

Gender, attachment, competitive anxiety and self-confidence among competitive swimmers

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Abstract: Attachment has been associated with the way individuals adjust themselves in various social, emotional and behavioral contexts. Attachment and sports performance remains one of the most unexplored topics in sport psychology. Thus, the aim of this study was to examine possible relationships between attachment styles, competitive anxiety, self-confidence and performance among competitive swimmers aged 17-20. The participants were 44 swimmers from all over Sweden (24 elite and 20 sub-elite). It was hypothesized that elite swimmers differ significantly from sub-elite swimmers in their attachment, competitive anxiety and self-confidence scores. The hypotheses were partially supported by the findings. The study found one significant result, which stated that insecure anxious attachment style combined with young age predicted lower performance results among swimmers. Interestingly this style was found to be prevalent among sub-elite swimmers. The findings should be treated in a very delicate and careful way and ethical considerations should be considered.

Keywords: attachment, competitive anxiety, self-confidence, swimming, performance

Attachment theory studies the nature of early experiences during childhood and the later impact of these experiences on personality and general functioning of the individual. The key assumption of this theory is that secure individuals grow up self-confident, are trusty towards others and use adaptive strategies to deal with stress, whereas insecure individuals tend to experience feelings of mistrust, low self-confidence and use maladaptive strategies while dealing with stress. Bowlby in his theory will refer to two main types of attachment: secure and insecure. Ainsworth and Bell (1970), will conduct further investigations on Bowlby theory and conclude that insecure attachment patterns could be explained based on two underlying mechanisms: anxiety and avoidance. Hereby, insecure attachment, according to them, stands either for insecure anxious or insecure avoidant.

As can be noted, different types of attachment react differently to transitory distressful situations (Bowlby,1973). Sports in itself represents an environment which continuously places demands on athletes and faces them with different stressors such as fear of failure, injury, pain, self-doubts about talent and team selection, competitive pressure, lack of self-confidence, anxiety, coach stress, financial issues (e.g. Dale, 2000; Gould et al., 1993; Holt & Hogg, 2002; Nicholls & Polman, 2007). If the athlete won't be able to cope effectively with these stressors then he/she will possibly face a number of negative consequences where motivation, commitment and satisfaction will be affected and his or her performance will suffer (Nicholls & Polman, 2007). This pressure to either adapt or change lead people to cognitively appraise their resources, coping skills and the ability to respond to the environmental demands (Lazarus & Folkman, 1984). Most of the times, this process is mediated by type of attachment and is associated with high levels of anxiety. On the other hand, self-confidence is thought to be one of the most common sources of stress and anxiety (Weinberg and Gould, 2011).

With this knowledge background it should be possible to deduce that attachment can

in some way affect different domains of functioning including performance. Thus, the focus of the present study was to investigate the relationship between attachment, competitive anxiety and self- confidence among competitive swimmers aged 17-20.

Research Methodology

A cross-sectional design using quantitative and qualitative methods for data collection was applied in order to investigate the questions of interest. All the instruments involved in the study produced quantitative data.

Operationalization of the Study's Main Variables

Performance outcomes. In the present study participants were carefully chosen in a way that they could share common characteristics such as age and sport. At the same time they were chosen so they could differ significantly in terms of training hours per week, career goals and objective performance results.

They were categorized into two big groups; high-competitive elite athletes and sub-elite athletes focusing only on objective performance results. Annual points of each swimmer, collected during the previous year 2011- 2012, in different national and international events, according to Swedish Swimming Federation Database, were taken in consideration. In the database the swimmers were ranked from the first best one, who scored 961 points to the last one who scored 515 points. Each list had in total the results of 240 swimmers.

The research group defined as high-competitive elite- athletes those swimmers, who were ranked from number 1 to 40 in the Swedish Swimming Ranking Database list and scored from 961 to 715 points. On the other hand, sub-elite swimmers were defined as those in the lowest part of the ranking list, starting from number 200 to 240, who scored from 552 to 515 points.

Attachment outcomes. Research on attachment has categorized attachment measures in dimensional (continuous) versus categorical and self-reporting versus coding of observed data (Ravitz et al., 2005). Categorical measures usually strictly assign individuals in one of the four categories of attachment, whereas dimensional models measure the degree to which various dimensions of attachment styles (security, anxiety and avoidance), are mostly presented in one person.

It is believed that self-reporting measures are based on currently conscious attitudes toward relationships with important others and therefore they cannot detect defense mechanisms of distorted responses. On the other hand, coding of observed data measures, such as interviews or projective and narrative tests, tend to reduce the response biases through activating thoughts and feeling in relation to early attachment patterns.

Therefore, to have a clear view of the swimmers attachment style, in the current study, two different attachment instruments were used: the ASQ and the SBST. ASQ represents a self-reporting instrument resulting in continuous attachment data and the SBST represents a projective instrument based on narrative stories, and results in both continuous and categorical data.

