

The Impact of Confidence on Athletic Performance
How the Implementation of Mental Training Affect Track and Field Performances

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Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of Education

December 2019

Graduate Program in Education
Goucher College

Table of Contents

List of Tables	i
Abstract	ii
I. Introduction	1
Statement of Problem	1
Hypothesis	2
Operational Definitions	2
II. Review of the Literature	3
Introduction	3
Definition of Sports Confidence	3
Factors Involved in Sports Confidence	4
Methods of Measuring Confidence	5
Impact on Sports Performance	6
Development of Sports Confidence	7
Summary	7
III. Methods	8
Design	8
Participants	8
Instrument	9
Procedure	9
IV. Results	11
V. Discussion	12
Implications of Results	12

Theoretical Consequences	12
Threats to Validity	13
Implications for Future Research	13
Conclusion	13
References	14

List of Tables

1. Means and Standard Deviations of the Measures

11

Abstract

The purpose of this research was to determine if the implementation of mental training will improve athletic performance of Division III track and field athletes over a track and field season. The null hypothesis states that sports confidence will not improve athletic performance. Of the two groups tested, the posttest results of the sprinters did not accept the null hypothesis, which means there was no significant change from the results of the pretest. The hypothesis was accepted for the throwers, as there was a significant change in the results of the shot-put pretest and post-tests. This study involved the use of a pretest/posttest design to compare data from www.TFRRS.org and the use of a confidence questionnaire.

CHAPTER I

INTRODUCTION

As our culture promotes a competitive environment, coaches across the world seek to find the best method to give their athletes the competitive edge over their opponents. One must be willing to explore not just the physical realm of sports but to involve the mental aspect of competition. The psychological aspects of competitive sports should never be overlooked as the deciding factor for victory may come down to who wants it more. Research has demonstrated that athletes who are more confident in their team's abilities exert more effort, set more challenging goals, are more resilient when facing adversities, and ultimately perform better (Fransen, Mertens, Feltz & Boen, 2017). The belief in one's self and abilities have been a prevalent factor when it comes to competing in sports. Confident athletes tend to be more skilled at using the cognitive resources necessary for sporting success. Sports confidence defines itself to be the belief in one's athletic ability to perform a specific task. This became the focus of the research because the researcher sought to find out how confidence plays a role in the athletes of the track and field team and their abilities to effectively compete.

The research in this study will investigate the changes in athletic performance when mental training stimulus are added to the training program. This study will seek to find and examine the relationship between confidence and performance throughout a track and field competitive season. This study was influenced by the researcher's experience around athletes that showed traits and athletes that lacked the development of confidence.

Statement of Problem

Does improving self- efficacy, and sports confidence increase athletic performances or ability for college athlete in track and field athlete throughout the season?

Hypothesis

Implementation of sports confidence training will not improve athletic performance.

Operational Definitions

The purpose of this study is to see the impact that self-efficacy and sports confidence has on athletic performances on NCAA Division III track and field team. The dependent (like) variable is athletic performance as measured by the times ran by the sprinters and distances recorded by and throwers. Confidence training can be defined as the planning and practice of various method to build or increase the belief in one's ability to perform a task.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Developing the mental aspect of sports is what give some athletes of equal ability the dive to be better competitors than others, one must be willing to explore the mental aspect of competition to find what gives athletes that extra push to achieve great feats? The importance of confidence and its impact on athletic performance. In this literature review, the researcher will seek to first define sports confidence and self-efficacy then secondly, studies have sought to find the impact of how one's ability to believe in themselves can influence their physical performance. The researcher will then review the factors involved in sports confidence. Lastly, this review then will review methods of measuring confidence, its impact on sports and lastly explore methods of developing sports confidence.

Definition of Sports Confidence

When it involves mental processes the term psychology becomes the focal point, therefore, the involvement of mental processes in sports are sports psychology. Sports psychology is defined as "the application of the knowledge and scientific methods of psychology to the study of people in sport and exercise settings" (Gallucci, 2014, p.4).

One of the most important psychological factors for performance is confidence because research has shown that confidence is the most important psychological factor that differentiates more successful elite athletes from less successful ones. Confidence is no stranger in many aspects of society, this would mean it is also present in the world of sports. The study of

confidence within the domain of athletics and athletic situation seems to have been drawn from the concept of self-efficacy. Self-efficacy, according to psychologist Bandura (1977), is an individual's judgment of his or her capabilities to organize and execute a specific course of action required to attain the desired performance. This brings forth the formal definitions of sports confidence by Vealey and Chase (2008) as “the belief or degree of certainty individuals possess about their ability to be successful in sport” (p.70). Simply defined as one's confidence, it is the belief that an individual has capabilities to organize and execute the courses of action necessary to produce given attainments. This form of confidence is important for sport because it is a “state variable” that fluctuates based on the challenge at hand and can be manipulated by coaches (Gilson, 2010).

