

## **Emotional Intelligence and friendship patterns among Sport Studies Students**

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### **Definition of emotional intelligence**

Emotional intelligence (EI) is a relatively new construct (Zeidner, et al., 2004) that has gathered momentum due to proposals that measures of EI are related to a number of desirable outcomes, including performance and health. Although there are competing definitions of EI, Mayer and Salovey (1997) defined it as:

“The ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (p. 10). “

Mayer, et al. (2000) explained that EI has four skill hierarchical levels that range in complexity in terms of how individuals identify, manage and use emotions. Appraisal and expression (sometimes referred to as perception) of emotion is the lowest skill level. The next level involves evaluating emotional experiences, for example, weighing emotions against one another and against other sensations and thoughts. The third level involves understanding and reasoning about emotions. Each emotion follows its own specific rules. Each emotion changes according to its own characteristic rules; emotional intelligence includes the ability to identify emotions, know how they change, and reason about emotions accordingly. The fourth and highest skill level includes the management and regulation of emotions, such as knowing how to calm down after being really nervous or angry.

Recent years has witnessed the expansion of students entering higher education (Dawson, 1994; Wright, 1996). A large amount of students who embark on post-secondary education will withdraw before graduating (Gerdes & Mallinckrodt, 1994; Pancer, et al., 2000). First year students have to deal with a number of new personal and interpersonal responsibilities, including making new friends (Parker, et al., 2004). Parker et al. identified the relatively under-researched construct of emotional intelligence as a factor that could influence the student experience.

Due the nature of emotional intelligence and the proposed capability to recognize, process and control one's own emotions (Mayer, et al., 2000), first years students who are high in EI should be able to deal with escalating emotional stress as well as being able to deal with social adjustment related to friendship (Engelberg & Sjoberg, 2004). A study examining EI and personality correlates found that a lack of emotional intelligence was linked to illegal drug use, alcohol use, deviant behaviour and poor friendship bonds (Brackett, Mayer & Warner, 2002).

Indeed, studies have found that EI is associated with a number of positive outcomes including academic performance, health, and social support. Brackett, Mayer, and Warner (2004) found that emotional intelligence related to positive life experiences, in which life experiences was an amalgamated variable. In their study they examined everyday life and EI, it was found that there was a high correlation between negative coping skills and low EI for men. This was not the case for the women population in the study. The authors suggest that this could be related to the fact that men have problems identifying and expressing emotion (Helmers & Mente, 1999; Taylor, et al., 1990). A recent meta-analysis focusing on EI, found that EI correlated positively with general mental ability, agreeableness, openness to experience and extraversion (Van Rooy & Viswesvaran, 2004). All of these traits could be suggested to have an important impact on academic achievement and the ability to have success in the work place.

Emotional Intelligence may also have an impact with work place experiences. Golman (1998) suggested that individuals who had developed emotional intelligence, would be able to communicate better, thus making their intentions more clear. He goes on further to imply that people with EI would be well suited to deal with team work due to their advanced social skills. The ability to be attuned to other workers emotions as well as personal emotions and their impact on other workers has been purported to be a very attractive skill for leaders (George, 2000).

Engelberg and Sjoberg (2004) found that Emotional Intelligence, was related quite strongly to social adjustment. Social adjustment apparently seems to benefit from an ability to monitor ones own moods so as not to be out of sync with the social groups that they interact with. This could be considered the ability to self-regulate emotions. Their findings seem to strengthen the idea that emotional perception is essential for adaptation on a social level and thus developing friendships. A recent study by Antonio (2004) focused on the effects of student friendship groups supports a strong case for the importance of friendship groups and change during a students college years.

In a classic study, Feldman and Newcomb (1969) suggested that friendship groups could be thought of as synonymous with membership groups. In these membership groups, the members share a consensual set of norms which are developed through interpersonal interaction. As such EI should play a large part in the ability for a student to gain the most out of these membership groups. The efficacy of high achieving friendship groups on the membership has been found to produces positive effects across different studies (Epstein, 1983; Hallinan, 1983; Wallace, 1966).

University is a time of development, in which the student must constantly react to a changing environment in an attempt to create their adult identity. A major theory that has been utilized in the study of peer effects in University has been the 'frog pod' effect (Pascarella & Terenzini, 1991). The frog pod effect allows students to make assessments about themselves in relation to significant others that are in the academic environment. In particular a student will evaluate their abilities, competencies and potential. Therefore, it is possible that this information would be processed dependant upon the emotional intelligence of that student.

