

BOO05300.

At risk adolescents: their perception of parenting styles

Helen J Boon
James Cook University

Correspondence: Helen J Boon, School of Education, Western Campus, James Cook University, Townsville, Queensland, 4811, Australia. Telephone: 07 4781 6030, Facsimile: 07 4725 1690, E-mail: helen.boon@jcu.edu.au

This research was supported by a Smart State Grant from the Queensland Government. I would also like to sincerely thank the participating schools for their support of the study and the students for their time.

Abstract

This study was conducted to compare typical and students at risk' perceptions of their parenting and the relations those perceptions have with other factors connected with academic achievement, namely, motivational goals, coping strategies and expectancy orientation.

Three urban state high schools in North Queensland, involving 1127 Year 8-10 students, participated in the study. The students completed a survey exploring their: a) parenting perceptions, b) motivational goals, c) coping strategies and d) expectancy orientation. Sociodemographic variables and mid-semester English and math grades were also recorded.

Multivariate analyses of variance showed significant differences between typical and students at risk' coping strategies, motivational goals, expectancy orientation and perceptions of parenting. Perceptions of parenting as authoritative was consistently linked with enhanced motivational goals, coping strategies and expectancy orientation in typical and students at risk, while the converse was found in students who perceived their parenting to be neglectful. An important finding is that there were no significant differences in constructs between those students who reported permissive parenting (N=50) compared to the rest of the sample (N= 1013) suggesting that parenting processes in the sample follow the permissive style.

Introduction

This paper reports initial findings on some perceptions of students at risk of not completing their secondary schooling. Perceptions of typically achieving students are compared to those of students at risk.

Students at risk are those students who are disengaged or disaffected from school (Batten & Russell, 1995). Student disaffection is of concern among educationalists and parents since it may lead to non-completion of secondary education (Solomon & Rogers, 2001).

In reviewing the Australian educational literature on students at risk, Batten and Russell (1995) state: "Students at risk are regarded as those likely to leave before completion of Year 12 and those whose school achievement is significantly below their potential achievement level, thus indicating that they are not benefiting from attendance at school" (p.2). More recently, students at risk were defined as those who: "are at serious risk of failing in school and, as a result, will not possess sufficient skills or qualifications to become integrated in accepted patterns of family, social and working life" (Mortimore & Mortimore, 1999, p.3).

Predictors of achievement

Gange and St Pere, (2002) maintain that the most important predictors of achievement are cognitive (IQ) and motivational factors. Given that over the last twenty years measures indicate that present generations have made massive IQ gains over previous generations (Flynn, 1999; Dickens & Flynn, 2001) it may be expected that achievement levels in general would have increased. Yet, this same period marks a decline in Scholastic Aptitude Tests for United States high school students (Flynn, 1999; Dickens & Flynn, 2001) and findings from international studies show similar trends: the closer the IQ test comes to the content of school-taught subjects, nil or minimal gain is noted (Flynn, 1999). Australian research centered in a school for students whose low levels literacy and numeracy placed them at risk, showed that 57 percent had average IQs while 30 percent had above average IQs (Candy & Baker, 1992). Dickens and Flynn attribute IQ gains to cultural influences. Similarly, cultural influences are thought to be responsible for the paradoxical lack of increase in scholastic achievement levels. There is much empirical evidence to support their view.

Cultural influences might exert their effect through motivational patterns, coping strategies and expectancy orientations that might or might not be conducive to successful school engagement and consequent achievement. In line with this rationale, Solomon and Rogers (2001) studied 92 students aged 13-16 whose referral histories, school histories and educational background indicated that they had the classic student at risk profile. Motivational and attribution factors were rated using questionnaires incorporating selected items of the Patterns of Adaptive Learning Survey scales (PALS). Solomon and Rogers (2001) summarized their findings by asserting that the disaffection experienced by these students was the result of inappropriate motivational and coping strategies.

Contemporary educational research connects higher achievement levels with certain motivational goals, self-efficacy beliefs, an optimistic expectancy orientation and particular coping strategies. Conversely, lower achievement is linked to low levels of these constructs. Fostering adaptive motivations and coping strategies is parenting behaviour.

Motivational Goals

Motives do not have a direct effect on achievement behaviour, but influence behaviour through different achievement goals that individuals pursue (Elliot & Church, 1997). Goals are conceived in terms of *mastery* and *performance*, sometimes also referred to as task and

ability respectively. Mastery goals have been associated with positive cognitive, motivational, affective, and behavioral outcomes, whereas performance goals have been linked to less adaptive outcomes (Ames, 1992; Dweck & Leggett, 1988). Adoption of performance goals regardless of ability may lead to increased vulnerability to negative outcomes in the face of academic failure since they are positively related to projective coping and disruptive behaviour (Midgley, Kaplan, & Middleton, 2001). In addition, performance goals are associated with negative affect (Kaplan & Maehr, 1999) as well as with self-handicapping strategies (Martin, Marsh, & Debus, 2003) that are in themselves, independently linked to lower achievement (Midgley & Urdan 2001; Zuckermann, Kieffer, & Knee, 1998).

Self- efficacy

In regard to the motivation of students at risk, it has been found that children's perceived efficacy raises academic aspirations and final grades independently of their prior grades in the subject matter (Zimmerman, Bandura, & Martinez- Pons, 1992). Self-efficacy plays a role in facilitating successful achievement in mathematics (Pajares, 1996), predicting successful school to work transitions (Pinquart, Juang, & Silbereisen, 2003), enhancing effort and academic success (Pintrich, 2003), curtailing transgressive behaviour (Bandura, Regalia, Caprara, Barbaranelli, & Pastorelli, 2001), and preventing problem behaviours and depression in children (Bandura, Caprara, Barbaranelli, & Pastorelli, 1999). In brief, self-efficacy beliefs appear to facilitate both scholastic motivation and psychological well-being, perhaps through their association with adaptive coping behaviour (Bandura, Caprara, Barbaranelli, Gerbino & Pastorelli, 2003).

Coping Strategies

The importance of coping strategies lies in their presumed role as moderators in the relationship between a stressful environment and subjective well being (Compas, 1987). Positive coping strategies are linked to a higher self-concept which in turn is linked to achievement (Mantzicopoulos, 1990). Tero and Connell (1984) found that positive coping strategies were linked to a mastery goal motivation and higher achievement while projection and denial strategies correlated negatively with a mastery orientation and achievement. Later work suggests that positive coping strategies mediate positive classroom affect (Kaplan & Midgley, 1999) and adaptive coping strategies facilitate resilience (Howard & Johnson, 2000). Projective coping strategies have been correlated with disruptive behaviour which is linked to underachievement (Friedel, Marachi & Midgley, 2002).

Expectancy orientation

Adaptive coping strategies have been related to optimism. Optimism has been defined as expecting a positive outcome, while pessimism has been defined as failure expectancy (Kassinove & Sukhodolsky, 1995). Early work by Scheier and Carver (1985) has connected optimism with adaptive coping. Optimism was found to be negatively correlated with the use of denial and attempts to distance oneself from a problem, while pessimism was related to maladaptive strategies, such as problem avoidance, denial, withdrawal, and the failure to complete goals when under stress (Scheier, Weintraub, & Carver, 1986).