Although self-efficacy and sport confidence share some similarities (eg a belief that one has the capabilities to be successful), sport confidence embodies a frame of mind (i.e. a positive attitude and sense of personal control) that subsequently impacts the individual in a variety of athletic situations and tasks. It is interesting to emphasize that a good understanding of self-efficacy theory will in a long way help to determine the compelling sport confidence construct (Amasiatu, 2013).

Factors Involved in Sports Confidence

There is research that seeks to pinpoint the factors involved in confidence. The sports confidence model developed by Manzo, Ilva and Silva (2001) is a theoretical model for sports confidence based on three underlying constructs: dispositional optimism perceived control and perceived competence (Amasiatu, 2013). The theoretical model for sports confidence by Manzo et. al (2001) defines their aspects to be having a positive attitude, possessing the belief that ability is expected and that the degree to which one believes that one can successfully fulfill the

demands of a sports situation (Amasiatu, 2013). Another study states that athletes develop confidence via four sources, these sources though like that of Manzo et. al (2001) are different and developed through mastery experience, vicarious experiences, verbal persuasion and lastly physiological perceptions, these four sources stem from Bandura's self-efficacy theory (1977).

Self-efficacy, in comparison to self-esteem, is relatively specific to situation and domain. Sources of self-confidence and self-efficacy are also seen through, past success, the influence of the coach, learning through observation, Learn from successful prototypes and interpretation of one's own body signals as an optimal state and not as a nervous state (Beckmann & Elbe, 2013).

Reviewing all aspects of factors involving confidence the common theme across the board speaks that there must be the inclusion of trait and state confidence. Trait self-confidence represents the perceptions that individuals usually possess about their ability to be successful in sport; state self-confidence represents the perceptions individuals have at a particular moment about their ability to be successful in sport (Hossein et. al, 2013). All studies follow a specific trend confirms that self-confidence is a skill and can be developed according to such as an athlete's physical development which will be considered and explain in the later sections of the literature review.

Methods of Measuring Confidence

Methods of measuring one's internal beliefs or personal attitude have made groundbreaking achievements throughout the timeline of sports psychological research. Some research seeks to find sport-related attitude surveys that are predictive of athletic performance.

According to Cameron (2011), the Sports Personality Questionnaire (SPQ20) is a sport psychology assessment test provides information about an athlete's personality and mental skills. The instrument is based on a model of mental toughness, covering personality factors and mental skills that have been shown to impact on athletic performance. The SPQ20 is designed to help athletes understand and measure themselves against the psychological factors that affect a player's performance and potential. The field of sports psychology could be completely flexible in finding answers if the researcher remains ethical.

Impact on Sports Performance

It is evident that someone's psychological state can affect one's performance. The articles under review all concluded some effect through their studies, an example of someone's mental state can be in the form of fear, as Compte and Postlewaite (2004) explained, "Positive emotions can improve performance, while negative ones can diminish it". Studies have shown that even the thought of possible failure can lead to physiological consequence that can affect the athlete's performance (Compte & Postlewaite, 2004).

As studies have shown that confidence is associated with a positive effect. Self-confidence provides a general framework for control and management of stress and sport self-efficacy particularly helps the athlete in a specific field related to management and control of sport stresses, better performance, and sport achievement (Besharat & Pourbohloul, 2011). Not only does confidence impact individuals there is also an uprising trend that confidence also impacts teams, Research has demonstrated that athletes who are more confident in their team's abilities exert more effort, set more challenging goals, are more resilient when facing adversities, and ultimately perform better (Fransen, et al., 2017).

Development of Sports Confidence

As mentioned before, confidence is considered a skill, with that being established, coaches seek ways of developing confidence as they would train an athlete to run faster, jump higher or lift heavier. The development of mental skills are sometimes the factors that push an athlete to achieve above another. Finding that confidence affects both teams and individuals, one important factor in developing the skill of confidence would be that of “Goal Setting”, according to research findings, a multiple goal strategy with a good balance between outcome, performance and process goals leads to the best results (Beckmann & Elbe, 2013). They also said that, the setting group goals appears to be important for athletic performance because it can mobilize team spirit; shared goals promote a “we feeling”. Development can also take place with the intervention of imagery training and the implementing of positive self-talk. By practicing positive imagery, athletes can develop images of themselves performing successfully and create a template in their mind’s eye” of positive past performances and expectations of good performances (success in the future) (Amasiatu, 2013).

