



Using a Video-Training Intervention to Influence Self-Efficacy Perceptions of Division III Tennis Players

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Introduction

Video training has been shown to improve athletic skills such as decision-making and anticipation (Broadbent, Causer, Williams, & Ford, 2015). Development of these skills has resulted in athletes reporting higher levels of confidence regarding their abilities (Caserta & Singer, 2007). Self-efficacy is someone's perception that they have the ability necessary to successfully perform a desired behavior (Bandura, 1977). Self-efficacy perceptions combined with performance factors provide an explanation for performance (Feltz, 1988). Stronger self-efficacy perceptions are associated with greater amounts of perseverance and higher likelihoods of performing successfully (Bandura, 2006). Martin and Gill (1991) found that high school distance runners who had higher self-efficacy expectations for their race outcome finished the race faster than their counterparts with lower self-efficacy expectations. Numerous aspects of tennis performance were consistently seen to be related to self-efficacy, some of which included footwork, anticipation, accuracy, and concentration (Barling & Abel, 1983).

Research Question

- Does a video training intervention affect the serve return self-efficacy perceptions of men's and women's Division III tennis players?

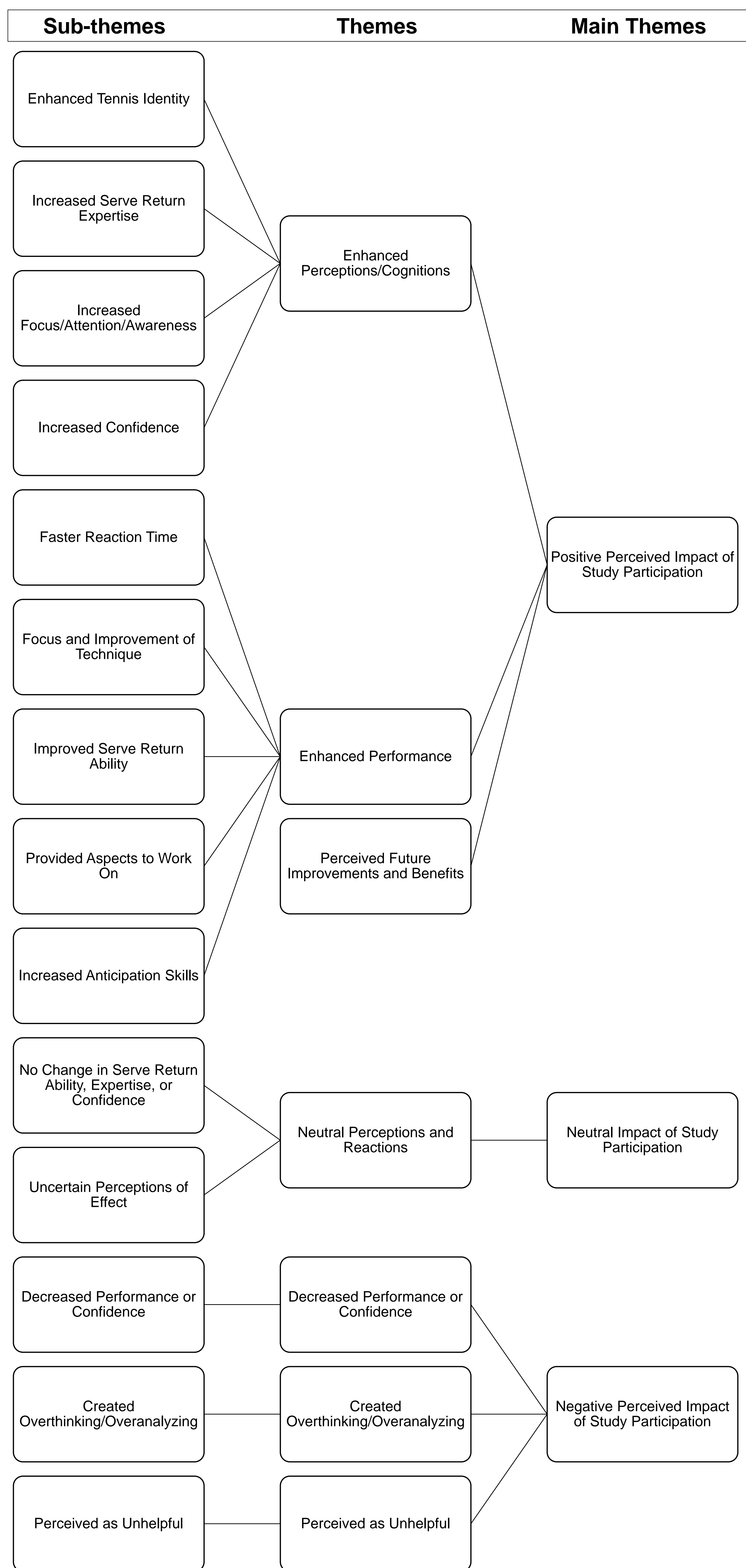
Participants

- All on a collegiate Division III tennis varsity or practice squad team
 - Majority were on varsity (81.25%)
- 16 participants, all right handed
 - 7 males
 - 9 females
- Majority were Caucasian (81.25%)
- Ages ranged from 18 to 21 years old

Measures with Sample Questions

- Self-Efficacy for Tennis Scale
 - "I am confident in my specific serve return skills of anticipating the direction of my opponent's serve"
 - "I am confident in my ability to focus on my opponent's serve cues"
 - "I believe I could return a serve if my opponent hits me a kick serve"
 - "I am confident in my specific serve return skills of accurately reading my opponent's serve"
 - "I am confident in my ability to return every serve in play."
- Exit Interview Free Response Questions
 - "Did you feel more confident in your ability to return serves given your reaction training?"
 - "How do you feel the reaction training affected your serve return expertise?"
 - "In what ways did the reaction training increase or decrease your confidence in your serve return abilities?"
 - "Do you feel that the reaction training was beneficial to your match performance?"

Qualitative Data Concept Map



Brief Methodology

