidence in athletes. Sport-confidence is defined as "the belief or degree of certainty individuals possess about their ability to be successful in sport" (Vealey, 1986 p.222).

An athlete's level of confidence in different situations while competing as well as practicing has been shown to affect a multitude of factors influencing performance in their sport. An athlete that feels confident is more persistent in the face of adversity, puts forth more effort and is more motivated than a less confident athlete. The confident athlete is also able to cope with a larger amount of anxiety and therefore has better decision making ability as well as

concentration. Finally, the more confident athlete has been shown to give more positive causal attributions to failures as well as successes (Vealey, 2009).

The concept of confidence can essentially be viewed through two psychological lenses: cognitive and behavioral. From a cognitive perspective, confidence can be influenced by factors such as imagery, self-talk, and thought processes. These strategies are commonly referred to as "psyching up". For example, in a study by Hamilton et al (2007), positive self-talk was shown to increase endurance during a cycling workout. After reaching baseline stability, meaning participants were showing little to no variance from one trial to the next, three interventions were introduced. These consisted of self-regulated positive self-talk, assisted positive self-talk, and assisted negative self-talk. Both positive groups showed improvement in endurance from the baseline level, however, the assisted positive self-talk group improved even more than the self-regulated group. Overall, studies such as this have emphasized the influence mental states can have on an athlete's performance. From this cognitive point of view, an athlete is successful because they feel confident going into a competition. In other words, the feeling of confidence precedes, and therefore increases the likelihood of success. Conversely, a more behavioral perspective of confidence argues in favor of the opposite. Instead of confidence as a cause of success, a radical behaviorist would say that past success creates a dense schedule of reinforcement in many specific situations in sports, which can then cause a person to have feelings of confidence as a sort of side effect of success and not a cause of it. Perhaps the most famous behaviorist, B.F. Skinner, argues just this. He states that feelings such as confidence, as well as characteristics such as persistence, are effects of schedules of reinforcement. If an athlete is always, or almost always, reinforced while completing a specific skill for example, he or she will subsequently feel confident about their ability to perform that skill. Furthermore, if they

have a history of reinforcement in a specific situation, they will persist longer in that activity in the face of adversity (or lack of reinforcement) than another person who does not have such a history (Skinner, 1974 p.64). Another name for schedules of reinforcement specific to sports is past performance success, which has been identified as the most important source of sport-confidence (Vealey, 2009). Often, an athlete will practice a specific task until they feel confident in their ability to successfully complete it. In other words, they are building a schedule of reinforcement that in turn, causes their feelings of confidence. Therefore, in direct contrast to the cognitive viewpoint, an athlete is confident during a competition because they have been, and continue to be, successful in the past.

Despite this contrast, in real life, it is nearly impossible to entirely separate the cognitive aspects of confidence from the behavioral. Most often, they work together in some combination that likely varies for each individual athlete. There are also several different types of sport-confidence that can be influenced by several different sources, which will later be discussed in detail. This variance in confidence, as well as its fragility makes it complicated to work with and improve. Because of this, being aware of and accurately measuring the types of confidence an athlete can have, the sources of confidence they prefer, and which may actually be more effective, could be invaluable information to athletes, coaches, and trainers. If each athlete could pinpoint their individual preferences for what is effective in improving their confidence, or if more cognitive or more behavioral strategies were found to be more effective, such information could potentially enhance athletic performance at all levels of competition.

Literature Review

Types of Sport-Confidence

While developing the definition of sport confidence as stated above, Vealey (1986) took into account two major types of confidence that athletes can have. These two types are trait sport-confidence (SC-trait) and state sport-confidence (SC-state). SC-trait is a more general confidence that an individual athlete typically has about their ability to perform well in their sport, whereas SC-state is a more fluid confidence that is influenced by particular situations in sports. This distinction led Vealey (1986) to use two separate measures for each. The first measures SC-trait and is therefore called the *Trait Sport-Confidence Inventory (TSCI)*, and the second measures SC-state and is therefore called the *State Sport-Confidence Inventory (SSCI)*.

