

Creating Stress-Free Learning Environments for Sport and Physical Education

Janet Currie, University of Technology, Sydney, Australia
Kelly Sumich, Sports Science Education Institute, Perth, Australia

Abstract: Exercise participation is usually recognised for its anxiolytic properties. However, performance anxiety in physical education and sport may also be faced by those students perceiving a negative difference between their degree of competence or self-worth in terms of sporting skill, and the perceived demands of a class activity, sporting competition or training situation. While the response to feeling anxious is not always negative, anxiety usually results in a 'fight or flight' response creating an elevated heart rate and a release of adrenaline preparing the body for action. Anxiety may serve as an in-built warning system for an individual student of their personal vulnerability in an upcoming activity, drill or game situation. An inability to manage sporting performance anxiety can negatively impact on a student's participation, enjoyment and positive skill development, even deterring future exercise and sporting activities. The key to managing sport and exercise-related anxiety is achieving an optimal level. The teacher or coach needs to challenge students sufficiently to prepare mind and body for exercise, without an individual overextending into anxiety levels that create negative performance. Bringing together the disciplines of sport and physical education, we explore the nature of anxiety, and practical sports psychology techniques the teacher or sports coach can introduce to help students manage sports anxiety, and create supportive learning environments. Helping students overcome sporting performance anxiety will assist them in performing at their best and teach important skills they can apply for the rest of their future sporting and exercise activities.

Keywords: Anxiety, Physical Education and School Sport, Student

Introduction

Recent health concerns have been raised over how to practically address overweight children in Australia and the obesity crisis amongst them (AIHW 2011; AMA 2003). Therefore, increasing attention has been placed on the role that physical education (PE) and sport may have in increasing young people's engagement in physically active lifestyles (Crawford 2009). In Australia, students participate in both school sport and PE programs, in the one setting. Physical activity is an excellent way of developing a student's self-esteem, self-concept and team skills, together with developing physical abilities such as fundamental motor skill development (Currie 2013; Van Raalte and Brewer 2008). However, if not delivered in a positive manner, PE and/or sport participation can also cause fear and anxiety in children and adolescents if they don't enjoy taking part, or worry about becoming hurt, losing, or not playing well in front of others (Humphrey 2003). When individual participation in sport or PE is associated with such negative factors, this may result in negative outcomes such as a decrease in performance, lack of enjoyment or full engagement, or at worst dropping out altogether (Smith and Smoll 1990). Thus it is important for coaches and PE teachers to assist students to learn how to manage any fears, and as teachers, to implement supportive learning environments for their students and players. Indeed, this understanding and practice should be amongst the most highly prioritised components of how a physical educator approaches his/her profession.

How Fear and Anxiety Impact Performance

Anxiety is created when an individual perceives a negative difference between his/her skill level and the demand of a situation. It results in a fight or flight response creating an elevated heart rate, muscle tension and a release of adrenalin, which in turn can drain energy levels after adrenalin. Not all anxiety is negative as it prepares the body for action, which is useful for sporting events. The key to anxiety is to try and maintain optimal levels. Creating enough anxiety and challenge to boost the body to prepare for exercise is a positive, yet if an individual believes the goal is unachievable then the anxiety may overextend, thus creating negative performance (Karageorghis and Terry 2011).

The Inverted U-Shaped theory helps explain how various levels of anticipation and excitement experienced in sporting events create bodily responses such as an increase in heart rate or muscle tension (Williams, Landers and Boutcher, 1993). Somatic anxiety experienced through muscle tension, sweating and so on has a curvilinear relationship with performance. A moderate level of anxiety is related to optimum performance, whereas high and low anxiety levels are associated with poorer performance outcomes (Bakoukis et al. 2012; Craft et al. 2003; Martens et al. 1990), for instance in Figure 1 (Wann 1997).