Wilson and Pritchard (2000) suggest that team membership buffers the first year student-athlete against social stresses. Belonging to a team allows the athlete to have a support system, which lends itself to coping skills that are not available to non-sport

students. Furthermore, the authors suggest that allowing first year student-athletes to work in groups so that they can share experience and thus assimilate into University work much more easily. This suggestion works nicely with the development of Emotional intelligence and its importance in academics.

It has been found that student-athletes may invest more into the educational experience because they spend more time at University and thus develop stronger: student friendships, University identity-reputation and bonds with support services and administrators. As a result, the student-athlete has a better chance of developing an environment of satisfaction for their overall University experience (Astin, 1984). Student-athletes were found to be more satisfied with their University experience than non student-athletes. Ryan (1989) echo's Astin's (1984) sentiment by suggesting that the student-athlete invests more into the University experience and thus has more personal involvement and ego identification so that they work harder to be satisfied. In many cases the friendship groups acts as a reference group, which the student will develop judgements of their abilities and academic desires (Alwin & Otto, 1977). In a similar vein, Belch, et al. (2001) found support for those first year students who belonged to and used a recreational sport facility program and slightly higher grade point averages, increased persistence and more academic credit hours. It was suggested that a 'sense of community' was a major contributor to the positive increases mentioned.

Parker, et al. (2004) conducted a relevant study which found some support for Emotional Intelligence factors and academic performance. The EI factors that were found to be predictive of academic performance, as indicated by GPA, were: intrapersonal relationships, adaptability and stress management. The authors point out that their study is in opposition to a study by Newsome, et al. (2000), which found very little support between EI and academic achievement. They go on to suggest that this was due to the wide range in the participants used in the Newsome et al. study. Parker et al. (2004) suggest that future studies should be longitudinal in nature and that EI could change over the course of a students academic career. In response to their call for a longitudinal study the current study was conducted over entire academic year for a first year sport study student.

## **Purpose**

The purpose of this study will be to analyze sport students friendships over the course of an academic year: University sport related friendships, University non sport related friendships and its relationship with Emotional Intelligence and academic performance.

## **Methods**

### **Subjects**

Subjects were University students, N = 66 in their first year of Sport studies at a University in the West midlands. Participants were randomly picked for a participant pool of those who competed on a University team n=32 (M = 20.71, SD = 1.41) and those who did not play on a University team n=34 (M = 24.11, SD = 4.24).

### **Procedure**

The Emotional Intelligence Scale was administered on the last day of the first semester and near the end of the second semester. Academic performance was accessed by computing Grade point average at the end of the first semester and the end of the second semester. Only those respondents who replied to both times periods were included in the experiment.

### **Emotional Intelligence Scale, (EIS; Shutte, 1998)**

A 33-item measure of emotional intelligence was used (Schutte, et al., 1998). Items for this test were initially constructed on the basis of the theoretical work of Salovey and Mayer (1990), and represent three inter-related dimensions: (a) appraisal and expression of emotion, (b) regulation of emotion, and (c) utilization of emotion. Items are rated on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). A series of studies by Schutte et al. (1998) revealed adequate internal reliability estimates for the scale at .87 and above, and two-week test-retest reliability of .78. Zizzi et al. (2003) found links between EI and sport performance using baseball hitting and throwing statistics. Schutte et al. reported internal consistency coefficient of .87 and test-retest correlation of .78. The internal consistency in the present study was .78. For this study the EIS was conceptualized as a 6-subscale model of Emotional intelligence. The six subscales are: utilization of emotions, appraisal of others emotions, optimism, appraisal of own emotions, emotional regulation and social emotional intelligence.

### **General Demographic Questionnaire**

A general demographic questionnaire was used which asked: age, University sport membership and grades for the end of each semester.

### **Results**

Results are reported in 3 sections: (a) Within group analysis for those participants who were a part of a University team – step-wise regression analysis; (b) Within group analysis for those participants who were not part of a University team – step-wise regression analysis; and (c) Between groups analysis for both groups – Repeated measures ANOVA for both academic performance and Emotional Intelligence.

#### **Regression analysis for university sport team students – first and second semesters.**

Backwards exclusion regression was used due to the exploratory nature of this study. Academic performance was used as the outcome variable and the subscales for the Emotional Intelligence Scale. During the start of the first semester the initial model accounted for 18% of the variance. However, the adjusted  $R^2$  was markedly different from the original model so that caution should be taken when assessing this model. The three strongest predictors of academic performance was: optimism, emotional self regulation and social regulation.

During the second semester the same procedure was used, however, results difference substantially. Utilization of emotions, appraisal of others emotions and social accounted for 50% of the variance. The adjusted  $R^2$  was similar at .44 suggesting that the model could be replicable.

