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Biodata

Chin is a senior lecturer at the Department of Physical Education and Health in the Institute of Education Batu Lintang Campus, Malaysia. He is a Panel Member of the National Coaching Academy under the National Sports Institute of Malaysia, Coaching Education Panel Member of the Badminton Association of Malaysia (BAM) and Committee Member of the Malaysian Sports Psychology Association (MASPA). In addition, he is also the Malaysian Representative for the Asian South-Pacific Association of Sports Psychology (ASPASP). He also serves as a Sports Consultant for the Sarawak Sports Corporation, Deputy Chair of Sarawak Coaching Advisory Panel and Sports Psychology Advisor for the Sarawak State Taekwondo Association (WTF). He is an author and co-author of 6 books on sports and sports psychology. He has also published articles, conference papers and peer-reviewed scientific publications in his field. His research interests include sports psychology, physical education and innovation in Physical Education.

Abstract

Mental Toughness, Motivation and Competition State Anxiety in Sports: A Multidimensional Perspective

This study examined athletes' mental toughness, motivation and competition state anxiety in Malaysia. The participants were 685 athletes (2.92 ± 1.11) comprising of 425 male and 260 female from different sports. Participants completed the Mental Toughness Questionnaire (Clough et al., 2002), Sport-Motivation Scale-II (Pelletier et al., 2013) and Competitive State Anxiety Inventory-2 (Cox, Martens & Russell, 2003). The independent *t*-test revealed that there was a significant difference between gender in challenge, $t(683)=3.45, p = .001$, commitment, $t(683)=3.76, p = .000$, emotional control, $t(683)=2.79, p = .005$, life control, $t(683)=4.52, p = .000$, confidence in ability, $t(683) = 2.75, p = .006$ and confidence interpersonal, $t(683) = 4.26, p = .000$ in mental toughness factors. Furthermore, there was a significant difference between gender in somatic anxiety, $t(683) = -2.30, p = .022$ and cognitive anxiety, $t(683) = 3.07, p = .002$ for competitive state anxiety factors. In addition, there was a significant difference in external regulation, $t(683) = 2.67, p = .008$, integrated regulation, $t(683) = 2.03, p = .043$ and amotivation, $t(683) = 2.35, p = .019$. The one-way ANOVA revealed significant difference in life control and interpersonal for three age groups, $F(4, 680)=3.06, p = .016$ and $F(4,680)= 2.597, p = .035$ respectively. Post hoc comparisons using Tukey HSD test showed that life control was significant difference between age group <13 vs 19-21 ($p = .007, d = 0.51$). For confidence interpersonal, results showed significant difference between age group < 13 vs 13-15 ($p = .027, d = .015$), <13 vs 19-21 ($p = .044, d = .015$). The ANOVA also revealed significant difference in cognitive anxiety, $F(4,680) = 2.645,$

$p = .033$. $d = 0.015$. Whereas, ANOVA also revealed significant difference in intrinsic motivation, $F(4, 680) = 4.705$, $p = .001$, $d = 0.027$; integrated regulation, $F(4, 680) = 2.626$, $p = .034$, $d = 0.015$; identify regulation, $F(4, 680) = 9.626$, $p = .000$, $d = 0.054$; introjected regulation, $F(4, 680) = 3.596$, $p = .007$, $d = 0.021$; extrinsic regulation, $F(4, 680) = 3.187$, $p = .013$, $d = 0.018$ and amotivation, $F(4, 680) = 8.296$, $p = .000$, $d = 0.047$. The Tukey HSD test revealed a significant increase in intrinsic motivation between <13 with 19-21 ($p=.031$) and > 21 age categories ($p=.034$), 13-15 with 19-21 ($p=.011$) and >21 ($p=.025$), 19-21 with <13($p=.031$), >21 with <13($p=.034$), >21 and 13-15($p=.025$); integrated regulation between <13 with 16-18 ($p=.027$); identified regulation between <13 and 13-15 ($p=.033$); introjected regulation between <13 with 13-15($p=.036$), 16-18 ($p=.007$), 19-21 ($p=.004$), external regulation between 13-15 with >21($p=.025$) and amotivation between <13 with 19-21($p=.039$), >21($p=.041$), 13-15 with 16-18($p=.002$), 19-21($p=.000$), >21($p=.000$); >21 with <13 ($p=.041$). However, the ANOVA revealed no significant difference in cognitive state anxiety, somatic state anxiety and self-confidence. Pearson correlation revealed significant differences among the factors of mental toughness with motivation and competitive state anxiety which ranged from low correlation ($r=.116$, $p= .116$) to moderate correlation ($r=.665$, $p=.665$). The findings suggest the implementation of a systematic and appropriate interventions in strengthening, motivating and managing the performance anxiety of the athletes which can further improve their sustainability in sports performance.