However, increases in cognitive anxiety, experienced through our thought processes and mental reactions, have a negative linear relationship with performance. As this mental form of anxiety increases upwards in a linear fashion, beyond a certain ideal point, decreases in performance are experienced. This may be caused by poor memory or deterioration in information-processing and decision-making ability and efficiency, pre-occupation of one's focus or attention, and slowed problem solving of tasks.

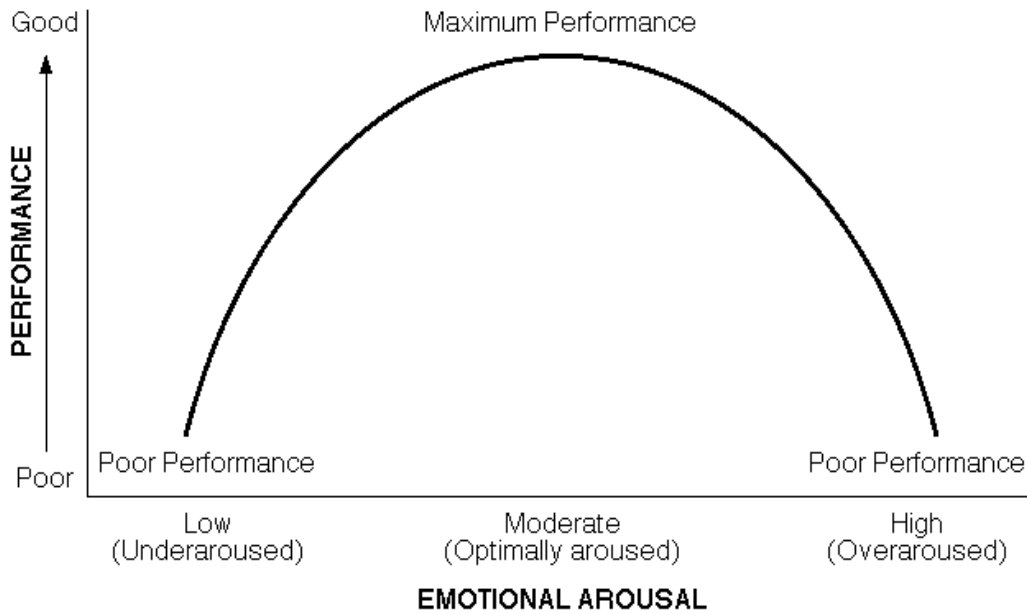


Figure 1: The Inverted U-Shaped Hypothesis.

An optimal amount of arousal maintained at manageable levels is needed to create a positive state of mental alertness and physical activation in preparation for participation in sport. This may result in the athlete being more aware of her/his position in space, or not experience delayed reaction time when hearing the starter’s gun. However, experiencing too much or not being able to feel in control of anxiety impairs our mental efficiency. The athlete won’t be able to focus or make quick and effective decisions or being able to read the game as well as s/he normally would. This may result in increased physiological and muscle tension, and the ability to be able to ‘stay loose’ and execute movements freely may be impaired.

As the demands of a task become perceptibly harder or of increased value to an athlete, anxiety levels may consequently increase and performance outcomes subsequently diminish (Craft 2003; Lavallee et al. 2004; Martens et al. 1990). For example, an athlete could experience performance difficulty with a tennis finals match, balancing on a beam in front a crowd of peers, or remembering a complicated dance routine as part of a class assessment.

The two main influences that may impact on an individual’s anxiety levels and achievement of optimal sporting performance outcomes are: (a) type of motor skill level of the sport, and (b) the personality of the student. Most young people’s sports and PE activities involve gross motor skills. In these types of sports, far higher arousal levels may be endured before performance is impacted, and in fact, it is more suited for the athlete to feel more ‘hyped up’ before the race or event, for example 100 metre sprints, rugby league and weight lifting. However, many team sports have a variation between gross and fine motor skill motions so optimal arousal levels may be more influenced by personality differences. Figure 2 illustrates the different arousal levels as suited to two different sports.

