International Education Journal, 2005, 6(2), 232-239.
ISSN 1443-1475 © 2005 *Shannon Research Press*.
http://iej.cjb.net

Perfectionism and the gifted: A study of an Australian school sample

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The quest for perfection has been anecdotally associated with great achievement and despair; with adjustment and maladjustment. No population has more frequently been associated with perfectionism than the gifted. This study was designed to (i) identify the types of perfectionism observed in a sample of Australian school students, and (ii) to examine where gifted students fitted in the profiles of perfectionism.

Perfectionism, adjustment, psychosocial development, healthy, gifted

INTRODUCTION

In an often-quoted formulation of perfectionism, Hamachek (1978) identified both normal and neurotic perfectionism. Normal perfectionists are able to set realistic performance goals and gain satisfaction from successes. In contrast, neurotic perfectionists set exceedingly high standards, and always feel that the task could have been done better. What distinguishes negative from positive perfectionism is the excessively self-critical or self-doubting stance of negative perfectionism. Organisation and neatness attitudes also feature. Individuals may be "fussy or exacting" (Hollender, 1965, p.96) or by contrast, display poor organisation as they procrastinate over tasks because of fears about adequacy of performance. Perceptions of high expectations or criticisms held by parents or significant others are also important characteristics of the perfectionist profile (Burns, 1980; Hamachek, 1978; Hollender, 1965).

Research into perfectionism has frequently used scales such as the 'Multidimensional Perfectionism Scale' (Frost, Marten, Lahart and Rosenblate, 1990). This scale divides perfectionism into six core features: Personal Standards (PS), Concern over Mistakes (CM), Doubt about actions (D), Parental Expectations (PE), Parental Criticisms (PC) and Organisation (O). Although there is some disagreement over the scale structure there is general agreement that certain groupings of items are differentially associated with positive or negative outcomes. Where a person's self standards are highly critical, or where people perceive their parents to be highly critical, an association with maladjustment seems to emerge. High concern over mistakes (CM) and doubt over actions (D) have been associated with difficulties such as obsessive-compulsiveness (Antony, Purdon, Huta and Swinson, 1998), social phobia (Saboonchi, Lundh and Öst, 1999), and depression (Enns and Cox, 1999). High parental criticism (PC) has been associated with difficulties such as social phobia (Juster et al., 1996) and panic disorder (Saboonchi et al., 1999). In contrast, high personal standards (PS) and organisation (O) have tended to be associated with adaptive traits, such as goal commitment at school and work (Flett et al., 1995), or have shown a negative association with pathology (Lynd-Stevenson and Hearne, 1999).

The distinction between positive and negative perfectionism has been confirmed by research into perfectionism subtypes. Parker (1997) identified three perfectionism subtypes from scores on the six FMPS subscales. Healthy Perfectionists were characterised by moderately high PS, moderate PE, the highest O scores and low CM.

It was suggested by Flett, Sawatzky and Hewitt (1995) that this label be used to avoid confusing this scale with another of the same name (Hewitt and Flett, 1991), which they refer to as the MPS. The Dysfunctional Perfectionism subtype was characterised by the highest scores on five of the six scales (PS, CM, D, PE and PC). They scored below Healthy Perfectionists on O. The Non-Perfectionist subtype showed low scores overall. Scores on other measures validated these subtypes. For example, Healthy Perfectionists scored the lowest on Neuroticism, while Dysfunctional Perfectionists scored the highest. Non-Perfectionists recorded the lowest scores on Conscientiousness (Parker, 1997). The present study used a similar methodology to test for the three-way typology in a sample of mixed gender, age and ability Australian school students.

Much of our existing information about perfectionism in able and talented individuals is anecdotal, such as the self-reports of gifted children (Buescher, 1985) and those who work with them (Silverman, 1995). Empirical data have been sparse and inconsistent. Using measures other than the FMPS, evidence has been reported of higher personal standards in gifted than non-gifted students (LoCicero and Ashby, 2000), or in gifted students in special programs over gifted and non-gifted students not in special programs (Roberts and Lovett, 1994). Using the FMPS, Parker and Mills (1996) found no significant differences in personal standards between gifted and nongifted students. Research into giftedness and perfectionism subtypes has also been equivocal. Parker, Portesova and Stumpf (1999, cited in Parker, 2000) reported gifted students were more likely than non-gifted students to be Non-Perfectionists, and less likely to be Unhealthy Perfectionists. In addition, the literature on giftedness and adjustment suggests that giftedness does not predispose a child to psychopathology (Freeman, 1991) and indeed could be linked with significantly lower symptomatology (Olszewski-Kubilius, Kulieke and Krasney, 1988).

Following these findings the present investigation predicted that gifted students would have higher personal standards (PS) than non-gifted students and would be more likely than non-gifted students to become perfectionists and to be healthy perfectionists. Patterns associated with age and gender were also considered but are not be reported in detail here.

