

An analysis of competitive state anxiety at three pre-event time points.

Introduction

Athletes who take part in competitive sports have significant psychological pressures, particularly during the run up to a performance. Competitive states of anxiety (CSA), which describes an immediate emotional response felt prior to the beginning of competition, is one of the most thoroughly investigated psychological concepts in this context (Martens, 1990). It's important to understand how CSA varies over time since it could impact athletes' overall experiences along with performance results.

Cognitive anxiety, physical anxiety and self confidence are the three variables that make up the complex structure known as CSA. While physical activity is defined by physiological reactions like a rapid heart rate and tense muscles, cognitive anxiety is linked with negative thoughts, worry and performance related concerns. On the other hand, self confidence is a measurement of how prepared and capable a person feels to achieve (Martens, 1990). The competitive state anxiety inventory-2 (CSAI-2), which has been widely supported in sport psychology research, is frequently used to assess these variables.

Most importantly, a deeper knowledge of how athletes experience anxiety is made possible by the difference between these factors. The CSAI-2 approach acknowledges that athletes may at the same time have high physiological arousal and low levels of cognitive worry, or vice versa, rather than thinking of anxiety as a singular concept. This has a major impact for applied practice and research since treatment may need to focus on specific aspects of anxiety rather than the problem as a whole.

Previous studies have shown that these factors change in the run up to competition rather than being steady. As reported by Mellalieu (2006), cognitive anxiety tends to gradually rise as the event draws near, suggesting a growing concern about achieving performance results. However, somatic anxiety tends to rise more rapidly in the run up to the event, indicating a physiological preparatory response. Hanton (2004), who pointed out that anxiety reactions are dynamic and influenced by situational demands, gave evidence for this time based pattern.

Also, research studies have shown that the type of sport and level of competition may have an effect on whether anxiety changes. For example, athletes participating in team sports may benefit from shared pressure, but individual sport athletes might have higher levels of cognitive anxiety since they carry more personal responsibility for results. In the same way, performers with more experience could show more regular worry behaviours as a result of a gradual growth of effective ways to cope.

There has also been much debate about the relationship between anxiety and performance. Balanced levels of arousal are best for performance, based on early theories like the inverted-U hypothesis (Yerkes and Dodson, 1908). More modern approaches, however, emphasise the importance of the interpretation and suggest that

anxiety symptoms can be seen as either damaging or helpful (Jones, 1995). Furthermore, Woodman and Hardy (2003) argued that individual differences, such as, coping strategies and confidence levels impact the complex link between anxiety and performance.

Performance is frequently found to be significantly affected by self confidence. Better results for performance and more flexible responses to stress are usually linked to higher levels of confidence (craft, 2003). However, external factors like sense of importance and level of readiness can lead confidence levels to fluctuate.

In light of these results, it is important to take a look at how CSA changes over time rather than relying only on one measurement. Therefore the objective of this study was to investigate changes in self confidence, physical activity and cognitive anxiety, at three important times; one week, 24hrs and the morning of an event.

Methods

Participants -

The participants were students who were getting ready for an athletic event. Every participant actively took part in sports and had the option to fill out the CSA questionnaire three times before their competition. Private information was protected by using participant ID numbers and following correct legal guidelines.

Design -

In order to look at how competitive state anxiety changed and evolved over time, a repeated-measures approach was carried out. Cognitive anxiety, physical anxiety and self confidence assessments were the dependent variables. Whereas the time (one week prior, 24hrs prior and morning of the event) were the independent variables.

Procedure -

At each of the three points participants completed the CSAI-2 questionnaire (Martens, 1990). There were nine items in each of the 27 items in the inventory. The participants were told to respond according to their thoughts at that particular time.

The group dataset was used to calculate mean score and standard deviations for each subscale at each time point after data had been scored, in line with CSAI-2 criteria.

Results

Design procedure -

Time slot ▾	Cog (M) ▾	Cog (SD) ▾	Som (M) ▾	Som (SD) ▾	Conf (M) ▾	Conf (SD) ▾
1 Week before	18.1	2.918	14.85	1.981	24.3	2.296
24Hrs before	20.25	2.917	18.94	2.874	21.4	2.563
Morning of	23.5	3.411	22.4	3.633	19.65	2.739

Narrative description -

Throughout the duration of the three time points, the data suggests a continuous pattern of rising anxiety and decreasing confidence. From one week prior to the event until the morning of the event, cognitive anxiety levels gradually grew. The same trends were seen in somatic anxiety, which grew significantly between the day before and on the morning of the event.

On the other hand, self confidence gradually declined with time. Additionally, as the competition drew nearer, the standard deviations for anxiety measures slightly increased, including a greater range in participants responses.