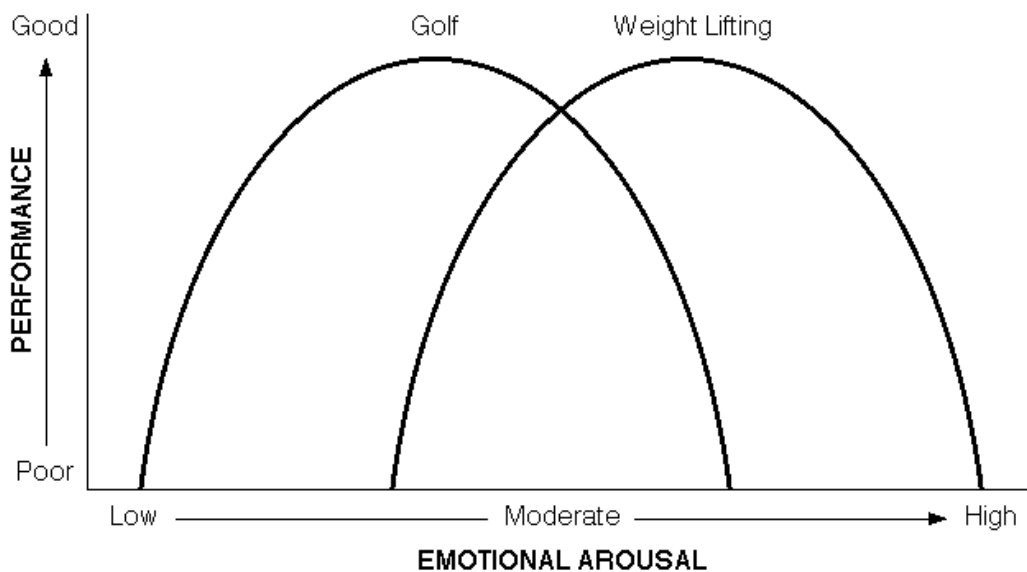


Figure 2: Different sports may suit different optimal arousal levels.

Each unique individual can view participation in a sporting event from a different perspective. One individual might view a sporting event as a positive challenge to look forward to and thus experience fewer nerves or anxiety towards the event. However, another individual may find the ability to remain calm a difficult process because s/he might feel incompetent about her/his skill level, not prepared for the competition, or that expectations from those around them are too high (Lavallee et al. 2004). As a coach or PE teacher, particularly in team sports, you may need to use different levels and methods of anxiety management techniques for the different individuals within the same team.

What Causes Sporting Performance Anxiety Amongst Students?

A student participating in an event that is deemed of utmost individual importance for him/herself; the school, selectors, parents, coach or by one's teacher; can be at a greater risk of experiencing sporting performance anxiety (Hayslip et al. 2010). The perceived readiness of a student for participation in sport can also be influenced by his/her own self-concept and self-esteem, training preparation and the level of the event compared to his/her own fitness, one's physical abilities, competition history and past results, and how psychologically s/he feels prepared. If the student's readiness for the sporting event is low then the student will more likely be at risk of experiencing higher anxiety levels (Moran 2012). If excessive negative external pressures and expectations are placed on a student, such as from parents, carers, peers, coaches or PE teachers, this will form a negative influence on performance results (Hedstrom and Gould 2004; Hunter 2006, Nicholls and Jones 2013).

A student may also feel unsafe taking part in a PE class environment and experience increased anxiety due to factors such as lack of inclusion, or bullying and aggression from other students. For example, Janciauskas (2012) found that physically weaker or less skilled students worried that other students would laugh at them in case of failure. Students exhibiting higher levels of self-evaluation felt more confident and 'safe' so more willing to take part. Mitrovic, Todorovic and Markovic (2012) concluded that self-esteem is the most significant factor affecting anxiety levels in PE.