These two major types of confidence are based on an athlete's definition of success. Vealey (1986) emphasized the fact that success can mean different things to different athletes. For example, depending on the sport and individual competitive orientations, some athletes are most concerned about performing well while others are most concerned with the result of the competition, or more simply put, winning. In addition to having confidence about their ability to perform well and win, Vealey (2009) discussed several other aspects of sports that can also influence an athlete's overall confidence. For example, an athlete needs to have physical confidence. While practicing as well as competing, an athlete will have a certain belief about their ability to execute the skills they currently have, learn new skills necessary to their sport, as well as achieving and maintaining their fitness level in order to participate in the sport at all. Second, there are self-regulatory aspects of competing in sports. These include an athlete's ability to effectively manage their thoughts and emotions, as well as their ability to persist through any adversity they may face.

Sources of Sport-Confidence

All of the different types of confidence also come from several different sources. Certain sources can be identified as either cognitive or behavioral. However, most work as a combination of both. Hays et al. (2007) conducted a comprehensive study about the many sources of confidence as identified by elite athletes on the world class or Olympic stage. In the study, athletes were interviewed by researchers about where they believed their sport confidence came from. The interview transcripts were then reviewed by separate researchers who identified all of the responses the athletes gave about the sources of their confidence. The responses were then broken down into sub-themes, higher order themes, and global dimensions.

Some of the athletes' responses were most aligned with behavioral concepts. Examples of these included "consistency from training skill over and over again", being "unbeaten by opposition", and positive reinforcement by coaches as well as teammates and other figures in an athlete's life. Training a skill repeatedly and being unbeaten combined with positive reinforcement is very similar to the concepts discussed by Skinner (1974). They all include building a high rate of reinforcement for particular skills and specific situations that in turn cause athletes to have feelings of confidence when they next perform these skills or find themselves in similar situations. On the other hand, many of the responses were about mental and holistic preparation and reflected cognitive concepts. These included "anxiety control work", "putting things into perspective", "trust in teammates", and "everything else in life going smoothly". However, most responses about preparation contained some combination of behavioral and cognitive factors. Some examples included "testing the preparation and knowing it works", "knowledge of improvement", "training diary", "getting everything right/feeling well prepared", "supportive environment". Finally, some responses included innate factors and athlete specific

factors. These included individual differences that affect confidence such as "innate natural skill", "enjoying sport", and "omens". Overall, these results show that although some specific sources of confidence may be attributed to only behavioral or only cognitive factors, a majority rely on some combination of both or some other individual difference entirely. Additionally, it suggests the sources that can influence an individual athlete's confidence are highly varied. Because of this variance in sources, it could be extremely helpful to coaches and trainers as well as the athletes themselves to be aware of which ones are the most salient or important to athletes and which may correlate with a higher level of confidence in athletes. With this knowledge, athletes and coaches could put more focus on specific drills or exercises designed to focus on the more effective or the athlete's preferred sources of confidence.

Gender differences in sources of sport-confidence. The findings in the interviews conducted by Hays et al. (2007) showed some differences in gender for sources of confidence. While males tended to talk more about the importance of believing their coach had set up an appropriate training program, females talked more about positive feedback and encouragement from their coaches. Furthermore, while most females identified perceived competitive advantage over opponents as a source of confidence, six out of the seven males interviewed specifically mentioned being superior while only one female mentioned superiority. This could suggest that females are more susceptible to external information influencing their perception of an opponent and therefore influencing their confidence. This may also be a factor that causes females' confidence to fluctuate more than males', who tend to believe more in their own superiority in general, which is less likely to fluctuate. These differences could also mean there are differences in whether males or females tend to depend on more behavioral or cognitive factors for

confidence. For example, if females are more susceptible to external influences, a behavioral approach to improving confidence may be more effective.

Strategies for Improving Sport-Confidence

Due to the intertwined nature of behavioral and cognitive aspects of sport-confidence, many past studies that will be discussed below tend to focus on some kind of combination of the two. However, there are some specific aspects within the studies that can be separated into one category or the other. One study done by Beaumont et al. (2014) interviewed ten practicing sport psychology consultants about how an athlete's sport confidence can be developed and maintained. Researchers then read the interview transcripts and ultimately organized the responses into six higher order themes. The first two themes involved cognitive strategies. The first theme, developing understanding and awareness of confidence, involves defining what confidence means to the individual athlete, making them aware of the thoughts and feelings they associate with being confident, as well as what they feel are the sources of their confidence. The second was a general theme encompassing psychological skills such as goal setting, imagery, reframing cognitions, focusing on the processes an athlete can control, and psychological competition plans. All of these strategies are meant to help an athlete approach competition and practice with a positive mindset about their abilities. The sports psychologists interviewed also mentioned several behavioral strategies. The first of these was manipulating the athlete's coaching environment. This theme consisted of educating coaches about confidence, but also having coaches create a challenging training environment so that athletes can practice their skills under conditions they will be exposed to in competition. This way, athletes will have many practice repetitions under pressure that will help them have confidence in their ability to perform successfully in actual competition. The next theme involved building confidence by having

