

28th ECSS Anniversary Congress, Paris/France, 4-7 July 2023

Evaluation of Sports-Specific Mindful Program (SSMP) for Elite Archers

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Introduction

Mindfulness is trainable with a structured program and regular practice for better self-awareness, attentional control, and emotional regulation to improve athletic coping skills under stressful sports competitions [1]. The application of Mindfulness-Based Intervention (MBI) to elite sports performance has recently become very popular in precision sports and has a positive effect on shooting and dart throwing but no consistent findings in archery. This study aimed to evaluate the effectiveness of a newly developed Sports-Specific Mindful Program (SSMP) with eleven mindfulness-based intervention sessions and one sports-specific simulated competition session to enhance archers shooting performance, mindfulness levels, and flow states with decreasing anxiety levels.

Method

A wait-list control design was used in the study. The participants first waited for 12 weeks and received the 12 weeks of the Sports-Specific Mindful Program (SSMP). Informed consent and demographic information were gathered at baseline. Twelve participants from the Hong Kong Elite Archery Team completed shooting performance competitions [2], the computerized Five Facet Mindfulness Questionnaire (FFMQ) [3], the computerized Competition State Anxiety Inventory-2 Questionnaire (CSAI-2) [4], Short Dispositional Flow State (SDFS) [5] at baseline, pre-intervention (12th weeks), and post-intervention (24th weeks). Participants views of the SSMP programs acceptability were measured post-intervention. ANOVAs with repeated measures were used to compare the intervention effects across the time points (baseline, pre-intervention, and post-intervention). Bonferroni test as a post hoc test was used if significant differences were found between the time points.

Result

The repeated measure analysis showed that SSMP had a positive effect on shooting performance ($p < 0.001$). Furthermore, there was a significant increase in mindfulness level in the total score of FFMQ ($p = 0.016$), and flow state ($p = 0.014$). On a ten-point Likert scale, the mean enjoyment of the Sports Specific Mindful Program (SSMP) was 7.9, and the mean mindfulness practice frequency was 3.1 times/week. The athletes' favorite SSMP sessions were the sports-specific simulate competitions, with the highest the average enjoyment of 8.3 in the session.

Conclusion

The positive evaluations suggest that Sports-Specific Mindful Program (SSMP), with the sports-specific simulated competition session, is an acceptable and feasible intervention to enhance shooting performance, mindfulness levels and flow states of archers. Future study is suggested to include more subjects and explore their experience on how they apply mindfulness to enhance their experience in sports performance.

Reference

1. Jones et al. (2020)
2. World Archery Federation. (2022).
3. Deng et al., (2011) .
4. Cox et al., (2003).
5. Liu, (2010).

Topic: Psychology

Presentation Oral