Self-presentation includes those behaviours and actions we choose to present as our external image to other people. As Mesagno, Harvey and Janelle (2012) found, an individual's concerns around her/his own presentation is likely to increase susceptibility to "choking". This is because an individual becomes so anxious s/he ends up producing a failed or flawed performance. People with higher levels of social anxiety seem to be prone to this scenario and there is often a link between an athlete's desire to keep up a positive self-image and then stalling performance-wise in a competition or examination. In a previous study, Mesagno, Marchant and Morris (2009) suggested that the reason fourteen athletes were susceptible to this phenomena was due to each individual's strong concerns for his/her own perceived self-presentation in public. This may be explained through one's high degree of self-consciousness in public situations, such as concern for one's physical appearance during a class dance performance in PE, or fear of negative evaluation by others, for example a student worrying her gymnastics outfit isn't attractive enough. Belger (2013) stated that athletes and students who are socially anxious in this way may also experience heightened levels of somatic anxiety, which occurs even when the body doesn't feel directly affected. For example, an athlete feeling more fatigued or experiencing his or her muscles failing, even though s/he realistically assesses him or herself as still able to physically complete the event.

In PE and sports situations, various individuals will perceive a range of pressures differently. This may range from externally-based sources such as feeling the activity is too difficult, not to the student's liking with little or no individual choice; through to internal pressures such as poor body image, low perceived motor competence or confidence in one's ability to complete the set task (Hunter 2006).

How Can Coaches and Physical Education Teachers Help Children Manage Performance Anxiety?

Progressive muscular relaxation can be learned to help reduce anxiety before sporting performance (Karageorghis and Terry 2011). Progressive muscular relaxation focuses on tensing and relaxing all the various muscle groups throughout the body. For example, a student tenses the calf muscle then relaxes it, noticing the difference. At the end of the process the student should feel less tension in his/her muscles and more relaxed overall (Navaneethan and Soundara 2010). There are many breathing techniques coaches and physical educators can teach students. The aim is to slow a student's breathing rate down and for them to take deeper breaths. When feeling anxious the human reaction is to take shallow and fast breaths. When we breathe slower and more deeply this decreases the heart rate and relaxes our bodies physiological systems (Shaw, Gorely and Corban 2005). One simplistic technique particularly useful in cool downs is to ask students to take one breath in for the duration of a count of four, and then breathe out for a count of four. Students can also place a hand on the stomach and focus on the hand moving during the intake and exhalation of breath. In a 2009 study conducted by Garza and Ford, students prone to strong anxiety responses in sporting events participated in a breathing technique training sessions conducted over four weeks. After practising this technique, each student documented feeling calmer before and during performance and half of them experienced significant reductions in measured heart rates.

Research has found that children do not need to specialise in sports early to reach elite level. In fact this can contribute to increased drop-out rate, injuries, overtraining and emotional burnout (Baker, Copley and Thomas 2009; Crocker et al. 2004). It is not until mid-teenage years that specialisation and intense training for most sports will need to occur, thus influencing whether a student decides if she or he wishes to pursue the elite level (Moesch et al. 2011).

Music can be used to boost a mood or create a calming effect. Mesagno, Marchant and Morris (2009) found that music such as an iPod listened to while waiting around for events decreased performance anxiety as the music formed a distraction away from the pressure of the situation. Familiarity is also recommended as a method that coaches and PE teachers can use to

lower anxiety levels of performers. For example, completing a similar, habitual warm up routine prior to competition is extremely helpful and creates a sense of calmness (Anshel 2012). Many athletes use the familiarity technique ranging from tennis players bouncing the ball a set number of times before a serve, to triathletes eating the same pre-competition meal, or cyclists wearing a “lucky” item of jewellery or clothing.