Later, Martin, Marsh and Debus (2001) showed that success oriented students are optimistic and have a strong sense of self-belief. In further conceptualizations, Martin and Marsh (2003) link optimism to a success oriented student profile characterized by a proactive and positive task orientation, a positive self-belief and mastery goals.

There is evidence that high school students are more likely to experience positive adjustment if they are optimistic (Boman & Yates, 2001). This positive adjustment is related to parenting. Jackson, Pratt, Hunsberger and Pancer (2005) used longitudinal data to confirm the role of optimism as a mediator between social and personal adjustment and parenting.

Parenting Factors

Empirical work suggests that many of the constructs discussed above are connected to parenting. For example, Marchant, Paulson and Rothlisberg (2001) examined student motivation and concluded that parent and teaching effects upon achievement were mediated by student motivational patterns. On the basis of these types of observations, parenting style has been linked to children's outcomes.

Parental style classification is based on two dimensions, warmth and involvement and monitoring and discipline. Research in North American families led to the typology of four childrearing styles: authoritative, authoritarian, permissive (permissive indulgent) and neglectful (permissive indifferent) (Seifert, Hoffnung & Hoffnung, 2000). Authoritative parenting is characterized by a high degree of control and monitoring, nurturance and warmth and maturity demands. Authoritarian parenting by contrast involves a high degree of control and monitoring, but a low level of warmth and nurturance. The permissive styles of parenting are identified by either low monitoring and control and high warmth- nurturance (indulgent), or by low warmth and low monitoring (neglectful).

A key study examining parenting styles was conducted by Lamborn, Mounts, Steinberg, and Dornbusch (1991). Using self-report questionnaires on a sample of 10,000 American adolescents Lamborn et al. found that adolescents experiencing one of the different types of pure parenting style showed significant differences in psychosocial development, school achievement, problem behaviour and internalised distress. Specifically, the sample of 1,320 adolescents who perceived their parents to be authoritative scored highest on psychosocial competence and lowest on measures of psychological and behavioural dysfunction, while the reverse patterns were found for the 1521 participants whose parents were described as neglectful. Subsequent research has validated the concept of parenting style and its influence upon adolescent well-being and achievement (Leung & Kwan, 1998; Shuckmith, Henry, & Glendinning 1995; Aunola, Stattin & Nurmi, 2000; Wolfradta, Hempelb, & Miles 2003; Heaven, Newburya, & Mak, 2004).

The current study

This study investigates the differences between typical and at risk students on motivation, coping and expectancy orientation. Moreover, particular parenting styles are investigated to assess whether they are associated with motivational patterns, coping strategies and expectancy orientation that support achievement.

It is distinguished from previous work in a number of ways. Firstly, while it follows the methodology and parenting typologies adopted by Lamborn et al. (1991) the outcome variables examined are different. In keeping with contemporary research examining predictors of achievement, the indices surveyed are motivational goals, coping strategies and optimism. Secondly, comparisons of typical and at risk student perceptions are conducted, following Solomon and Roger's (2001) approach. The process followed is: a) students at risk compared to typical students, b) students perceiving the four pure parenting styles compared and c) students from each pure parenting style compared to the total sample. And thirdly, the study aims to validate previous overseas research findings in a North Queensland sample.

Based on previous research it is hypothesized that students at risk will differ from typical students in their perceptions of all the constructs chosen above. Furthermore, it is

hypothesized that these differences will be moderated by the parenting style that students experience. In particular, it is predicted that authoritative parenting will be characterized by patterns of motivation that are connected to higher achievement, more adaptive coping strategies, and higher optimism. The converse is predicted in regard to neglectful parenting.

Method

Participants

The sample comprised 1127 year 8 -10 students from three state high schools in Townsville, North Queensland. Surveys were administered during a 45 minute class period three to four weeks after mid-year report cards were sent to students. Of the 1127 questionnaires obtained 64 were missing parts of different scales. Parents of all students were sent letters informing them of the study. As the study was interested in accessing the perceptions of students at risk, parental permission forms requested that they were to be returned only if they did not wish their child to participate. The resulting sample represented 65% of the students enrolled in the schools on the days the data were collected.

Academic competence criteria

English and mathematics mid-year grades were recorded as achievement levels. The grades were coded very limited (E)“0”, limited (D) “1”, sound (C) “2”, high (B) “3” and very high (A) “4”. A combined math and English achievement score below 4 was used to classify students as at risk.

Instrumentation

Four instruments validated in Australia and/or overseas, were chosen to measure the selected indices:

a) Parenting style

The **Parenting Style Questionnaire** was developed by Lamborn, Mounts, Steinberg & Dornbusch (1991). The questionnaire measures adolescent’s perceptions of their parenting along two dimensions: acceptance/involvement and strictness/supervision. The acceptance/involvement scale measures the extent to which the adolescent perceives his or her parents as loving, responsive and involved using 15 items, $\alpha = .72$, Mean = .81, SD = .11, Range = .25-1.0. The strictness/supervision factor assesses parental monitoring and supervision of the adolescent, 9 items, $\alpha = .76$, Mean = .74, SD = .13, Range = .30-1.0. Four parenting categories were defined by trichotomising the sample on each dimension and examining the two variables simultaneously. Following Lamborn et al (1991), parenting is defined by scores on the top tertile for both variables (authoritative), the bottom tertile for both variable (neglectful), top tertile for strictness/supervision and bottom tertile for warmth and involvement (authoritarian), and bottom tertile for strictness/supervision but top tertile for warmth and involvement (permissive).

b) Motivational goals

The **Patterns of Adaptive Learning (PALS) Questionnaire** (Freeman, Nelson, Kaplan, Kumar, & Middleton, 2000) has been used extensively in the United States and parts of it have been used in Australian studies (Smith, Sinclair & Chapman, 1999). They have been developed over time by a group of researchers using goal orientation theory to examine the relation students’ motivation and behaviour. In this study, 5 student sub scales from the PALS questionnaire were used:

| Sub-Scale | Number of Items | Cronbach's α | Mean | S.D. |
|---|-----------------|---------------------|------|------|
| The mastery goal orientation | 6 | .85 | 4.15 | 0.88 |
| The performance approach goal orientation | 5 | .89 | 2.46 | 1.15 |
| The performance avoid goal orientation | 5 | .74 | 2.40 | 1.04 |
| Academic efficacy | 5 | .78 | 4.20 | 0.71 |
| Academic self-handicapping strategies | 6 | .84 | 2.09 | 1.01 |

The rating was done on a five point Likert type scale. Items on this scale are anchored at 1 = "Not at all true," 3 = "Somewhat true," and 5 = "Very true."

c) Expectancy orientation

The **Life Orientation Scale** was constructed by Scheier & Carver (1985) and it measures dispositional optimism defined in terms of generalized outcome expectancies. The scale consists of eight items, $\alpha = .76$, Mean = 21.03, S.D. = 4.56 for males and Mean = 21.41 and S.D. = 5.22 for females.

d) Coping strategies

The **Academic Coping Inventory (ACI)**, developed by Tero and Connell (1984), measures students' self-reported coping strategies. This inventory includes four scales assessing the "positive," "projective," "denial," and "non-coping" strategies. All items begin with the stem, "when something bad happens to me in school," and include the examples, "such as not doing well on a test, or not being able to answer a question in class". The inventory was used by Kaplan and Midgley (1999) in a longitudinal study. They report internal consistencies for the four coping scales at the second, third, and fourth waves of data as follows: positive coping-.72, .77, and .77; projective coping-.75, .77, and .74; denial coping-.71, .69, and .73; and non-coping-.72, .73, and .73.