athletes further develop and focus on their strengths. This strategy can help build confidence because it will increase the number of successful repetitions an athlete performs in practice and competition. The next theme, logging evidence, included a combination of cognitive and behavioral strategies. It involves tracking physical improvements in skill as well as recording thoughts or feelings about performance, observing skills being modeled, and watching video of the athlete's own highlights. This strategy is behavioral in that past successes are used to build confidence, but the cognitive aspect of reflection involving the athlete's thoughts and feelings is also necessary. The final theme emphasizes the importance of considering the individual differences of each athlete in developing confidence. In other words, the strengths, weaknesses and preferences of each athlete can make certain strategies more or less effective. This, along with the highly varied sources suggests that a universal strategy for improving confidence does not exist. Instead, it would be most helpful for athletes and coaches to know which specific strategies would be the most important or effective for individual athletes.

On the other hand, some studies looked into much more specific interventions meant to influence sport-confidence in athletes. One study by Pates et al. (2001) looked at the effects of hypnosis on the skill of shooting in basketball. The researches acknowledged the fact that the use of hypnosis has been controversial in sports psychology, but it has been researched thoroughly in the area of clinical psychology. Because it is agreed upon in sports psychology that controlling the mental aspects of competing in sports is necessary for success, it seems as though hypnosis, or at least intense visualization and imagery, could be a viable strategy. Three male collegiate basketball players were put through eight trials of specific shooting drills over four weeks before being exposed to the intervention and their scores were used as a baseline. The intervention was then given to each of the players daily and they would complete the drills

again in eight trials over four weeks. Finally, the intervention was stopped and the players again went through eight trials of the shooting drills over four weeks to serve as a second baseline. The actual intervention consisted of four stages. The first consisted of breathing and relaxation exercises. The second used a "staircase induction" in which each player was instructed to intensely visualize walking down a flight of twenty stairs to a room with a comfortable chair in front of a screen that showed a relaxing scene. Players were then given suggestions to help them recall their best performance in detail. In the fourth phase, each player's memory of their best performance was conditioned to be recalled by a trigger word of their choosing, which they would recite each time they shot. The players then practiced these techniques on their own every day during the four weeks of the intervention phase. Each of the players' mean scores improved during the intervention phase and returned to their first baseline level in the third phase when the intervention was stopped. Additionally, the players were interviewed afterward. They reporting feeling that the intervention had helped them with focus, relaxation, and confidence in general. Each participant stated they were able to experience the feelings and thoughts they had associated with their best performance while completing the drills. Some problems with the study include its generalizability as it only included three participants who were all male and at the same skill level. It is also unclear if the same results could be produced in a live game. Despite this, the results still suggest that imagery and visualization can impact psychological states, which could in turn impact performance. Although the imagery used is mostly a cognitive concept, the conditioning involved with the trigger word is behavioral, again suggesting the intertwined nature of the two aspects in influencing confidence.

Another study looking at strategies to improve sport confidence was done by Hall et al. (2009). It focused on imagery and observational learning specifically, as well as the difference

between athletes' use of these strategies in practice and competition. The use of these strategies was then compared to level of confidence. Researchers identified the functions of imagery as cognitive and motivational. These can be further broken down to include imagery about specific skills, general strategies, individual goals, anxiety/stress, as well as being mentally tough or in control. The most common of these images are specific skills (cognitive specific) and being mentally tough (motivational general-mastery). The three types of observational learning were identified as skill, strategy, and performance. The study consisted of 345 male and female athletes representing thirty two sports ranging from recreational to competitive. Each participant took three surveys. The *Sport Imagery Questionnaire* measuring the frequency and type of imagery they use, the *Functions of Observational Learning Questionnaire,* measuring the frequency and type of observational learning used, and the *Trait Sport Confidence Inventory* to measure athletes' general confidence while competing. It was found that athletes used all functions of imagery more in competition than in practice. They used motivational general-mastery imagery the most in competition however, cognitive specific imagery was used the most in practice. Athletes reported using observational learning (most often the skill function) more in practice than competition. Furthermore, after years of participation was controlled for, the researchers found that the skill function of observational learning, cognitive specific imagery, and motivational general-mastery imagery significantly predicted higher confidence levels in practice. In competition, motivational general-mastery imagery was the strongest predictor of higher levels of confidence followed by cognitive specific imagery. These results suggest that both observational learning and imagery can influence sport confidence in practice and competition, respectively. The difference between effectiveness in practice and competition could suggest that behavioral aspects like observational learning or modeling are more important