Encouraging a sense of self-belief and self-confidence can help reduce performance anxiety (Roberts et al. 2013; Woodman and Hardy 2003). Therefore, offering positive, targeted feedback, building in levels of success with activities, and emphasising improvements and the process of gaining increased competence, may be just a few of the ways teachers can help encourage a sense of self-belief and confidence in students. Training should be fun, games-based and focused on skill development. Tasks need to be meaningful and matched to student abilities. Offering a range of PE uniforms and choices allowing for student decision-making also assists.

Conclusion

In the sports and PE setting it is important to set high expectations and standards, yet offer a positive, supportive, motivational climate (Barkoukis et al. 2010; Siedentop 1991). This may be achieved through protecting the child with a bully-free learning environment; promoting free, creative individual expression and confidence to try-out new skills; promoting humanistic values and building tolerance, understanding and a happy supportive manner towards other students. We also recommend the following approaches be implemented as appropriate for helping reduce anxiety in PE, including (a) ensuring a positive class climate with zero-tolerance for bullying, sledging or put-downs of others promoting humanistic values, building tolerance, and an accepting, happy supportive manner towards other students; (b) building opportunities for encouraging free, creative, individual expression in addition to an approximate 80% success rate in an attempt to build confidence to try-out new skills; (c) allowing students choice or offer those activities rated highly for enjoyment by students; (d) permitting students to self-evaluate and measure results so not exposed to continuing and relentless performance in front of peers and the teacher, which creates feelings of tension and apprehension (that is, anxiety). In these situations, students tend to show more interest, are more focused on the task at hand, and apply more effort (Barkoukis, Koidou and Tsorbatzoudis 2010). Other class modifications include reducing the number of players per team or playing space, rule changes to minimise technical demands and user-friendly goals and balls.

Aspects of students’ frustration, anxiety, or failure to participate are significant factors affecting involvement, particularly in PE settings, and would benefit from being explored further. PE and sport offer effective means to address health and fitness concerns of a young nation. However, there is a need for further research into the effectiveness of various inclusive practices attempting to help cater for all students, instil healthy exercise habits, body image movement competence and attitudes towards engagement in lifelong sport and physical activity. Indeed, there are multiple ways to create an inclusive environment that have not been mentioned. We challenge all practitioners of school PE and sport to add to the list and incorporate your ideas into your own classes.

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ABOUT THE AUTHORS

Dr Janet L. Currie: A Senior Lecturer in Health and Physical Education at UTS, Janet has a background in school teaching, university lecturing, community health promotion and health policy. She has qualifications in education and health promotion. Her research interests focus on investigating the perceived benefits of participation in leisure and physical activity, health promotion policy, marketing and promotion of healthy lifestyles and social and emotional well-being. Janet has designed numerous educational materials in the area of health promotion and exercise including books, videos, teacher and community resources. She created the highly successful “Stroll Your Way to Well-Being” pramwalking program for new mothers, and is also the author of “Dream, Believe, Achieve”, a teaching resource developed for the National Rugby League of Australia as a tool to deliver effective health education messages especially for young males in the school classroom setting, using sport as the key focus. Dr Currie is a past National President, Vice-President and State representative of the Australian Health Promotion Association, and past Director of Health Education and Promotion International. She was awarded the Outstanding Community Engagement Award (Australian Catholic University) in 2003.

Kelly Sumich: Kelly Sumich is a sports science writer living in Perth, Western Australia. She has a special interest in paediatric (child) exercise science, has competed at national level as an athlete and is educated with a Bachelor of Applied Science (Sports Science) and Postgraduate Certificate in Policy Studies (Research and Evaluation). As Director of the Sports Science Education Institute, Australia, Kelly applies her sport and exercise science knowledge with her extensive experience working with athletes, children, personal trainers, coaches and medical practitioners, in delivering inspiring educational courses to coaches and trainers. She is author of “Coaching Children: Sports Science Essentials” and “Kids Exercise Programs Done for You”, and in 2013 Kelly was awarded the "Inspirational Instructor Award" by Physical Activity Australia.