

An Article by Michele Beltramo for Athletics Weekly, April 2025

Michele Beltramo is a First Claim member of VAC. He is an expert in sports psychology and has a Masters degree in the optimal performance for elite athletes. For his MSc thesis, he researched pre-competition anxiety in sprinters. The thesis attracted a lot of attention from athletes and researchers and an article derived from the thesis was published in the April 2025 edition of Athletics Weekly magazine.

Michele has kindly provided the following cut-down version of the article for VAC's website.

Michele's website is: www.beltramo-fitness.com

Pre-Competition Anxiety and Self Confidence in Sprinters: Tuning into Optimal Performance

By Michele Beltramo

MSc in Optimal Performance for Elite Athletes

As a sprinter myself, I decided to carry out my master's degree thesis on pre-competition anxiety in sprinters. The aim of the research was to observe anxiety and self-confidence response of the athletes just before their race.

Do sprinters tend to be very anxious or not? Is anxiety purely detrimental to performance or can in some cases be helpful to it? Is high self-confidence by itself key to a successful race?

Sprinters aged 18 and above took part in the study. Age was not a factor in this study and the results may generally apply to sprinters of any age. The investigation evaluated sprinters' cognitive (pre-race worries) and somatic (physical tension) anxiety as well as their self-confidence.

Study Results

The results indicated that optimal anxiety regulation and good self-confidence are both important for performance. The results also indicated that managing worries and physical tension leading to a race is key to performance success. The table below shows that when the association between cognitive and somatic anxiety is low, sprinters perform better, by contrast when the association between the two anxiety types is high, sprinters have difficulty performing well.

The study results indicated that the athlete's ability to control psychophysiological reactions appears paramount to performance, as the ability to use cognitive resources, thus regulating thoughts and symptoms independently, is associated to better performance.

Observations

The study observed whether the two types of anxiety were raising parallel to each other or if the sprinters were able to control them independently.

Neither cognitive nor somatic anxiety or self-confidence were directly associated with performance success. High self-confidence per-se did not translate into performance success. Neither low nor high anxiety by itself correlated to success rate. What did differ was the drastic difference in success rate according to each group's ability to control mental and physical symptoms independently.

Elite Males

Those athletes who had a high pre-race physical response of somatic anxiety but not high worries (low cognitive anxiety) or had high worries but the ability not to physically react to them with high levels of somatic anxiety, were those who had the highest percentage of success rate. These were elite males.

The athletes who performed better were those whose correlation between the two types of anxiety was the lowest (ability to control psychophysiological reactions). Conversely, those athletes whose worries and somatic anxiety were going up (or down) simultaneously had the lowest level of success rate.

CATEGORY	SUCCESS RATE	CORRELATION BETWEEN COGNITIVE AND SOMATIC ANXIETY.	SELF-CONFIDENCE
Elite males	50%	Very low (good ability to control anxiety)	Medium/High
County females	44%	Low	Medium/High
All females	32%	Low	Medium
All males	34%	Low	Medium High
Elite females	20%	High/Moderate	Medium/Low
County males	14%	High (poor ability to control anxiety)	High

The full scientific paper can be downloaded for free from DIVA, Open access European Portal. Should you need help to prepare for your competition you can send me an email to discuss it.

Full Title: National level sprinter's competitive anxiety and performance success according to ability level and sex: An observational study with a cross-sectional design © 2020 Michele Beltramo all rights reserved.

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