Results

SPSS software was used to carry out all the analyses, using pairwise deletions for missing data. Table 1 summarizes characteristics of students (N=1063). The sample reflects national trends with regard to the percentage of potentially at risk students, their gender and ethnicity. Indigenous students comprised 10.2 % of the sample, a higher percentage than the Queensland average of 3.15% (ABS, 2001). Pure parenting style is evident (Table 2) in similar percentages to those found by Lamborn et al. (1991) in their American sample: 13.2 % authoritative, 6.3% authoritarian, 6.1% permissive and 15.2% neglectful.

It is of interest that parenting style perceptions in the Indigenous group compared to non-Indigenous group follow the pattern observed in typical students compared to the students at risk. In other words, Indigenous students and students at risk report a high percentage of neglectful parenting perceptions and low authoritative perceptions, while non-Indigenous and typical students report the reverse (Table 1).

Table 1 Summary of student characteristics

| | | Ethnic background | | | | | Failing math /English | | | | |
|---------------------------------|---------------|-------------------|-------|----------------|-------|-------------|-----------------------|--------|---------|-------|-------------|
| | | Indigenous | | Non-indigenous | | | Typical | | At risk | | |
| | | Count | Row % | Count | Row % | Total Count | Count | Row % | Count | Row % | Total Count |
| Gender | male | 45 | 8.4% | 493 | 91.6% | 538 | 403 | 77.5% | 117 | 22.5% | 520 |
| | female | 67 | 11.9% | 498 | 88.1% | 565 | 436 | 80.3% | 107 | 19.7% | 543 |
| English grade | very low (E) | 10 | 25.6% | 29 | 74.4% | 39 | 1 | 2.6% | 37 | 97.4% | 38 |
| | low (D) | 17 | 16.2% | 88 | 83.8% | 105 | 13 | 12.4% | 92 | 87.6% | 105 |
| | sound (C) | 46 | 10.6% | 390 | 89.4% | 436 | 348 | 79.1% | 92 | 20.9% | 440 |
| | high (B) | 25 | 7.2% | 321 | 92.8% | 346 | 344 | 99.1% | 3 | .9% | 347 |
| | very high (A) | 9 | 6.8% | 124 | 93.2% | 133 | 134 | 100.0% | 0 | 0 | 134 |
| Math grade | very low (E) | 15 | 27.8% | 39 | 72.2% | 54 | 6 | 11.1% | 48 | 88.9% | 54 |
| | low (D) | 26 | 15.9% | 138 | 84.1% | 164 | 26 | 16.0% | 137 | 84.0% | 163 |
| | sound (C) | 38 | 11.5% | 293 | 88.5% | 331 | 298 | 89.0% | 37 | 11.0% | 335 |
| | high (B) | 20 | 8.1% | 227 | 91.9% | 247 | 248 | 99.2% | 2 | .8% | 250 |
| | very high (A) | 9 | 3.5% | 250 | 96.5% | 259 | 262 | 100.0% | 0 | 0 | 262 |
| Parenting Style : authoritative | | 7 | 3.8% | 176 | 96.2% | 183 | 160 | 87.9% | 22 | 12.1% | 182 |
| authoritarian | | 5 | 8.3% | 55 | 91.7% | 60 | 46 | 82.1% | 10 | 17.9% | 56 |
| permissive | | 5 | 10.0% | 45 | 90.0% | 50 | 39 | 81.3% | 9 | 18.8% | 48 |
| neglectful | | 27 | 15.0% | 153 | 85.0% | 180 | 117 | 67.2% | 57 | 32.8% | 174 |
| Total | | 44 | 9.3% | 429 | 90.7% | 473 | 362 | 78.7% | 98 | 21.3% | 460 |

Table 2 Frequencies and percentage of pure parenting style families

| Parenting Style | Frequency | (%) total sample |
|-----------------------|-----------|------------------|
| authoritative | 183 | 17.2 |
| authoritarian | 60 | 5.6 |
| permissive | 50 | 4.7 |
| neglectful | 180 | 16.9 |
| Total | 473 | 44.4 |
| mixed parenting style | 590 | 56.4 |
| Total | 1063 | 100.0 |

Independent sample t-tests were conducted to evaluate the hypothesis that students at risk differ significantly from typical students in their motivational goals, coping strategies and expectancy. A $p < 0.05$ is the maximum level at which significance is accepted. The means, standard deviations, (SD), and sample size for each pair-wise comparison are shown in Table

3. Results show significant differences between typical and students at risk in the means of the various constructs. However, there was no significant difference in the performance approach and avoid goal orientations in the two groups (Table 3).

Table 3 Mean (M), Standard deviations (SD) and independent t-tests for comparisons of constructs between typical and at risk students

| | | N** | Mean | SD | t-test for Equality of Means | | | |
|---------------------------------|---------|-----|---------|---------|---------------------------------|---------|-----------------|------|
| | | | | | t | Df | Sig. (2-tailed) | |
| optimism | typical | 804 | 18.5535 | 5.35963 | optimism | 6.455* | 367.121 | .000 |
| | at risk | 211 | 16.1374 | 4.69296 | | | | |
| mastery goals | typical | 803 | 3.8545 | .91704 | mastery goals | 6.700 | 1009 | .000 |
| | at risk | 208 | 3.3798 | .88584 | | | | |
| academic self efficacy | typical | 803 | 3.7880 | .84065 | academic self efficacy | 9.662 | 1008 | .000 |
| | at risk | 207 | 3.1440 | .90968 | | | | |
| performance approach goals | typical | 807 | 2.5508 | .97362 | performance approach goals | .305 | 1012 | .761 |
| | at risk | 207 | 2.5278 | .95887 | | | | |
| performance avoid goals | typical | 803 | 2.7572 | .91522 | performance avoid goals | -.761 | 1011 | .447 |
| | at risk | 210 | 2.8119 | .97565 | | | | |
| self handicapping | typical | 811 | 2.1862 | .90153 | self handicapping | -5.900 | 1022 | .000 |
| | at risk | 213 | 2.5908 | .84774 | | | | |
| projective coping | typical | 815 | 1.6311 | .62957 | projective coping | -5.329* | 306.963 | .000 |
| | at risk | 216 | 1.9182 | .72247 | | | | |
| denial coping | typical | 807 | 2.0359 | .70306 | denial coping | -2.821 | 1022 | .005 |
| | at risk | 217 | 2.1874 | .69884 | | | | |
| non-coping | typical | 805 | 1.9745 | .74718 | non-coping | -2.902 | 1019 | .004 |
| | at risk | 216 | 2.1400 | .73319 | | | | |
| positive coping | typical | 815 | 2.8192 | .72175 | positive coping | -2.902 | 1019 | .004 |
| | at risk | 218 | 2.3716 | .71346 | | | | |
| parental strictness | typical | 790 | .7773 | .12511 | parental strictness | 5.494* | 287.683 | .000 |
| | at risk | 205 | .7165 | .14498 | | | | |
| parental warmth and involvement | typical | 807 | .8233 | .10641 | parental warmth and involvement | 6.274* | 304.339 | .000 |
| | at risk | 211 | .7670 | .11851 | | | | |