METHOD

Participants

A total of 623 students from Years 6, 8 and 11 participated in the study providing 612 full data sets, as presented in Table 1. Participants were recruited from schools in the inner eastern and south-eastern suburbs of Melbourne: a coeducational private school, two single sex, private schools, and two coeducational government schools. A large number of boys were available for the study due to the passive parental consent procedure preferred by the boys' school. This gender imbalance was addressed, where necessary, during data analysis.

Table 1. Participant Numbers: Gender, Age and Year Level

Gender	Year Level			Total
	6	8	11	
Boys	110	148	180	438
Girls	61	57	55	173
Total	171	205	235	612*
Mean Age	11.5	13.4	16.1	13.9

* One student did not indicate gender

There are numerous methods of identifying gifted students. "Each method … distinguishes a somewhat different group of children, with possibly different consequences for their self-concept and education" (Friedman and Rogers, 1998, p.4). In the present study affirmative answers to questions about participation in acceleration or extension programs for highly able students identified 367 students as 'gifted' (256 boys, 110 girls). These programs typically used methods of identification that included teacher, parent, peer and self-nomination, and standardised methods of assessment. Students who did not report being selected into such programs were classified as 'non-gifted' (245 - 182 boys, 63 girls).

Procedure

Participants completed the Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990), a questionnaire about participation in special programs, as well as other questionnaires, part of a broader study that is not be presented here.

The perfectionism questionnaire was labelled "Student Attitudes Scale" to minimise priming for perfectionism. The FMPS was administered prior to questions regarding special program participation, in case thinking about programs in which they have participated might prompt students to limit their responses to that particular context.

RESULTS

Means and standard deviations on the six original FMPS subscales were calculated for the current sample and found to be comparable to two other samples (Hawkins, Watt and Sinclair, 2000; Parker and Stumpf, 1995). Principal component analysis confirmed that a four-factor solution was superior to either six or five factor solutions of the data. The solution accounted for 51.33 per cent of the total variance. Consistent with other studies (Hawkins et al. 2000; Stöber, 1998), three items showed cross loadings (18, 16 and 10) and were deleted leaving 32 items. This four-factor solution closely replicated the solutions of other samples representing different cultures, ages, abilities and genders (Hawkins et al., 2000; Stöber, 1998; Stumpf and Parker, 2000). The four factors were Personal Standards (PS), Concern over Mistakes (CMD), Parental Expectations and Criticism (PEC) and Organisation (O). Subscale scores for these dimensions were calculated by summing subscale items. Means, standard deviations and Cronbach alpha coefficients are presented in Table 2.

Table 2. Descriptives and Alpha Coefficients for four new FMPS dimensions

	Subscales			
	CMD	**PEC**	**PS**	**O**
Mean	22.51	21.47	18.10	20.71
Standard Deviation	7.35	7.42	4.89	5.26
No. of items in subscale	11	9	6	6
Cronbach's α	0.82	0.86	0.79	0.88

Students' scores were converted to z-scores and a MANOVA was performed. The FMPS subscale z-scores (PEC, CMD, O and PS) were the dependent variables, while giftedness, year level and gender were the grouping variables. Pillai's Trace criterion was used to determine significance to ensure robustness of the technique where there were unequal group sizes (Tabachnick and Fidell, 1996). Significant multivariate main effects of giftedness, year level and gender were found. These were investigated further using univariate tests for each subscale separately. The results are presented in Table 3.

For giftedness there was a significant main effect on PS. Gifted students scored higher (mean z-score=0.20) than non-gifted students (mean z-score= -0.29). There were also two significant interaction effects on CMD and PEC separating gifted and non-gifted students. These are displayed in Figure 1. CMD and PEC both increased with year level for the gifted group from

below the general mean in Year 6 to above the general mean in Year 11. For the non-gifted group scores were lowest at Year 8.

Table 3. Univariate Results: Giftedness, Year Level and Gender effects

	FMPS Subscale	F	df	p- value
Main Effects				
Giftedness	PS	28.172	1,599	< 0.0001
Year Level	PEC	3.054	2,599	<0.05
Gender	O	5.868	1,599	<0.05
2-way Interactions				
Gifted x Year Level	PEC	5.683	2,599	<0.01
	CMD	3.997	2,599	<0.05
Gender x Year Level	PS	3.953	2,599	<0.05

