



# Psycho-Social Relationships and Academic Achievement in Early Adolescence

By

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Dedicated to my beautiful girls, Amelie Grace and Lucy Jane, who always make me smile.

May you always aim high and never forget to dream.

Love always,

Dad xo.

**Declaration of Originality**

This thesis contains no material which has been accepted for a degree or diploma by this University or any other institution, except by way of background information and duly acknowledged in the thesis, and to the best of my knowledge and belief no material previously published or written by another person except where due acknowledgement is made in the text of the thesis, nor does the thesis contain any material that infringes copyright.

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The research associated with this thesis abides by the international and Australian codes on human and animal experimentation, the guidelines by the Australian Government's Office of the Gene Technology Regulator and the rulings of the Safety, Ethics and Institutional Biosafety Committees of the University.

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### **Publications Arising from the Present Study**

#### **Articles**

Hay, I., & Simmons, N. (2011). The significance of the pan-cultural factors of self-concept, friendship, and emotional development on students' learning and identity. In T. Lê & Q. Lê (Eds.), *Linguistic diversity and cultural identity: A global perspective* (pp. 207-219). New York: Nova Science Publishers.

Simmons, N., & Hay, I. (2010). Early adolescents' friendship patterns in middle school: Social-emotional and academic implications. *Australian Educational and Developmental Psychologist*, 27(2), 59 - 69.

#### **Conference Presentations**

Simmons, N. (2013, 8 November). Social relationships and academic achievement in adolescence: Implications for educators. *Paper presented at 40<sup>th</sup> Annual Conference for Middle Level Education*. Minneapolis, USA: Association for Middle Level Education.

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### Abstract

This research explored the academic achievement of early adolescents and the interactions between the following six psycho-social variables: friendship patterns, emotional and behavioural development, coping skills, self-concept, personal values, and the classroom learning environment. The study specifically sought to address the following research questions: 1. What is the influence of friendship patterns on middle school students' mathematics performance?; 2. What is the influence of friendship patterns on middle school students' English performance?; 3. What are the interactive influences between friendship and academic achievement in mathematics and English in the middle school years?; 4. What is the validity of the Children's Value Profile (Fyffe, 2006) for use with adolescent students?; 5. What are the gender differences on the measures of friendship patterns and quality, adjustment, self-concept, coping skills, personal values, classroom environment and academic achievement?; and 6. What are the quantitative and qualitative differences in these variables between high and low friendship groups?

Three non-government schools and one government school were selected for the study. The schools represented both metropolitan and provincial locations, and co-educational and single sex schools, in two states of Australia. The research was conducted on a sample of 266 early adolescents (59% male) with a mean age of 13 years and 5 months ( $SD = 1$  year & 1 month). These participants completed seven self-report psycho-social instruments during the initial data collection phase. The first measure completed by the participants was a Friendship Nomination Form, followed by six psycho-social measures comprising the: 1. Friendship Quality Scale (FQS; Bukowski, Hoza, & Boivin, 1994); 2. Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997); 3. Coping Strategy Indicator – Short Form (CSI-S; Amirkhan, 1990); 4. Self-Description Questionnaire II – Short Form (SDQ-II-S; Marsh, 1990b); 5. Children's Values Profile (CVP; Fyffe, 2006); and

## 6. What is Happening in this Classroom Scale (WIHIC; Fraser, McRobbie, & Fisher, 1996).

The initial questionnaire assessment of the students occurred late in the academic year.

The second phase of the investigation involved individual interviews to explore aspects of students' relationships with their nominated best friends. These structured interviews were conducted in the following academic year on a cohort of 37 students from the sample selected because they either scored in the highest or lowest section on the friendship nomination measure. Of this cohort, 16 were identified as having a high friendship score and 21 were identified as having a low friendship score. Analysis of the interview data revealed some qualitative and quantitative differences between these groups. Low friendship students were characterised by clustering into three related word groups: friends, time, and school. In comparison, the words used by students in the high friendship group were characterised by clustering into three related groups: friends, school, and person.

The quantitative data from the psycho-social instruments were analysed to explore gender differences. It was demonstrated that female students were more likely than males to describe their relationship quality with their best friend as higher in aspects of caring interactions and companionship. In terms of mental health, female students perceived a higher level of well-being than males and a greater ability to cope by seeking help from their friends and by using problem solving strategies. In comparison, males were more likely to place importance on the value of sports participation, were more likely to have experienced bullying in the school context, and they viewed themselves as less honest compared to their female peers.

Using structural equation modeling, it was demonstrated that the students' friendship patterns and social relations significantly influenced the students' English and mathematics academic outcomes. The final measurement model demonstrated that those students who had more friendships achieved better end of year academic results in the curriculum areas of

mathematics and English. This model also highlighted the importance of students' level of self-concept in English and mathematics on students' English and mathematics achievement. The importance of students' personal values was highlighted in the model with greater achievement in English predicted by higher value placed on numeracy and literacy activities. Because the Children's Values Profile (Fyffe, 2006) is a recently developed psycho-social instrument and, to date is untested with early adolescent students, its structural properties were of interest in this study. The Children's Values Profile yielded a twelve factor solution when administered to an adolescent population, compared with its original seven factor structure for primary school aged students. Of specific interest was a newly identified factor for adolescents: Future Focus.

In conclusion, this study validates the need for professionals working with adolescents to consider the interactive and iterative relationships between adolescents' psychological and social well-being, their academic achievement, and friendship patterns. In particular, the results suggest that psycho-social variables and the social arena have the potential to make a significant positive contribution to the academic achievements of middle school students.