to confidence in practice while the cognitive aspects such as imagery are more important to confidence in competition. This suggests that setting could be yet another variable that can influence the effectiveness of different sources and strategies for improving confidence.

Hypothesis

In summary, the factors that can influence an athlete's confidence are extensive and varying. Individual athletes may be more performance oriented or outcome oriented in their definition of success, which in turn changes the definition of success a bit for each individual. In order to fulfill their definition of success in their sport, athletes need to have confidence about not only their physical fitness and skills, but also their ability to control their mental states in different situations. Confidence about each aspect of competition can come from a multitude of sources. While some strategies for improving confidence focus on cognitive aspects and developing strong psychological skills such as imagery, others focus on behavioral aspects which include physical repetitions such as practicing skills in a game-like environment to build confidence. However, depending on individual differences including gender, competitive orientation, and other individual characteristics, certain strategies may be more effective for certain athletes and not others. Because of this, it could be extremely helpful for coaches and trainers as well as athletes themselves to know exactly which strategies for developing confidence they prefer. However, it may be that certain strategies are simply more effective, despite individual differences. This may be determined by finding whether or not there is a correlation between levels of confidence and whether an athlete's preferred strategy for improving confidence is more behavioral or cognitive. For example, behavioral sources of confidence may be more effective because they focus on repetitions of a certain skill in a game-like environment, and do not rely on mental states, which are virtually uncontrollable and tend to

vary greatly. Despite this, certain athletes may believe that it is more important for them to develop a positive mindset and therefore lean more towards cognitive strategies, while others may prefer repeating a skill successfully to build their confidence. Often, athletes will probably prefer to use some combination of both cognitive and behavioral strategies. It could be that one or the other of these strategies correlates with a higher level of sport-confidence and should therefore be used more universally. For example, individual sport athletes may prefer cognitive sources of confidence over behavioral because individual sports are often more "mental" sports than team sports. Furthermore, individual sport athletes do not have teammates to rely on in the same way team sport athletes do. This means that individual sport athletes may rely more on cognitive strategies such as self-talk. However, even if there is no specific correlation between cognitive and behavioral strategies and confidence levels, knowledge of each individual's preferences would be valuable to coaches and trainers because they could then adjust the practice environment as well as their coaching style towards each athlete in order to effectively influence their athletes' confidence levels. Experimentally determining which strategies for improving confidence are the most effective for individual athletes would be extremely complicated as it is most likely impossible to entirely separate the cognitive and behavioral factors that affect sport confidence. Despite this, an alternative option that could also be effective would be to ask athletes what factors they feel most influence their confidence as well as measuring their actual level of sport confidence. In this way, a possible correlation between athletes' preferences about sources that most improve their confidence and how confident they are in their sport could be investigated. Furthermore, as Beaumont et al (2014) found, one strategy for improving confidence is to develop a better awareness of an athlete's own confidence. Therefore, having athletes identify what they perceive to be the most important influencers of their own confidence

levels may be very helpful in itself. Overall, a better understanding of how to influence sport-confidence in athletes could improve performance at all levels of competition.

Method

Participants

This study targeted student-athletes who participate in a varsity level sport at Allegheny College. Participants were recruited through Allegheny's SONA program as well as by reaching out to the coaches of each team in order to generate interest in the study. Participants were given one SONA credit as compensation for completing this study. There were 53 total participants in the study, however, two participants did not fully complete the surveys. These two incomplete scores were excluded from the study. The 51 remaining athletes represented nine different sports including baseball, basketball, cross country/track and field, football, lacrosse, soccer, softball, swimming/diving, and volleyball. Of the athletes that participated, 39 play a team sport while 12 play and individual sport. No other demographic information was collected in this study.