**N is the number of students in the each comparison, *unequal variances t-test used.

The next step in the analysis procedure was to conduct a 2 x 4 contingency table to determine whether there was an association between parenting style and being at risk (Table 4). A significant relationship was found associating being at risk with parenting style, $\chi^2 = 23.42$, $df = 3$, $p < .001$. The proportion of variance attributable to parenting style for being at risk is

23%. The results show that an authoritative parenting style is associated with typical students while a neglectful parenting style predicts students at risk.

Table 4 Chi squared independence test between parenting style and being at risk

| Parenting style | | | typical | Failing math and/or English (at risk) |
|------------------------|----------------|----------------|---------|---------------------------------------|
| Parenting style | authoritative | Count | 160 | 22 |
| | | Expected Count | 143.2 | 38.8 |
| | authoritarian | Count | 46 | 10 |
| | | Expected Count | 44.1 | 11.9 |
| | permissive | Count | 39 | 9 |
| | | Expected Count | 37.8 | 10.2 |
| | neglectful | Count | 117 | 57 |
| | | Expected Count | 136.9 | 37.1 |
| Total | Count | 362 | 98 | |
| | Expected Count | 362.0 | 98.0 | |

Figure 1 shows a plot of the means of achievement for both typical and students at risk by parenting style. It is notable that parenting style is linked with achievement in both typical and at risk students (Figure 1). In sum, parenting style moderates achievement in both typical and students at risk.

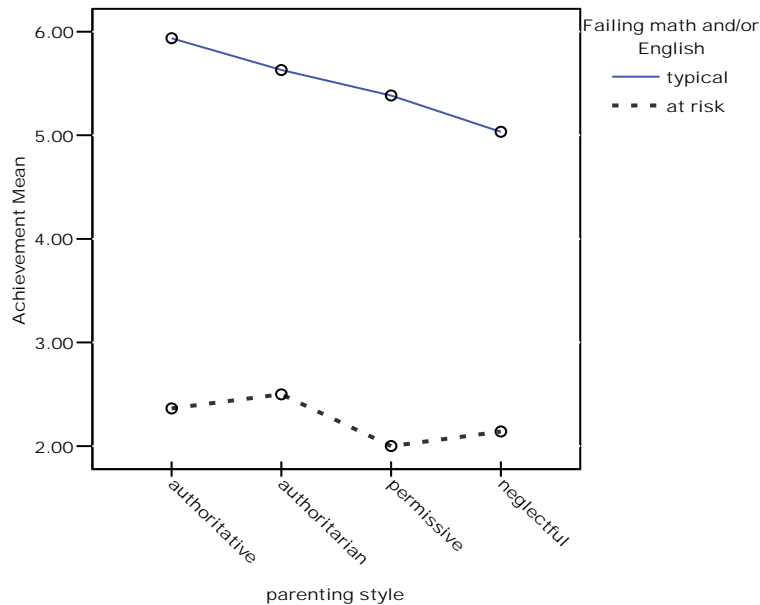


Figure 1 Means of achievement for typical and at risk students by parenting style

Group comparisons

In order to examine the effects of parenting style and being at risk on the psychological constructs, analyses of variance were conducted. These analyses involved only the students experiencing a pure parenting style. Multivariate analysis of variance (MANOVA) results are summarized in Tables 5, 6, 7. These examine parenting style (4) by being at risk (2) on clusters of dependent variables (Tables 5 a, b, c and Table 6). Analyses are then carried out for each pure parenting style group by the whole sample (2) by being at risk (2) as independent variables (Table 7). Interaction effects of parenting style with being at risk were also examined.

Table 5(a) MANOVAs of motivational goals comparing typical and at risk students by parenting style

| Motivational Goals | | Dependent Variable | F | Sig. | Partial Eta ² (η^2) |
|----------------------------|---------|----------------------------|--------|------|---------------------------------------|
| Main effect: Wilk's Lambda | | Df | | | |
| | | Univariate effects | | | |
| Parenting style | (3,399) | | 5.424 | .000 | .115 |
| | | mastery goals | 11.126 | .000 | .170 |
| | | academic self efficacy | 15.994 | .000 | .189 |
| | | performance approach goals | 9.129 | .000 | .059 |
| | | performance avoid goals | .930 | .426 | .007 |
| | | self handicapping | 3.304 | .020 | .116 |
| Failing math / English | (1,399) | | 6.491 | .001 | .086 |
| | | mastery goals | 11.634 | .001 | .022 |
| | | academic self efficacy | 25.906 | .000 | .065 |
| | | performance approach goals | 2.192 | .140 | .002 |
| | | performance avoid goals | .312 | .577 | .000 |
| | | self handicapping | 7.600 | .006 | .029 |

Table 5(b) MANOVAs of coping strategies comparing typical and at risk students by parenting style

| Coping strategies | | Dependent Variable | F | Sig. | Partial Eta ² (η^2) |
|-----------------------------|---------|---------------------|--------|------|---------------------------------------|
| Main effects: Wilk's Lambda | | Df | | | |
| | | Univariate effects: | | | |
| Parenting style: | (3,426) | | 4.758 | .000 | .074 |
| | | projective coping | 2.933 | .033 | .059 |
| | | denial coping | 1.652 | .177 | .022 |
| | | non-coping | 2.545 | .056 | .024 |
| | | positive coping | 13.377 | .000 | .133 |
| Failing math/English | (1,426) | | 4.179 | .002 | .042 |
| | | projective coping | 4.033 | .045 | .014 |
| | | denial coping | .361 | .548 | .003 |
| | | non-coping | 4.494 | .035 | .014 |
| | | positive coping | 7.089 | .008 | .016 |

Table 5(c) ANOVA of optimism comparing typical and at risk students by parenting style

| Optimism | Df | F | Sig. | Partial Eta ² (η^2) |
|------------------------------------|---------|--------|------|--|
| <i>Main effects: Wilk's Lambda</i> | | | | |
| Failing math/English | (1,443) | 3.471 | .063 | .008 |
| Parenting style: | (3,443) | 17.038 | .000 | .105 |