Also, to create success coaches need to create an environment that fosters confidence the best way to do that is to create a good rapport and respectful environment. The successful implementation helps build an intense caring climate that athletes enjoy and work hard in (Moore, 2010).

Summary

Confidence is a very important factor when it comes to athletic achievement. It can be seen as the factor that drives athletes to the pursuit and continues achieving within their sports. The ability to successfully implement methods to develop this skill can further impact the success of the athlete and team.

CHAPTER III

METHODS

Design

The study uses a pre-experimental study with a pretest and posttest on a single group. The Goucher College Track and Field team the sprinters, and throwers who have participated throughout the entirety of the season were selected to participate in the research. TFRRS.org was used as the measure for pretest and posttest. Different types of confidence training such as mental imagery training and positive self-talk will be implemented after the first competition. The competitive season takes place from January 2019 – May 2019, the athletic measures tabulated were the times/ distances achieved with achieved at the first competition of the season and will be compared to the marks at the end of the season.

Participants

Participants in this study included a total of 10 student-athletes from two different event groups of the Men's and Women Track and Field team at a private, liberal arts college. Participants were between the ages of 18 and 21 years old. The athletes will be selected from the team if they are returning athletes, this group is chosen because the results from the previous season are already readily available. The groups consisted of five sprinters, and five throwers that all had different experience levels. Of the five sprinters, three were female and two males, the thrower group consisted of two females and three males.

Instrument

The instruments used in this project were the Track and Field Result Reporting System (TFRRS.org) and the Sports Personality Questionnaire (SPQ20). The SPQ20 is a personality assessment questionnaire that provides information about an athlete's personality and mental skills, it measures 20 dimensions which cover four key factors, confidence and resilience, achievement drive and competitiveness, interaction and sportsmanship, and power and aggressiveness. The instrument is based on a model of mental toughness covering personality factors and mental skills that have an impact on athletic performance. This instrument seeks to provide information on how to increase awareness and understanding of sport mental skills, analyze mental toughness, provide practical tips for performance improvement and to increase confidence and improve mental skills.

According to myskillprofile.com, the publisher and distributor of the SPQ20 state that the criterion-related validity studies show statistically significant correlations between athletic performance and test scores on nearly all the scales. The test also boasts an internal consistency reliability of the scales range from 0.7 to 0.8 with a median of 0.7.”

The Track and Field Result Reporting System (TFRRS.org) is the website used to compile all collegiate track and field results in a centralized location. This website is the standard source for all applicable event marks.

Procedure

The participants' results from the first meet of the season were tabulated. On the first practice session prior to the first meet, the participants were presented the SPQ20. The results of the SPQ20 and the meet results were tabulated with each corresponding participant.

Throughout the entirety of the season, the participants took part in two forms of mental training and confidence building activities prior to two the five training days and once before

competitions. On Tuesdays, the athletes participated in a series of positive self-talk scenarios prior to practice sessions. Prior to Thursday practice session, the athletes took part in a round of guided imagery training and on competition day the participants were required to use positive self-talk.

At the end of the season, the participants redid the SPQ20 and the final seasonal marks were taken from TFRRS and tabulated accordingly.

CHAPTER IV

RESULTS

The purpose of this study was to determine if improving self-efficacy and sports confidence will increase athletic performance for collegiate track and field athletes. This study tabulated the athletic marks of athletes in the 200m dash and the shot put. The hypothesis states that the implementation of sport confidence training will not improve athletic performance.

Table 1. *Means and Standard Deviations of the Measures*

Measure	Pre-Test Mean (Standard Deviation)	Post-Test Mean (Standard Deviation)
200 Meters	28.35 (2.689)	26.51 (3.072)
Shot Put	10.84 (.957)	11.07 (1.203)

Dependent t-tests were run to determine if there was impact of confidence training on athletic performance. Mean and standard deviations of the measures are shown in Table 1. Results showed no significant difference for the 200 meters [$t(7) = 20369, p >.05$] and showed a significant difference for the shot put [$t(4) = -.8620, p <.05$]. These results and their implications will be discussed in the next chapter.

CHAPTER V

DISCUSSION

The purpose of this study was to determine if improving self-efficacy, and sports confidence will increase the athletic performances for collegiate track and field athletes. The null hypothesis indicates that there will be no changes after the intervention of mental training. The results states that the null hypothesis was accepted for the 200 meters and rejected for the shot put.