Competitive Anxiety outcomes. Competitive anxiety was measured by CSAI-2, which is known for assessing intensity and direction of cognitive anxiety, somatic anxiety and self- confidence.

Participants

Both, Swedish Swimming Federation and the Swedish Aquatic Research, approved to be part of the study and provided two performance ranking lists, according to gender, which contained the contact addresses of 240 competitive swimmers, aged 17- 20, in Sweden, and

their respective performance results during the previous year 2011-2012. In order to compare elite and sub-elite swimmers, from the two lists, only the forty best swimmers ranked from number 1 to 40 (40 boys and 40 girls) and the swimmers ranked from number 200 to 240, were included in the study. In total, 44 swimmers from all over Sweden (22 boys and 22 girls), aged 17-20 ($M=19$ years old; $SD=1.3$), agreed to participate in the study. 24 elite swimmers (performance scores ranking from 961 to 715) (8 girls and 16 boys), training on an average 20 hours per week ($M=20.4$, $SD=3.6$) and 20 sub-elite swimmers (14 girls and 6 boys) (performance scores ranking from 552 to 515), training on average 15 hours per week ($M=14.6$, $SD=4.5$).

Measures

All the questionnaires used were administered in Swedish and have been shown to have acceptable reliability and validity. The first part of the online survey consisted of general questions concerning the athletes' training hours per week, future career goals, and support from important others. The second part addressed attachment style through two instruments: The Secure Based Script (SBST: Psouni & Apetroaia, in press) which represents a narrative based assessment and the Attachment Style Questionnaire (Feeney et al., 1994) a self-reported measure of attachment in relation to personal thoughts and feelings. The fourth part was an assessment of performance anxiety intensity and direction and self-confidence through the Competitive State Anxiety Inventory-2 (Martens, Burton, Vealey, Bump, & Smith, 1990).

Results

Descriptive statistics

Both elite and sub-elite reported their parents to be most important figures in supporting them in sports performance, with coach and friends following after. In terms of

attachment scores, there were significant differences between the elite and sub-elite swimmer groups only in the anxiety dimension, with a large effect size of $\mu^2 = .10$ (mean difference = .19, 95% CI: -.64 to .24), where the elite group scored higher than the sub-elite group ($t(40) = -2.04$, $p = .05$, two-tailed) with a very small significant difference in the means ($\mu^2 = .02$; mean difference = -.47, 95% CI: -.93 to .006). The results showed also a strong significant negative relationship between confidence/security and avoidance attachment dimensions ($p < .01$), where high levels of attachment confidence were associated with low levels of attachment avoidance. There was also a negative significant relationship between confidence and anxiety attachment dimension ($p < .01$). Avoidance and anxiety dimensions of attachment in the ASQ ($p < .01$), were positively and significantly correlated to each other. Whereas, self-confidence was negatively significantly related to competitive anxiety ($p < .01$).

Correlational statistics

Self-confidence was significantly positively related to attachment confidence (ASQ) ($p < .01$) and negatively related to attachment anxiety and avoidance (ASQ) ($p < .05$) and somatic and cognitive anxiety. The relationship between performance and self-confidence showed to be negative in the elite group and positive in the sub-elite group, but the results were not statistically significant. Competitive anxiety was significantly negatively correlated with confidence/secure dimension of attachment ($p < .01$) and positively correlated with insecure attachment anxiety and avoidance dimension ($p < .05$). The relationships were considered stronger in the case of the sub-elite group ($p < .05$). Performance results were negatively correlated with competitive anxiety, attachment avoidance and anxiety dimension ($p < .05$) and positively correlated with self-confidence and secure attachment (confidence), but no significant result was achieved.

Multiple Regression data

Once the model was checked, it was established that only attachment anxiety dimension showed a significant relationship with performance ($r = .33$), which confirmed our correlation statistics. More specifically, age and sex were entered at the Step 1, explaining 15% of variance in swimmers overall performance results. After entering all the remaining controlling variables plus anxious attachment dimension in Step 2, the analysis again excluded all the variables, maintaining only sex, age and anxious attachment as predictive variables. The total variance explained by the model 2 was 23.2%, $F(3, 38) = 3.83$, $p < .05$. Therefore, insecure attachment anxiety dimension explained an additional of 8.5% of the variance in performance, after controlling for age and sex variables, $R^2 \text{ change} = .08$, $F \text{ change}(1, 38) = 4.194$, $p < .05$. In the final model anxious attachment dimension highly contributed to make the difference with beta values $= 1.63$, $p < .05$, (Table 7). To examine the impact of attachment and self-confidence onto competitive anxiety another stepwise regression analysis was conducted. Participants sex and age were entered in a first block, followed by self-confidence, attachment confidence and attachment anxiety and competitive anxiety. The model maintained only self-confidence as a significant predictor of competitive anxiety capturing 54% of the variation of competitive anxiety in swimmers $F(1, 40) = 46.65$, $p < .01$ with beta values (beta = $-.734$ $p < .01$).