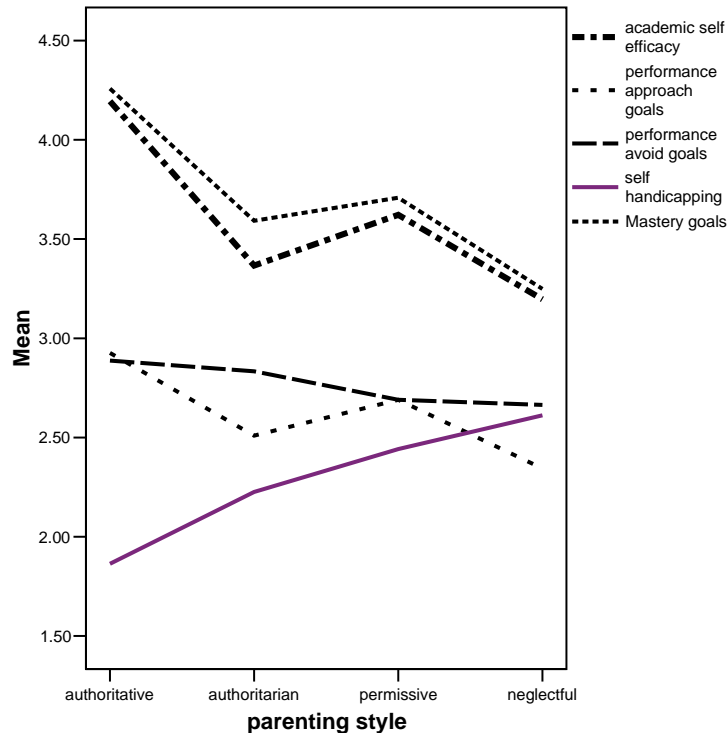


Figure 2 Motivational goals of students from different parenting groups

Results revealed significant main effects for the independent variables, parenting style and failing math/English (at risk), on all clusters of dependent variables whereas interaction effects did not reach significance.

Parenting style is connected to all motivational constructs except performance avoid, with the biggest effect (η^2) upon academic self-efficacy and mastery goals. Authoritative parenting is linked to higher mastery and performance approach goals and self-efficacy and lower self-handicapping than the other parenting styles. The converse is observed for neglectful parenting. Permissive parenting is associated with higher self-efficacy, mastery and performance approach goals than neglectful parenting but follows a rising trend with regard to self-handicapping. Authoritarian parenting follows the same qualitative pattern as neglectful parenting but to a lower magnitude (Figure 2). Main effects for being at risk are evident in this group (N=460), however, performance approach and avoid goals did not reach significance. Once again, self-efficacy had the biggest size effect (η^2). Results show that parenting style is linked to a bigger size effect (11.5%) on motivational goals than failing math/English (8.6%).

Coping strategies are also associated with parenting style. Authoritative parenting predicts the highest positive coping and the lowest projective and denial coping means, while the reverse is observed for neglectful parenting (Figure 3). Non-coping appears to be characteristic of authoritarian parenting while permissive parenting is typified by a mixture of

positive and denial coping. Being at risk is linked to lower positive and higher projective and non-coping strategies, but denial coping is not significantly linked with either parenting style or being at risk. There were no interaction effects evident between parenting style and being at risk (Table 5b). Notably, main effects of parenting style result in a bigger size effect upon coping strategies than main effects of academic failure.

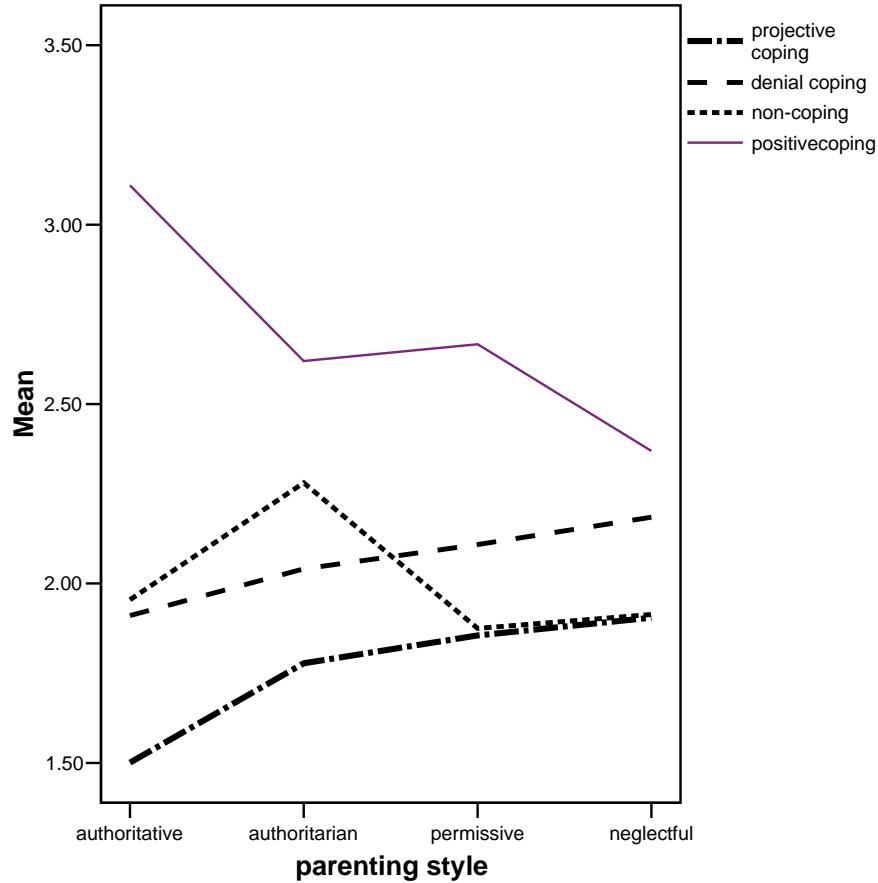


Figure 3 Coping strategies of students from different parenting groups

Optimism reveals the same patterns as the other constructs, with no significant interactions between the two main effects (Table 5c). Authoritative parenting is linked to the most optimistic students, neglectful parenting to the most pessimistic. Authoritarian parenting seems to be linked to more pessimistic perceptions than permissive parenting, while being at risk independently predicts lower optimism however this is not highly significant, $p = .06$ (Figure 4). In other words, once again, main effects for parenting style are of a greater magnitude than main effects for academic failure.