Discussion

The results of this study are typically in line with previous research that investigated changes in competitive state anxiety across a duration. The steady increase in cognitive anxiety corresponds with previous research by Mellaileu (2006), which suggests that anxiety and negative expectations progressively get worse as competition gets nearer. This might be an effect of stronger focus on successful outcomes and what is considered the consequences of failure.

In the same way, the increase in somatic anxiety corresponds to theoretical predictions that physiological arousal increases in approach to competition. The greater increase found just before the event may be explained through situational pressures and perceived importance, as suggested by Hanton (2004). While a certain level of somatic anxiety could be beneficial, excessive amounts of it might negatively impact performance if it is not properly managed.

The results of Craft (2003), who found a negative link between anxiety and confidence, are consistent with the decrease in self confidence seen in this study. Anxiety along with perceived pressure may weaken athletes confidence in their ability to perform well as they get closer to competition. This is particularly important because the relationship between anxiety and performance has been found to be significantly influenced by confidence (Woodman and Hardy, 2003).

The possible connection between physical as well as cognitive anxiety is another variable to take into account. If athletes view these physical indications negatively, elevated physiological arousal can worsen cognitive stress. As an example, an elevated heart rate could be prevented as a sign of fear rather than being prepared, which would increase cognitive anxiety further. This stresses how crucial it is for athletes to understand their own mental responses and learn how to interpret them more positively. The rising significance of the competitive event is a possible explanation for these results. Athletes may feel greater pressure as the competition gets closer, which might lead them to become more worried and less confident. Athletes' response to these

stressors may also differ depending on individual variables like experience level, strategies for coping and past results for performance.

The effect of external factors such as coaching style, group dynamics and what is considered expectation from others should also be taken into account. While athletes who experience significant amounts of external pressure may be more at risk to negative psychological reactions, those who feel well prepared and encouraged may have lower anxiety levels and maintain higher levels of trust. This suggests that maintaining the competitive environment can be just as crucial as taking care of individual mental health problems.

The role of anxiety processing must also be taken into consideration. Even at higher levels of arousal, athletes who experience anxiety symptoms to be beneficial are more likely to do well, according to Jones (1995). As it turns out, the way anxiety is experienced is just as crucial to its degree of intensity.

Conclusion

To conclude, this study suggested that as a competition approached closer, self-confidence decreased and physical and cognitive anxiety increased. These results indicate the dynamic character associated with competitive state anxiety and support previous research.

The findings show the importance of psychological preparation in the lead up to competition and maintaining their performance levels with the help of techniques including imagery, relaxation techniques and confidence boosting tactics.

Wider, and more varied numbers of participants should be considered in future studies, along with different variables including performance results and personal coping strategies. Overall, athletes and coaches looking to improve their performance can benefit greatly from understanding how anxiety and confidence change with time. In addition, it would be helpful for future research to look at how different treatment methods affect anxiety patterns over time, particularly during the last stages before competition. This would provide a more realistic understanding of how to support athletes in challenging circumstances and improve their performance and mental wellbeing.

References

- Craft, L.L., Magyar, T.M., Becker, B.J. and Feltz, D.L. (2003) 'The relationship between the Competitive State Anxiety Inventory-2 and sport performance: A meta-analysis', *Journal of Sport and Exercise Psychology*, 25(1), pp. 44–65.
- Hanton, S., Fletcher, D. and Coughlan, G. (2005) 'Stress in elite sport performers: A comparative study of competitive and organisational stressors', *Journal of Sports Sciences*, 23(10), pp. 1129–1141.

- Jones, G. (1995) 'More than just a game: Research developments and issues in competitive anxiety in sport', *British Journal of Psychology*, 86(4), pp. 449–478.
- Martens, R., Vealey, R.S. and Burton, D. (1990) *Competitive Anxiety in Sport*. Champaign, IL: Human Kinetics.
- Mellalieu, S.D., Hanton, S. and Fletcher, D. (2006) 'A competitive anxiety review: Recent directions in sport psychology research', in Hanton, S. and Mellalieu, S.D. (eds.) *Literature Reviews in Sport Psychology*. New York: Nova Science, pp. 1–45.
- Woodman, T. and Hardy, L. (2003) 'The relative impact of cognitive anxiety and self-confidence upon sport performance: A meta-analysis', *Journal of Sports Sciences*, 21(6), pp. 443–457.
- Yerkes, R.M. and Dodson, J.D. (1908) 'The relation of strength of stimulus to rapidity of habit-formation', *Journal of Comparative Neurology and Psychology*, 18(5), pp. 459–482.