Discussion and Implications

Previous to this study, the relationship between attachment and swimming performance had not been addressed. Therefore, the aim of this study was to examine associations between type of attachment, competitive anxiety, self-confidence and performance. It was hypothesized that elite athletes differ significantly from sub-elite athletes in their trends of attachment, competitive anxiety and self-confidence scores. Overall, results

partially supported our hypotheses. Anxious attachment style, combined with young age, and gender was found to be strongly related to lower performance results. Also, low levels of self-confidence predicted high levels of perceived competitive anxiety among swimmers.

More specifically, the results indicated that swimmers with high levels of self-confidence experienced less competitive anxiety than swimmers with low levels of self-confidence, but this relation did not affect significantly their performance results. As predicted, self-confidence showed a strong negative relationship to competitive anxiety and a positive relationship to performance (although not statistically significant). The results between self-confidence and competitive anxiety were consistent with relevant literature on this topic, which stated that high levels of self-confidence were usually related to low levels of experienced anxiety (Weinberg & Gould, 2011; Lundqvist et al., 2010; Jones et al., 1993). Unfortunately, the present findings couldn't demonstrate a significant relation between competitive anxiety, self-confidence and performance results. The weak associations between self-confidence, competitive anxiety and performance may be due to the small sample size of the group of interest involved in the study. Other research strongly supported the significant positive effect of self-confidence and negative effect of competitive anxiety into performance (Weinberg & Gould 2011, Jones & Hardy, 1990; Valey, 2005). Securely attached swimmers were more self-confident, experienced less competitive anxiety and had better performance results than insecurely attached swimmers. This finding was consistent with relevant literature in the field which studied the effect of secure attachment in different domains especially with regard to academic and sports performance results and self-confidence (Ein -Dor et al., 2012; Fass & Tubman, 2002; Moss & St.Laurent, 2001). On the contrary, anxious and avoidant attached swimmers displayed low levels of self-confidence, high levels of competitive anxiety and poor performance results. Surprisingly, this finding was expected for the anxious type, but not for the avoidant type. Research in this area has indicated that individuals with

avoidant attachment style usually score higher on self-esteem (Bartholomew & Horowitz, 1991; Brennan & Morris, 1997) and performed better in individual sports such as tennis (Ein-Dor et al., 2012). Somehow the present result made sense, since both of the categories fell into attachment insecurity style and attachment insecurity is usually related to negative results on dimensions that are detrimental to performance (Ein-Dor et al., 2012). Again, the avoidant attachment category scored differently than expected in relation to competitive anxiety. Avoidant swimmers experienced high levels of competitive anxiety. Updated research emphasized that children with avoidant attachment histories did not develop so much anxiety symptoms compared to other categories of attachment, possibly due to the high vigilance sense they had developed during their early childhood. Therefore in distressful situations such as competition events, individuals with avoidant attachment styles were expected to experience less anxiety than other categories (Cassidy & Shaver, 2008).

Elite swimmers showed to be more securely attached than sub-elite swimmers, who scored higher in both insecure dimensions of attachment. The difference between the two groups was significant only in the case of anxious attachment type, where the sub-elite group dominated this dimension. Given that securely attached individuals accessed more adaptive strategies for dealing with stress than insecurely attached individuals, sub-elite group might be inclined to approach the insecure dimension (Mikulincer & Shaver, 2007). Consistent with the previous reasoning, it was expected that elite swimmers experienced less competitive anxiety than sub-elite swimmers and perceived anxiety symptoms as facilitative rather than debilitating to their performance. Surprisingly, the two groups did not differ significantly in their competitive anxiety intensity and direction scores, even though there were found different associations between attachment and performance anxiety in both groups. This finding was partly in line with updated research within the field supporting actual difference between elite and sub-elite athletes in the way they experienced and perceived anxiety

symptoms either as facilitative or as debilitating to their performance. According to Lundqvist et al. (2010), sub-elite athletes tended to rate higher percentages of anxiety items as debilitating to their performance in contrast to elite athletes.

To conclude, the findings suggested that insecurity attachment (the anxious type) combined with young age and gender predicted lower performance results. This was a very strong assumption, especially when considered the high interest of coaches and clubs to identify talents and factors that affect performance. Future research, which may wish to reconsider this approach, should take into consideration also different sports, larger groups and check further the impact of secure and avoidant attachment styles into performance. As previously mentioned, the study conducted by Ein-Dor (2012) found that avoidant type was beneficial to performance, a significant result which was not supported in the current study.

However, if this study findings find future support, ethical issues may arise. This could be due to claiming that insecure anxious attachment type lead to poor performance results, which may lead to different consequences for the athlete's career depending on how the coaches and clubs use this information. Reflections should arise in regard if coaches and clubs should be in knowledge of athlete types' of attachment and who will be in control of the use they make of this information. It could happen that clubs may start to choose athletes based on the assumption that insecure anxious attached athletes can hardly be elite athletes. Therefore, categorizing them could have tremendous negative consequences on the young athletes' career.

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