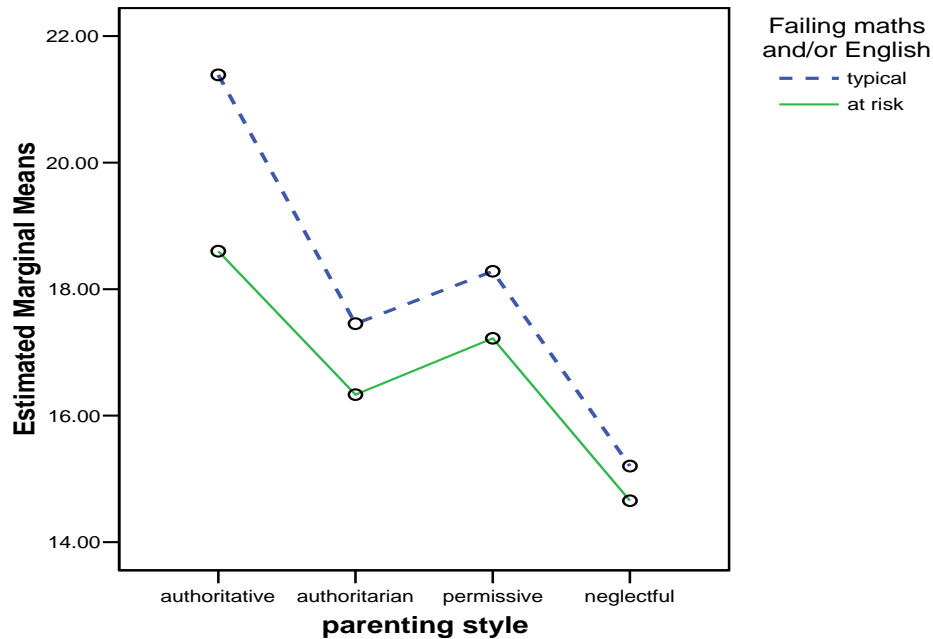


Figure 4 Optimism levels of students from different parenting groups

Inspection of Table 6 reveals that the means of the constructs under neglectful parenting are almost equal to the means under the at risk category. Optimism was the only exception, being even lower than those in the at risk category. This indicates that constructs of neglected students, whether at risk or typical, are equivalent to those of students at risk from the three other parenting styles.

Table 6 Means and Standard Deviations: pure parenting style sample (N=460)

| | authoritative | | authoritarian | | permissive | | neglectful | | typical | | Failing math / English | |
|-----------------------------------|---------------|------|---------------|------|------------|------|------------|------|---------|------|------------------------|------|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| | | | | | | | | | | | | |
| mastery goals | 4.24 | .73 | 3.57 | .95 | 3.70 | .90 | 3.23 | .99 | 3.85 | .92 | 3.38 | .89 |
| academic self efficacy | 4.14 | .74 | 3.34 | .83 | 3.60 | 1.02 | 3.19 | .94 | 3.79 | .84 | 3.14 | .91 |
| performance approach goals | 2.93 | .99 | 2.54 | 1.12 | 2.67 | .97 | 2.34 | .94 | 2.55 | .97 | 2.53 | .96 |
| performance avoid goals | 2.91 | .98 | 2.85 | 1.00 | 2.64 | 1.03 | 2.66 | .87 | 2.76 | .92 | 2.81 | .98 |
| self handicapping | 1.92 | .87 | 2.23 | .78 | 2.41 | .83 | 2.61 | .91 | 2.19 | .90 | 2.59 | .85 |
| projective coping | 1.50 | .64 | 1.80 | .67 | 1.85 | .69 | 1.91 | .72 | 1.63 | .63 | 1.92 | .72 |
| denial coping | 1.92 | .71 | 2.06 | .62 | 2.13 | .80 | 2.18 | .72 | 2.04 | .70 | 2.19 | .70 |
| non-coping | 1.95 | .74 | 2.29 | .78 | 1.88 | .78 | 1.93 | .73 | 1.97 | .75 | 2.14 | .73 |
| positive coping | 3.08 | .67 | 2.61 | .69 | 2.68 | .62 | 2.38 | .73 | 2.82 | .72 | 2.37 | .71 |
| optimism | 21.01 | 5.03 | 16.98 | 4.73 | 18.20 | 4.41 | 15.26 | 5.03 | 18.55 | 5.36 | 16.14 | 4.69 |

The final step in the analysis involved comparing each of the pure parenting style groups against the whole sample in order to find out how each parenting style differed from average parenting and whether a pure parenting style conferred an advantage or risk upon typical and students at risk. Results of the MANOVA are shown in Table 7. Mean values of constructs by parenting style against the total sample are shown in Table 8. No interaction effects were noted between the independent variables, namely pure parenting style/whole sample and at risk/typical for any comparison.

Table 7 MANOVA of motivational goals, coping strategies and optimism for each pure parenting group compared to all other students

| Motivational Goals | Df | Dependent Variable | F | Sig. | Partial Eta ² (η^2) |
|--------------------------------|-------------------------|----------------------------|--------|------|---------------------------------------|
| Main effects | | Univariate effects | | | |
| Authoritative parenting | (1,906) | | 22.552 | .000 | .108 |
| Failing math/English | (1,906) | | 19.732 | .000 | .096 |
| | Authoritative parenting | Mastery goals | 47.628 | .000 | .049 |
| | | academic self efficacy | 57.491 | .000 | .058 |
| | | performance approach goals | 30.338 | .001 | .032 |
| | | performance avoid goals | 3.425 | .065 | .004 |
| | | self handicapping | 30.833 | .000 | .035 |
| | Failing math/English | Mastery goals | 32.475 | .000 | .034 |
| | | academic self efficacy | 68.918 | .000 | .069 |
| | | performance approach goals | .097 | .756 | .000 |
| | | performance avoid goals | .898 | .344 | .001 |
| | | self handicapping | 33.449 | .000 | .035 |
| Neglectful parenting | (1,931) | | 15.616 | .000 | .078 |
| Failing math/English | (1,931) | | 19.249 | .000 | .094 |
| | Neglectful parenting | Mastery goals | 42.480 | .000 | .044 |
| | | academic self efficacy | 43.217 | .000 | .044 |
| | | performance approach goals | 6.674 | .010 | .007 |
| | | performance avoid goals | 1.173 | .279 | .001 |
| | | self handicapping | 27.940 | .000 | .029 |
| | Failing math/English | Mastery goals | 31.611 | .000 | .033 |
| | | academic self efficacy | 67.821 | .000 | .068 |
| | | performance approach goals | .003 | .530 | .000 |
| | | performance avoid goals | .779 | .799 | .001 |
| | | self handicapping | 32.713 | .000 | .034 |
| Authoritarian parenting | (1,934) | | 22.061 | .128 | .009 |
| Failing math/English | (1,934) | | 4.832 | .000 | .106 |
| Permissive parenting | (1,934) | | 1.145 | .335 | .006 |
| Failing math/English | (1,934) | | 21.897 | .000 | .106 |
| Coping strategies | | | | | |
| Authoritative parenting | (1,993) | | 18.252 | .000 | .069 |
| Failing math/English | (1,993) | | 19.916 | .000 | .075 |
| | Authoritative parenting | projective coping | 13.140 | .000 | .013 |
| | | denial coping | 4.013 | .004 | .008 |
| | | non-coping | .479 | .489 | .000 |
| | | positive coping | 56.318 | .000 | .054 |
| | Failing math/English | projective coping | 28.749 | .000 | .028 |
| | | denial coping | 7.043 | .008 | .007 |
| | | non-coping | 9.069 | .003 | .009 |
| | | positive coping | 44.440 | .000 | .043 |
| Neglectful parenting | (1,993) | | 13.157 | .000 | .051 |
| Failing math/English | (1,993) | | 19.294 | .000 | .072 |
| | Neglectful parenting | projective coping | 18.487 | .000 | .018 |
| | | denial coping | 3.449 | .064 | .003 |

