



**Children and Adolescents' Affective Responses to Physical Activity**

Submitted by Charlotte Claire Hamlyn Williams to the University of Exeter as a thesis for the degree of Doctor of Philosophy in Sport and Health Sciences (December, 2012)

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## **Abstract**

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Research suggests that optimising affect during exercise may be key to exercise adherence (Van Landuyt, Ekkekakis, Hall & Petruzzello, 2000; Williams et al. 2008; 2012). Recent advances in this area have explored factors that contribute to affective responses in adult populations (Ekkekakis, 2003), but whilst it has been hypothesised that these factors are the same for children and adolescents they have not been explored systematically in the same way. As such, one aim of this thesis was to investigate the relationships between affect and physical activity in child and adolescent populations. Following on from this, a further aim was to explore the factors that contribute to affective responses. Given the research that suggests positive affect experienced during exercise may result in enhanced adherence to physical activity (Williams et al. 2012), the final aim of this study was to determine how to elicit the most positive affective responses during an acute exercise session. This thesis comprises a review of relevant literature, and six study chapters which were the result of three empirical studies; two acute exercise studies and one questionnaire based study. The findings of Study 1 demonstrated that, as with adults, affective responses declined after the onset of ventilatory threshold in both children and adolescents, indicating that to achieve optimum affective responses, particularly with younger children, exercise needs to be prescribed at an intensity below the ventilatory threshold. The findings from studies 2 - 4 highlighted specific factors that contribute to affective responses, reporting that preference for, and tolerance of, different exercise intensities may be an important factor to consider when prescribing exercise (studies 2 & 4). Results also showed that affective associations with physical activity played a significant role in determining overall physical activity behaviour (study 3). The findings from studies 4 and 5a and b revealed that encouraging adolescents to self-select their own exercise intensity may

elicit a more positive affective response during the exercise session compared to the affective responses elicited during a prescribed exercise session. This thesis provides substantial evidence to support the link between affect and physical activity in children and adolescents. More specifically, it highlights several important factors that should be considered when attempting to enhance affective responses during an acute exercise session.

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