Materials

Participants in the study completed two surveys. The first is the *Trait Sport Confidence Inventory,* developed by Vealey (1986), which measures athletes' general confidence level in their sport. The second survey measured which sources of confidence athletes feel are the most effective for them. Items on this survey were categorized by the researcher as either a cognitive strategy or behavioral strategy. They were not labeled on the survey so the participant did not know explicitly which sources belong to which category. The survey asked participants to identify which of the sources in each question they feel they rely on the most for confidence in their sport. Ultimately, the sources of confidence survey measured whether the athlete uses more behavioral or cognitive sources of confidence. In addition, the sources survey asked participants

which sport they play in order to collect information about whether there are differences in confidence levels and preferred sources of confidence between athletes who play team or individual sports.

Procedure

Each participant completed the two surveys and data was collected from each to determine which sources the individual athlete prefers as well as how confident they are in their ability to be successful in their sport. The data was then analyzed to determine if there is any correlation between the type of sport-confidence an athlete prefers, their level of confidence in their sport, and whether they play an individual or team sport.

Results

Data was analyzed using IBM SPSS statistics 19 software (IBM Corp, 2010). Cronbach's alpha for the 12 items in the sources of confidence survey was .625. The Pearson Correlation between TSCI scores and the sources of confidence survey scores was .033. These results suggest that there is no significant correlation between confidence levels and preferred types of confidence sources. Two independent samples t-tests were conducted to compare type of sport (individual or team) and TSCI scores as well as preferred type of source of confidence (behavioral or cognitive). There was no significant difference in TSCI scores for team sport athletes ($M=5.86$, $SD=1.52$) and individual sport athletes ($M=5.16$, $SD=1.87$); $t(49)=1.34$, $p=0.188$. There was also no significant difference in preferred sources of confidence for team sport athletes ($M=52.35\%$, $SD=19.11\%$) and individual sport athletes ($M=48.61\%$, $SD=27.26\%$); $t(49)=.534$, $p=.596$. These results suggest that there is no difference in confidence levels or preferred sources of confidence between team and individual sport athletes.

Discussion

The data reported in the present study was contrary to all of the hypotheses made by this researcher. There was no pattern between confidence levels in athletes and which source of confidence they preferred. Although athletes preferred behavioral sources slightly more than cognitive, this difference was not enough to be significant. Team sport athletes did prefer slightly more behavioral sources than cognitive sources, however, this difference was not large enough to be significant. Finally, continuing this pattern, team sport athletes did have a slightly higher confidence level on average but, this difference again was not large enough to be significant. The data of the present study showing no pattern of preferred sources of sport-confidence across different sports is consistent with the current literature about sources of sport-confidence. For example, in Hays et al. (2007), researchers were able to categorize sources of sport-confidence into general themes, however these themes were seen across all athletes who were interviewed and did not correlate with any specific teams. Most of the sources found in this study were also a combination of behavioral and cognitive strategies for improving confidence and did not belong to only one category or the other. The fact that most sources of sport-confidence are a mixture of behavioral and cognitive strategies would also explain why no difference in preference was found between team and individual sports in the present study. Beaumont et al. (2014) found similar results in their study which entailed interviewing sport psychology consultants about strategies for developing and maintaining sport confidence. Although some strategies suggested by the consultants can be separated into the behavioral or cognitive group, most were a combination of the two. The data found in the present study also corroborate findings in studies testing specific interventions for developing and improving sport-confidence. Although studies such as Pates et al (2001) and Hall et al. (2009) have found that

strategies such as hypnosis, mindfulness, imagery, and visualization can have significant beneficial effects on confidence in athletes, these cognitive interventions are always paired with practice of a specific skill, which in itself is more of a behavioral strategy. However, as one strategy has not been found to be more beneficial or correlate with higher confidence, as was also the case in the present study, one reasonable conclusion may be that both sources are necessary to improve confidence. At the least, both cognitive and behavioral strategies working together help improve confidence better than one or the other used exclusively.

Some limitations in the present study could also possibly account for some of the results. Only 12 of 51 participants were individual sport athletes and the sample population was not distributed equally across sports in general. For example, there was only one participant each representing swimming/diving and baseball while there were 13 participants who play basketball. If the sample population was larger in general and included an equal number of individual and team sport athletes, the results could have possibly shown a larger difference between the two groups. Furthermore, although the items on the sources of confidence survey were reliable, they were sorted into either the behavioral or cognitive strategy by the researcher. An objective definition was used by the researcher, however, that definition was also made by the researcher. Therefore, the method may have some inherent bias. Finally, due to an error made by the researcher, all of the "A" answers on the sources of confidence survey were cognitive while all of the "B" answers were behavioral. This was not the original intention, however this error was only realized after the data collection process. Due to this error, it may have been possible for participants to detect a pattern which may have caused some bias in the way participants answered.