Prior to any training, participants were administered the Self-Efficacy for Tennis Scale to obtain a baseline measure of their tennis serve return self-efficacy perceptions. Participants that were randomly assigned to the intervention group started each practice with a serve return video analysis training protocol where they needed to accurately anticipate the location of each serve in the video. The control group, instead of starting practice with a serve return training protocol, were given the Stroop Test, a psychological assessment measuring reaction time. After the three-week intervention, participants were again administered the Self-Efficacy for Tennis Scale to determine whether or not there was a change in their serve return self-efficacy perceptions since the beginning of the intervention. Following the intervention, participants were a series of 10 free-response questions asking about their perceptions of the intervention and its effects on their self-efficacy.

Potential Beneficial Parties

- Athletes
- Coaches
- Injured Athletes
- Sports Psychology Consultants
- Software Program Developers

Implications and Future Directions

Implications:

- Provides insight into the thought processes influencing self-efficacy, contributing information regarding its influence on competition performance
- Raises questions regarding the best practice methods in sport, specifically the use of video-training and self-efficacy enhancement
- Increase awareness and knowledge about the impact of cognitive thought processes, specifically self-efficacy, on sport performance

Future Directions:

- Administer an intervention with a longer duration
- Conduct the intervention during the season and analyze serve return quality during intercollegiate matches
- Implement an at-home component of the video-training protocol
- Include a component with athletes viewing their previous matches, rating their serve return quality

References

Bandura, A. (1977). Self-efficacy: Towards a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. doi: 10.1037/0033-295x.84.2.191

Bandura, A. (2006). Guide for constructing self-efficacy scales. In T. C. Urdan & F. Pajares (Eds.), *Self-Efficacy Beliefs of Adolescents* (pp. 307–337). Greenwich, Connecticut: Information Age Publishing.

Barling, J., & Abel, M. (1983). Self-efficacy beliefs and tennis performance. *Cognitive Therapy and Research*, 7(3), 265–272. doi: 10.1007/BF01205140

Broadbent, D. P., Causer, J., Williams, A. M., & Ford, P. R. (2015). Perceptual-cognitive skill training and its transfer to expert performance in the field: Future research directions. *European Journal of Sport Science*, 15(4), 322–331. doi: 10.1080/17461391.2014.957727

Caserta, R. J., & Singer, R. N. (2007). The effectiveness of situational awareness learning in response to video tennis match situations. *Journal of Applied Sport Psychology*, 19, 125–141. doi: 10.1080/10413200601184712

Feltz, D. L. (1988). Self-confidence and sports performance. *Exercise and Sport Sciences Reviews*, 16(1), 423–458. doi: 10.1249/00003677-198800160-00016

Martin, J. J., & Gill, D. L. (1991). The relationships among competitive orientation, sport-confidence, self-efficacy, anxiety, and performance. *Journal of Sport and Exercise Psychology*, 13(2), 149–159. doi: 10.1123/jsep.13.2.149