Implications of Results

The results showed that there was a significant difference between in the in the pretest of the shot-put marks and the post-test of the shot-put marks which signifies that the null hypothesis was rejected. The 200m group showed no difference between pre and post-test marks, so the null hypothesis is accepted. Each group was given the same interventions of confidence training and the same timeline duration of the collegiate track and field season. Vealey and Chase (2008) suggest research in confidence across time should be considered to understand how unstable confidence is throughout a period of time. Vealey and Chase (2008) discusses the idea that confidence might need to fluctuate in order for athletes to have consistent success.

Theoretical Consequences

Several researchers advocate confidence as beneficial to performance, research into the relationship between confidence and elite performance is characterized by correlational designs, making it difficult to draw firm conclusions about causal relationships. Compte and Postlewaite (2004) explained, "Positive emotions can improve performance, while negative ones can

diminish it” (p.1536). Based on the results of this study the theory seems to be consistent with finding that mental training positively impacted the athletes’ performance.

Threats to Validity

The largest internal threat to validity in this study was the size of the group. Using only fourteen participants made it extremely hard to find statistical significance. The researcher would have possibly found more significant results using a larger sample size for both groups. The group was randomly selected from the convenience of the team he coached. Even though the null hypothesis for both groups were different every athlete showed some type of performance related improvement, if the size of the groups were bigger, a more inconclusive result could’ve been drawn. The target population also poses to be a threat to validity because this group of athletes does not represent athletes across all levels of competition. The study might have produced different results if the treatment were applied to more athletes at this level.

Implications for Future Research

For future research, the researcher would attempt the same type of mental training regimen with a larger group of participants and also with participants that compete across a larger area of competition levels.

Conclusion

This research indicates that implementing mental training interventions to regular training methods will positively impact athletic performance. The results showed statistical difference between the pre-test and post-test for the shot-put team and no significant statistical difference between the sprinters though there was a slight improvement athletic marks recorded.

References

- Amasiatu, A. (2013). Exploring the role of confidence to enhancing sports performance. *Educational Research International*. 1. 69 – 74.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behaviour change. *Psychological Bulletin*, 84, 191-215.
- Beckmann, J. and Elbe, A. (2013). Skill training. *Sport Psychological Interventions in Competitive Sports*. https://search.credoreference.com/content/entry/wileyse/skill_training/0
- Besharat, M & Pourbohloul, S. (2011). Moderating effects of self-confidence and sport self-efficacy on the relationship between competitive anxiety and port performance. *Psychology*. 02. 10.4236/psych.2011.27116.
- Cameron, A. (2011, January 1). Sport personality questionnaire | myskillsprofile. Retrieved from <https://www.myskillsprofile.com/tests/spq20>
- College Track & Field Results. (n.d.). Retrieved January 10, 2019, from <https://www.tfrrs.org/>.
- Compte, O., & Postlewaite, A. (2004). Confidence-enhanced performance. *The American Economic Review*, 94(5), 1536-1557.
- Fransen, K., Mertens, N., Feltz, D., & Boen, F. (2017). “Yes, we can!” review on team confidence in sports. *Current Opinion in Psychology*, 16, 98-103.
- Gallucci, N. (2014). Sport Psychology: Performance Enhancement, Performance Inhibition, Individuals, and Teams (2nd ed.).

- Gilson, T. A. (2010). Outcomes of confidence in sport training settings. *Strength and Conditioning Journal*, 32(5), 91-96.
- Hays, K., Thomas, O., Maynard, I., & Bawden, M. (2009). The role of confidence in world-class sports performance. *Journal of Sports Sciences*, 27(11), 1185-1199.
- Hossein, K. Surender R. and Z. Hojati (2013). State and trait self-confidence among elite and non-elite volleyball players in Iran. *Advances in Environmental Biology*, 7(2), 283-287
- Jones, J, Neuman, G, Altmann, R, & Dreschler, P. (2001). Development of the sports performance inventory: A psychological measure of athletic potential. *Journal of Business and Psychology*, 15(3)
- Manzo, L. G., Silva, Ilva III, J., Mink, R. (2001). The Carolina sport confidence inventory. *Journal of Applied Sport Psychology*, 13, 260-274.
- Moore, E. W. G. (2010). Developing a caring coaching climate fosters confidence. *Strength and Conditioning Journal*, 32(5), 97-99
- Rather, A & Singh, R. (2017). Analysis of sport self-confidence of high and low altitude cricket players. *International Journal of Physical Education, Sports and Health*, 4(3): 26-28
- Vealey R. S., & Chase M. A. (2008). Self-confidence in sport. In T.S. Horn, (Ed.), *Advances in Sport Psychology* (pp. 66-97). Champaign, IL: Human Kinetics.