In the future, steps could be taken to improve the sources of confidence measure. The definition of cognitive and behavioral sources could be sharpened and possibly become more objective by using a method such as having multiple people sort the items based on a specific definition, for example. In addition to this adjustment, the present study may be redone in the future with a larger sample population and an equal distribution of individual and team sport athletes. If this were done, it is possible that a pattern may appear across the two types of sports. Furthermore, the present study did not collect gender as a demographic. Studies by Hays et al (2007) as well as Vealey (2009) have suggested that gender has an effect on preferred sources of sport-confidence. In order to further investigate this possible effect, the present study could be repeated replacing type of sport played with gender as an independent variable.

To conclude, the present study corroborates current literature which emphasizes the influence of individual differences on the effectiveness of strategies for improving sport-confidence. The sources of confidence used by athletes vary greatly and although some fit better into the category of cognitive or behavioral, most are a combination of both. The present study, along with past studies suggest that although both behavioral strategies such as many repetitions of a skill in a game-like setting and positive reinforcement as well as cognitive strategies such as self-talk and visualization can be beneficial, one type is not better than the other for individual or team sport athletes. Ideally, these two types of strategies should be used together. Furthermore, as Beaumont et al. (2014) found, developing a better awareness of an athlete's own confidence can be helpful in itself. According to this finding, along with the strong influence of individual differences on sport-confidence, it would be helpful for coaches and trainers to have athletes identify what they believe are the factors that influence their confidence, and adapt practices and exercises according to each individual's answers.

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APPENDIX A

Part I: Which varsity sport do you participate in? _____

Part II:
Choose one option from each set that you feel contributes the most to increasing your confidence level in your sport:

1.
A. Feeling like I have given my all
B. Achieving consistency from training a skill over and over

2.
A. Mental work on anxiety control
B. Extra practice focusing on specific weaknesses/mistakes until they are perfect

3.
A. Positive self-talk before competition
B. Going through a pre-competition routine

4.
A. Belief in my training process
B. Having a good training session right before a competition

5.
A. Trusting my coach has set the right training plan
B. Positive reinforcement from my coach

6.
A. Everything else in life going smoothly
B. Positive reinforcement from friends and family

7.
A. My innate confidence/mental strength
B. I have always been good at my sport and been recognized for being good at it

8.
A. Coming back from a career low in the past
B. Knowing exactly what to do in a specific situation during the competition from experience

9.
A. Believing that no one else has worked as hard
B. Seeing other competitors perform badly

10.
A. Having trust in teammates
B. Feeding off teammates performing well

11.
A. Being happy and confident in my life in general
B. Knowing what my strengths are and using these the most in competition

12.
A. Enjoying my sport
B. Encountering a good omen that has been lucky in the past before a competition

Appendix B

Trait Sport-Confidence Inventory

Think about how self-confident you are when you compete in sport.

Answer the questions below based on how confident you *generally feel* when you compete in your sport. Compare your self-confidence to the *most self-confident athlete* you know.

Please answer as you *really* feel, not how you would like to feel. Your answers will be kept completely confidential.

When you compete, how confident do you *generally feel*? (circle number)

1. Compare your confidence in *your ability to execute the skills necessary to be successful* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
2. Compare your confidence in *your ability to make critical decisions during competition* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
3. Compare your confidence in *your ability to perform under pressure* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
4. Compare your confidence in *your ability to execute successful strategy* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
5. Compare your confidence in *your ability to concentrate well enough to be successful* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
6. Compare your confidence in *your ability to adapt to different game situations and still be successful* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
7. Compare your confidence in *your ability to achieve your competitive goals* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
8. Compare your confidence in *your ability to be successful* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
9. Compare your confidence in *your ability to consistently be successful* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
10. Compare your confidence in *your ability to think and respond successfully during competition* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
11. Compare your confidence in *your ability to meet the challenge of competition* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
12. Compare your confidence in *your ability to be successful even when the odds are against you* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9
13. Compare your confidence in *your ability to bounce back from performing poorly and be successful* to the most confident athlete you know.	Low			Medium					High
	1	2	3	4	5	6	7	8	9