| | | | | | |
|--------------------------------|-------------------------|-------------------|--------|------|-------------|
| | | non-coping | 6.183 | .013 | .006 |
| | | Positive coping | 33.700 | .000 | .033 |
| | Failing math/English | projective coping | 26.386 | .000 | .026 |
| | | denial coping | 7.071 | .008 | .007 |
| | | non-coping | 11.473 | .001 | .011 |
| | | positive coping | 42.264 | .000 | .041 |
| Authoritarian parenting | (1,993) | | 2.091 | .080 | .008 |
| Failing math/English | (1,993) | | 22.289 | .000 | .083 |
| | Authoritarian parenting | projective coping | .1113 | .292 | .001 |
| | | denial coping | .069 | .794 | .000 |
| | | non-coping | 5.311 | .021 | .005 |
| | | Positive coping | .944 | .332 | .001 |
| | Failing math/English | projective coping | 32.427 | .000 | .032 |
| | | denial coping | 1.048 | .306 | .008 |
| | | non-coping | 9.772 | .002 | .010 |
| | | Positive coping | 51.749 | .000 | .050 |
| Permissive parenting | (1,993) | | 1.624 | .166 | .007 |
| Failing math/English | (1,993) | | 22.088 | .000 | .082 |
| | Failing math/English | projective coping | 2.315 | .128 | .002 |
| | | denial coping | .188 | .665 | .000 |
| | | non-coping | 2.436 | .119 | .002 |
| | | Positive coping | .336 | .562 | .000 |
| Optimism | | | | | |
| Authoritative parenting | (1,1007) | | 62.995 | .000 | .059 |
| Failing math/English | (1,1007) | | 23.709 | .000 | .023 |
| Neglectful parenting | (1,1007) | | 60.818 | .000 | .057 |
| Failing math/English | (1,1007) | | 21.236 | .000 | .021 |
| Authoritarian parenting | (1,1007) | | 1.650 | .199 | .002 |
| Failing math/English | (1,1007) | | 31.122 | .000 | .030 |
| Permissive parenting | (1,1007) | | .004 | .952 | .000 |
| Failing math/English | (1,1008) | | 30.792 | .000 | .030 |

Authoritative parenting and being at risk were independently linked to mastery goals, self-efficacy and self-handicapping, acting in opposite directions, with authoritative parenting also significantly raising performance approach goals (Table 7).

Neglectful parenting and being at risk each significantly impacted upon mastery goals, self-efficacy and self-handicapping acting in the same direction; however neglected parenting has a greater impact than being at risk. For example, the mean for self-handicapping is 2.53 for at risk students and 2.76 for neglectfully parented students at risk. For typical students it is 2.11 and 2.59 for neglectfully parented students not at risk (Table 7). Neither authoritarian nor permissive parenting had a significant effect on motivational orientation.

As hypothesized, in comparing authoritative or neglectful parenting to the rest of the sample, it was shown that positive and projective coping strategies are significantly moderated by parenting style for typical and students at risk (Table 7). Permissive parenting did not reach significance for coping strategies but authoritarian parenting seems to increase reliance upon non-coping strategies. In all cases being at risk independently affected coping.

Optimism levels were significantly altered only by authoritative and neglectful parenting, optimism increasing in the former and decreasing in the latter for both typical and students at risk.

In sum, authoritative and neglectful parenting results in significant differences whether compared to other parenting styles or to the whole student sample. An important finding is that, as a result of the lack of differences produced in these comparisons, the parenting style most similar to that experienced by the whole sample may be said to be the permissive one.

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Table 8 Means of indices of typical and at risk students from each pure parenting group compared to the rest of the sample (N=1008)

| Mean | Typical | | At risk | | Typical | | At risk | | Typical | | At risk | | Typical | | At risk | |
|----------------------------|---------|-------------------|---------|-------------------|---------|----------------------|---------|----------------------|---------|-------------------|---------|-------------------|---------|----------------------|---------|----------------------|
| | other | Permissive parent | other | Permissive parent | other | Authoritative parent | other | Authoritative parent | other | Neglectful parent | other | Neglectful parent | other | Authoritarian parent | other | Authoritarian parent |
| Motivational goals | | | | | | | | | | | | | | | | |
| academic self efficacy | 3.79 | 3.76 | 3.15 | 2.82 | 3.67 | 4.21 | 3.10 | 3.44 | 3.87 | 3.36 | 3.23 | 2.89 | 3.82 | 3.40 | 3.13 | 3.09 |
| mastery goals | 3.85 | 3.91 | 3.43 | 2.96 | 3.73 | 4.27 | 3.37 | 3.72 | 3.96 | 3.32 | 3.50 | 3.18 | 3.87 | 3.67 | 3.40 | 3.38 |
| performance approach goals | 2.55 | 2.67 | 2.53 | 2.53 | 2.48 | 2.87 | 2.50 | 3.04 | 2.59 | 2.43 | 2.58 | 2.38 | 2.56 | 2.65 | 2.56 | 2.18 |
| performance avoid goals | 2.76 | 2.76 | 2.82 | 2.47 | 2.73 | 2.87 | 2.79 | 3.03 | 2.78 | 2.69 | 2.86 | 2.68 | 2.76 | 2.84 | 2.80 | 2.87 |
| self handicapping | 2.17 | 2.48 | 2.61 | 2.22 | 2.29 | 1.78 | 2.61 | 2.46 | 2.11 | 2.59 | 2.53 | 2.76 | 2.18 | 2.28 | 2.59 | 2.63 |
| Coping strategies | | | | | | | | | | | | | | | | |
| projective coping | 1.62 | 1.83 | 1.90 | 1.81 | 1.68 | 1.45 | 1.92 | 1.78 | 1.59 | 1.87 | 1.81 | 2.06 | 1.63 | 1.72 | 1.90 | 1.88 |
| denial coping | 2.03 | 2.08 | 2.17 | 2.03 | 2.08 | 1.89 | 2.18 | 2.00 | 2.02 | 2.14 | 2.13 | 2.25 | 2.04 | 2.06 | 2.17 | 2.14 |
| non-coping | 1.99 | 1.85 | 2.13 | 1.97 | 2.00 | 1.91 | 2.12 | 2.28 | 1.99 | 1.89 | 2.15 | 2.01 | 1.95 | 2.29 | 2.09 | 2.46 |
| positive coping | 2.82 | 2.74 | 2.37 | 2.47 | 2.72 | 3.14 | 2.34 | 2.65 | 2.89 | 2.47 | 2.44 | 2.25 | 2.83 | 2.69 | 2.37 | 2.48 |
| Optimism | | | | | | | | | | | | | | | | |
| optimism | 18.51 | 18.25 | 16.08 | 16.80 | 17.63 | 21.54 | 15.99 | 18.00 | 19.15 | 15.66 | 16.93 | 14.44 | 18.65 | 17.35 | 16.25 | 15.86 |

Discussion

The study reported here investigated the differences between typical and students at risk in relation to motivation, coping and expectancy perceptions. In addition, it explored the relation of parenting factors to these indices. Supporting the main hypothesis, findings indicate that students at risk differ from typical students in their motivations, coping strategies and optimism levels. Furthermore, perceived parenting style contributes to these differences, confirming the second hypothesis. In addition, previous ideas about pure parenting style proportions in the population and their effect on achievement (Lamborn et al., 1991) are supported for North Queensland families.

