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Attentional and explanatory style characteristics of injured professional
rugby league players: A prospective study.

Thesis submitted by

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In December 2004

For the degree of Doctor of Philosophy in
the Institute of Sport and Exercise Science and School of Psychology at
James Cook University

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Joann Lukins

9 December 2004

Ethics Statement

The research presented and reported in this thesis was conducted within the guidelines for research ethics outlined in the *National Statement on Ethics Conduct in Research Involving Human* (1999), the *Joint NHMRC/AVCC Statement and Guidelines on Research Practice* (1997), the *James Cook University Policy on Experimentation Ethics. Standard Practices and Guidelines* (2001), and the *James Cook University Statement and Guidelines on Research Practice* (2001). The proposed research methodology received clearance from the James Cook University Experimentation Ethics Review Committee (approval number HA73).

Joann Lukins

9 December 2004

Abstract

Injury has both physical and psychological sequelae for athletes. In addition to this, psychological variables influence the nature and duration of the injury experience. Psychological research into the injury experiences of professional rugby league players is limited and fragmented. The aim of the research was to determine which psychological variables may be related to the subsequent injury experiences of professional rugby league players. During a two year prospective study, professional level rugby league players (N=53) completed psychometric scales and had their injury experiences recorded. The psychometric scales utilised consisted of the Test of Attentional and Interpersonal Style (TAIS) and the Extended Attributional Style Questionnaire (EASQ). The injury variables included the number of injuries, injury severity, and time taken to resume playing.

A comparison of playing position indicated that forwards spent less time on the field due to being involved with a greater amount of full body contact ($F_{1,47}=16.78$, $p=0.00$; $d=0.98$). Forwards sustained more injuries than backs as a result of more physical contact ($F_{1,47}=4.21$, $p=0.04$; $d=0.24$). Such differences supports the continued differentiation between playing position in future studies on professional rugby league players.

Discriminant function analysis revealed one significant function ($\lambda = 0.15$, $p < 0.01$) indicating that professional rugby league players, who are overloaded by information (OIT), have lowered self-esteem (SES), and lower physical orientation (PO) had more severe injuries. Classification procedures correctly classified 84.9% of participants into their respective injury severity groups. The TAIS and the EASQ had adequate test-retest reliability indicating attentional, control, interpersonal and attributional variables to be stable over time. Spearman rank order correlations between TAIS and EASQ subscales revealed that players who tend to make global attributions were more likely to have better attentional style ($p < 0.05$), less likely to become overloaded ($p < 0.01$), process information more successfully ($p < 0.01$) and have higher self-esteem ($p < 0.01$).

Participants who made both global and stable attributions were more likely to have better attentional style ($p < 0.05$), less likely to become overloaded by information ($p < 0.01$), were less impulsive ($p < 0.05$) and had higher self-esteem ($p < 0.01$). In the instance of stable attributions, individuals were less likely to worry ($p < 0.05$) and better able to express themselves ($p < 0.05$). When explanatory style was compared with severity of injury, players who made global ($F_{2, 53} = 5.91$, $p = 0.00$, $d = 0.86$) and stable ($F_{2, 53} = 5.60$, $p = 0.00$; $d = 0.84$) attributions had a higher proportion of severe injury ratings. Utilisation of a prospective design is recommended for future research with injured athletes. Further research on the

mechanisms underlying the relationship between attentional and attributional style and injury is recommended.

Key words: Rugby league, injury, attentional and interpersonal style, explanatory style, discriminant function analysis

Acknowledgments

Completing this thesis has been a long and rewarding journey. Thank you to those who have contributed in some way to its completion.

“A candle loses nothing by lighting another flame”

To my supervisors, Associate Professor Warwick Spinks and Dr Jenny Promnitz: Your expertise, guidance and support allowed me to believe that I could do this. Thank you.

To the participants and coaches: thank you for sharing your experiences and your involvement and commitment to the research.

To the staff at the Institute of Sport and Exercise Science, in particular Dr Melissa Crowe and Dr Anthony Leicht: thank you for your feedback, encouragement and unlimited supply of chocolate! To Dr Shirley Morrissey, Dr Gina Mercer, the late Dr Jocelyn Wale, and Professor Beryl Hesketh: for wisdom at just the right moments. To Dr Peter Raggatt and Dr Anne Swinbourne: for being in the right place at the right time.

To my family, particularly Mum and Dad, Bette and Joe, Edward and Leanne, and Robert. Thank you for always being there to love, support and encourage me. To special friends: Sophie, Donna, Suzy, Al, Lizzy, Marijke & Jo: Thank you for your love and friendship.

To my partner, Joe and son, Lachlan. Thank you for understanding the late nights and early mornings. This thesis is as much yours as it is mine. Your love, encouragement and support kept me going. Lachlan, in years to come know that anything is possible with love and perseverance.

“The instant an athlete is injured, much of what he or she has worked for is taken away. This has a devastating impact, because, for athletes, physical condition and athletic ability are the major components of self-worth.”

(Faris, 1985, p.545)

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