### Regression analysis for students who were not on university sports teams –first semester and second semesters.

During the first semester non sport team students academic performance was best predicted by: utilization of emotions and social. These two predictors accounted for 58% of the variance with a similar adjusted  $R^2$  value.

The second semester had different results. Regulation, social and appraisal of others emotions now accounted for 70% of the variance with a similar adjusted  $R^2$  value.

### Repeated measures ANOVA analysis

Repeat measures ANOVA for academic performance (grade point average) between university team sport students and non university team sport students revealed a significant main effect, Wilks Lambda (1, 64) = .682,  $F = 29.85$ ,  $p < .0001$ ,  $\eta^2 = .31$ . The ANOVA for gpa over time was significant,  $F(1, 64) = 29.85$ ,  $p < .0001$ . See figure 1 below.

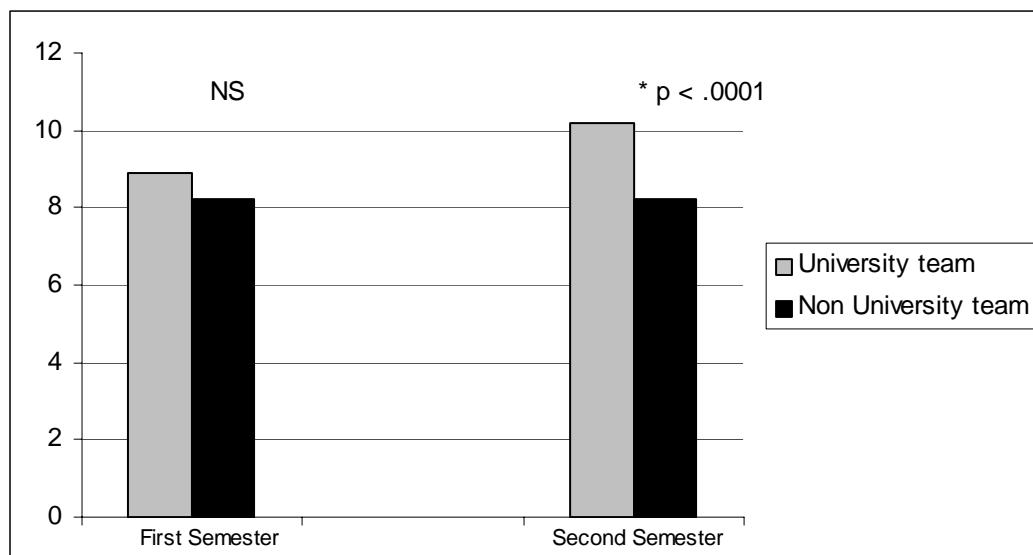


Figure 1. Academic performance between University team and Non University team sport studies students.

Repeat measures ANOVA for academic performance (change in emotional intelligence) between university team sport students and non university team sport students revealed a significant main effect, Wilks Lambda (5, 54) = .780,  $F = 3.40$ ,  $p < .01$ ,  $\eta^2 = .22$ . The ANOVA for emotional intelligence over time was significant,  $F(5, 292) = 3.85$ ,  $p < .05$ . Mauchly test for sphericity was significant so Greenhouse and Geisser correction was used and found the following significant difference: Appraisal of others emotions,  $F(4.05, 235.07) = 3.47$ ,  $p = .005$ ,  $\eta^2 = .05$ ; Appraisal of own emotions,  $F(4.05, 235.07) = 8.83$ ,  $p < .000$ ,  $\eta^2 = .13$ ; Optimism,  $F(4.05, 235.07) = 3.77$ ,  $p = .002$ ,  $\eta^2 = .06$ ; Social regulation,  $F(4.05, 235.07) = 2.82$ ,  $p = .017$ ,  $\eta^2 = .04$  and Utilization of emotions,  $F(4.05, 235.07) = 2.712$ ,  $p = .02$ ,  $\eta^2 = .04$ . See table 1 below for mean differences between groups.

Table 1. Emotional Intelligence between University team sport studies students and Non university team sport studies students.

	Sport team	Mean	SD
Appraisal of others emotions	Yes	3.5446	.42848
	no	3.3277	.37637
Appraisal of own emotions	yes	3.8375	.27562
	no	3.4294	.85441
Optimism	yes	4.2625	.34988
	no	3.2176	.46284
Regulation of emotions	yes	3.8516	.42531
	no	3.8971	.50796
Social	yes	4.0625	.51283
	no	3.3235	.38258
Utilization of emotions	yes	3.8906	.41177
	no	3.3480	.42317

## Discussion

Predictions of academic success and as a result adherence to a academic program using emotional intelligence and sport team membership is a tenuous operation, however, the findings of this experiment have shown that being part of a University sport team may help to develop emotional intelligence and may result in achieving higher academic performance.