The finding that typical and non-Indigenous students report significantly higher rates of authoritative parenting, while Indigenous and students at risk report significantly higher rates of neglectful parenting, might be of special consequence. In the case of Indigenous and students at risk, neglectful parenting appears at a rate three to four times higher than authoritative parenting (Table 1). In view of Indigenous students' apparent retention rates from Year 7/8 to Year 12, which in 2004 were 39.4% compared to 75.7% for non-Indigenous students (ABS, 2005) this finding may be critical.

Since the main interest in this research was the differences between groups of students categorized as at risk or typical and the impact that parenting has on these differences, the analyses examined both quantitative and qualitative differences.

Few departures from theory or previous empirical studies were detected with regard to qualitative differences between typical and students at risk. Specifically, higher achieving students did have higher self-efficacy and mastery goals and lower self-handicapping than lower achieving students, validating previous studies (Solomon & Rogers, 2001). Regarding performance goals, few differences were found between typical and students at risk, a result that may be uniquely connected to the Australian culture. The coping strategies that were found to be significantly linked to students at risk and typical students support previous findings and expectations. Adaptive positive coping strategies were employed by higher achieving students, while underachievement was linked to projective, non-coping and denial coping (e.g., Tero & Connell, 1984; Mantzicopoulos, 1990). Finally, typical students had higher optimism levels than students at risk confirming initial hypotheses.

Results support the second hypothesis that perceived parenting style moderates the constructs linked to achievement. In particular, students who characterize their parents as authoritative or neglectful follow consistently predictable patterns of achievement, motivation, coping strategies and optimism.

As predicted, adolescents perceiving authoritative parenting are more confident about their ability to learn, measured by a higher self-efficacy, have a mastery goal orientation and are less likely to self-handicap at school. Moreover, they employ more adaptive coping strategies to school demands. Out of the four parenting groups, they are least likely to be at risk of academic failure. Furthermore, authoritative parenting seems to act as a protective factor since, even when these students are failing in their academic work, the degree to which they display attributes of students at risk is lower than students at risk in different parenting style categories. This is important and needs to be widely disseminated to both prospective and current parents. An inconsistent finding with regard to these students is that in addition to mastery goals they tend to adopt performance approach goals, thought to be negatively linked with achievement. The trend is more marked in the students of this group who are failing. Some researchers, however, support the notion that when performance goals are balanced with mastery goals higher achievement is predicted (Wentzel, 1993). More research needs to be conducted to determine whether this is a general trend for those who characterize their parents as authoritative.

By contrast, adolescents who characterize their parents as neglectful show the reverse patterns in all indices examined. They are most likely to fail, be pessimistic and have unhelpful coping strategies at school. More importantly, neglectful parenting appears to act as a risk factor, amplifying differences between students at risk and typical students.

Permissive perceptions of parenting are not linked to higher failure rates or pessimism, and their patterns of motivation and coping are qualitatively similar to the authoritatively parented group. Quantitative differences in the indices examined show that this group resembles typical students perceiving parenting that is of a non-pure style. This is because there were no significant main effects between students reporting permissive parenting and other students in those indices measured. The implication of this is that parenting patterns across this sample follow the permissive model with relatively high parental warmth and involvement and moderate levels of strictness and supervision or demandingness.

Adolescents from homes characterized as authoritarian are not likely to be at risk. However, in comparison to students from other parenting groups, they are pessimistic, tend not to cope and their mastery goals and self-efficacy are reduced. Their performance avoid goals are as high as those of students at risk, perhaps as a result of the higher levels of non-cope that they report. The high level of strictness/supervision perceived in their parenting, equated to demandingness by theorists in the area, (e.g. Baumrind, 1991), might be responsible for this. In general, they do not feel that they cope very well with school demands even though they are apparently not at risk of failing.

The two parenting variables characterizing parenting style appear to act independently. Warmth and involvement supports optimism, self-efficacy, mastery and performance approach goals, while the absence of a high magnitude of supervision/strictness in those students reporting permissive parenting suggests that lower parental expectations and discipline may account for their lower achievement in comparison to the groups whose parents are authoritative or authoritarian.

Limitations of the current study include the use of self-report questionnaires to assess both independent and dependent variables, the lack of temperament measures to assess how student temperament factors relate to the perception of the variables reported and the cross sectional nature of the study.

Its cross-sectional nature makes it susceptible to occasion of data collection bias which might distort the main premise of the study, that is, that parenting processes moderate other constructs. A major limitation in this report is the ordinal measurement of achievement levels. It is likely that size effects obtained in this way are underestimated. However, practical and ethical considerations prevented the collection of exact (interval) numerical data for achievement.

Given that replication of findings from previous studies was obtained, it appears that the use of self-report questionnaires is an acceptable and reliable way to access such information. A lack of temperament measurement is a significant limitation since some researchers believe that temperament moderates the relationship between parenting and behaviour outcomes, while others see parenting style as a moderator of temperament on behaviour (Stice & Gonzales, 1998; Letcher, Toumbourou, Sanson, Prior, Smart & Oberklaid, 2004). Therefore, temperament needs to be considered in future studies.

Finally, the cross-sectional design of the study cannot confirm whether parenting style causes or precedes the outcomes assessed. It is possible that adolescent characteristics elicit particular parenting responses which then reinforce student attributes. Studies of longitudinal design are necessary to verify the reciprocal role of child temperament in parenting practices.

Additionally, it is likely that parenting style is linked to socioeconomic variables such as parental education and family structure variables such as one parent families, both of which may be associated. Future research needs to investigate these matters, along with the role of expectancy orientation in mediating parenting variables, since optimism has been linked with positive school adjustment (Boman & Yates, 2001). This is in turn associated with lower levels of externalising behaviour, a factor connected with academic failure (Gresham, Lane, MacMillan, & Bocian, 1999)

A valuable extension of our understanding of the underlying differences between students at risk and typical students would be gained from a Rasch analysis of their scale responses. There could be further confounding variables at play that traditional measurement methods were unable to discern. Future studies need to pursue this point.

In summary, when achievement predictors are investigated with a view to improving academic outcomes it is important to look at what parental involvement and support an adolescent is experiencing in addition to motivational, coping and expectancy characteristics. By taking into account parental support and involvement, or targeting groups whose parenting has been demonstrably compromised, educational programs are more likely to impact upon student adjustment and achievement.

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