Similar to the Parker et al. (2004) study EI accounted for a small amount of the variance in the beginning of the academic year with regards to academic performance for University team athletes. However, for non University team group EI accounted for 58% of the variance in the first semester. This could possibly due to the age difference between the two groups. There is roughly a three year difference between groups. Baron et al. (2000) have suggested that if EI is trainable that it would most assuredly be developed due to maturity. Support can be given to this theory due to the EI subscales which were most predictive for the Non University team group. Utilization of emotions and social regulation are vital in starting University successfully (Parker et al. 2004). During the second semester there is a large increased in EI's ability to predict academic performance with regards to the University team group, explaining 50% of the variance. These findings seem to be following that of the Non University team group, in that the following subscales were most predictive: utilization of emotions, appraisal of others emotions and social regulation. These subscales are much like the first semester

predictors for the Non University team group. Parker et al. (2004) results suggested a fairly strong relationship between academic performance and intrapersonal, adaptability, and stress management abilities which could be central factors in the successful transition from high school to university. As Parker et al. (2004, p. 170) state,

“The intrapersonal dimension involves the ability to distinguish among and label feelings, as well as the ability to use information about feelings to understand and guide behavior (Bar-On, 1997, 2000, 2002; Taylor et al., 1997). The adaptability dimension involves skills related to change management. Managing change involves the ability to identify potential problems, as well as the use of realistic and flexible coping strategies (Bar-On, 1997, 2000, 2002). The stress management dimension involves the ability to manage stressful situations in a relatively calm and proactive manner. Individuals who score high on this dimension are rarely impulsive and work well under pressure (Bar-On, 1997, 2000, 2002).”

The current results could be conceptualized to fit the model of EI used by Parker et al. (2004). Subscales of the EIS that could be considered as Interpersonal dimensions could be: regulation of emotions, appraisal of others emotions and social regulation. Subscales of the EIS that could be considered as Adaptable dimensions could be: optimism and emotional self regulation. Finally, subscales of the EIS that could be considered under the stress management dimension could be: optimism, emotional self regulation, social regulation, utilization of emotions and appraisal of others emotions. As a result, these findings could support those of Parker et al. (2004).

When looking at the development of EI over the course of an academic year those students who were on University teams produced significantly higher EIS subscale scores throughout all subscales, the exception being regulation of emotions. It could be possible that intercollegiate sport participation has a positive effect on their educational experience. More precisely being involved in intercollegiate sport produces additional affective growth, which has a facilitative effect by inspiring educational aptitude progression for student participants (Ryan, 1989). A large amount of research which has not found sport to be beneficial to academics has focused on Division one American sport system. In this system the sports in question could be a large income generator. As a result many student-athletes are more likely to be athlete-students or worse yet a professional athlete who is a student only in name (Richards and Aries, 1999). Richards and Aries, (1999) present a study which could mirror the UK student-athlete situation. Their focus was on Division III student-athletes who were seniors (in their fourth and final year of undergraduate studies). These students do not receive a scholarship, have to meet the same academic requirements as the rest of the student population and do not get a lot of focus from the media, student population and University lecturers or administration. The results revealed that at this particular Division III college, student-athletes (a) have to account for more than double the time commitment of those students involved in extracurricular activities, (b) graduate with non significantly different Grade point averages compared to non-athletes, (c) are involved in most aspects of University campus life compared to non-athletes and (d) have similar levels of growth and satisfaction in comparison to non-athletes. More interestingly the Richards and Aries (1999) study found that student-athlete membership were able to find time and energy for those activities that they are committed to and that student-athletes do not suffer from role conflict. In conclusion, the findings support intercollegiate sports as a possible path towards personal growth and the development of coping skills.

Though it is hard to deduce from the data available it is possible that due to their age, that those Non University team sport studies students are not University team members because they have a family, are working or find themselves to 'old' to be on a University sport team. As a result they would be missing the implied benefits of being on a University sport team and have a very different focus than those students joining teams.

A limitation of this study is that those students who do not come to class in the first place yet were part of a University sport team were not included in the study as data collection was completed during class time. As a result University team sport studies students could be misrepresented.

Future research should try to assess students from the very beginning of the academic year and look to study those students who drop out of the academic program. Another recommendation would be to complete a study over the course of an entire academic career.

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