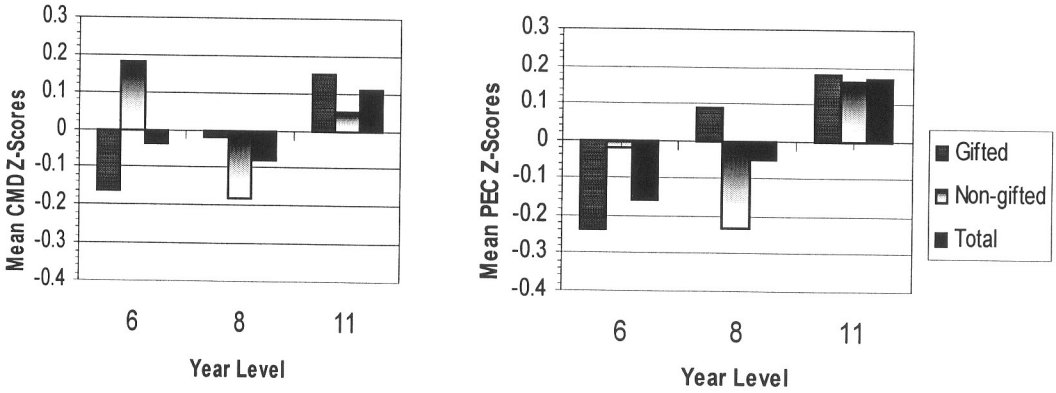

Figure 1. Year Level Differences in CMD (left) and PEC (right) for Gifted and Non-gifted Students

Perfectionist Profiles

K-Means cluster analysis was used to investigate whether the three-cluster solution reported by Parker (1997) would be identified in these data. Subscale z-scores were employed to ensure that subscales with more items did not carry a greater weight in the cluster analysis. The profile of scores for the three clusters is shown in Figure 2.

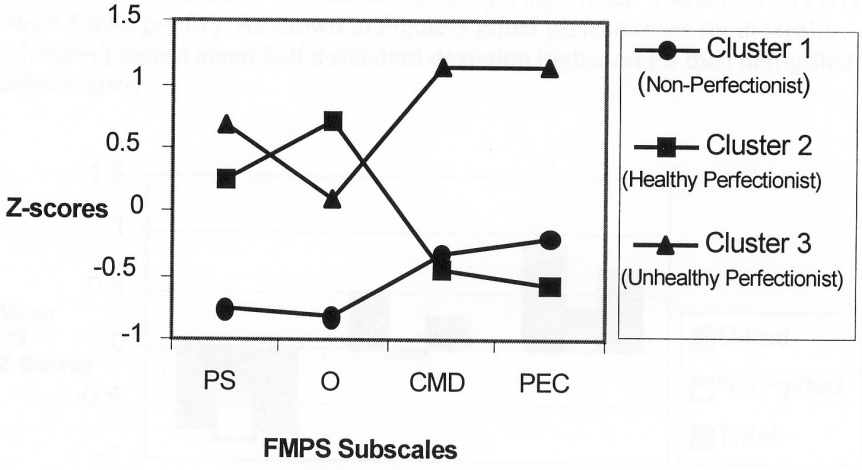

Figure 2. FMPS Subscale Z-scores for Non-Perfectionists, Healthy perfectionists and Unhealthy Perfectionists

Cluster 1 members (N=223) showed the lowest levels of PS and O identifying them as Non-perfectionists. Cluster 2 members (N=235) had the highest scores on O, above average scores on PS and low scores on CMD and PEC indicating a Healthy Perfectionists profile. Cluster 3

members (N=154) matched an Unhealthy Perfectionist profile having the highest scores on CMD and PEC. A MANOVA and follow-up univariate F-tests confirmed that the three subtypes were significantly different across the four FMPS subscales ($F_{(8, 1214)}$=194.015, p<0.001). Multiple planned comparisons (Bonferroni) showed significant differences between the three clusters on all four variables, except for clusters one and two on CMD. These results confirm the three perfectionism types reported by Parker (1997) and subsequent researchers (Hawkins et al., 2000; Parker and Mills, 1996; Rice and Mirzadeh, 2000).

Giftedness and perfectionism profiles

In order to explore the relationship of giftedness and perfectionism profiles, these data, including year level and gender variables, were subjected to a loglinear (model selection) procedure. Pooled chi-square tests revealed significant one way (Pearson $\chi^2_{(6)}$=173.331, p<0.0001) and two-way ($\chi^2_{(13)}$=27.008, p<0.05) effects. Only the effects related to exploring the association between giftedness and perfectionism profiles are described here.

The test for the overall association between giftedness and perfectionism profile was on the borderline of the 0.05 criterion of significance ($\chi^2_{(2)}$= 5.973, p=0.05). This was therefore explored further using Pearson chi-square tests and indicated that gifted students were less likely to be Non-Perfectionists than non-gifted students ($\chi^2_{(2)}$= 6.735, p<0.05). However, gifted students were no more likely than non-gifted students to be either Healthy or Unhealthy Perfectionists.

Multivariate analyses revealed a significant perfectionism profile by giftedness interaction across the four FMPS subscales ($F_{(8,1188)}$=2.235, p<0.05). Further analysis showed that this was accounted for by a significant interaction on PS ($F_{(2,596)}$=5.890, p<0.01). As shown in Figure 3 gifted perfectionists (both Healthy and Unhealthy) scored about half a standard deviation higher on PS than non-gifted perfectionists.

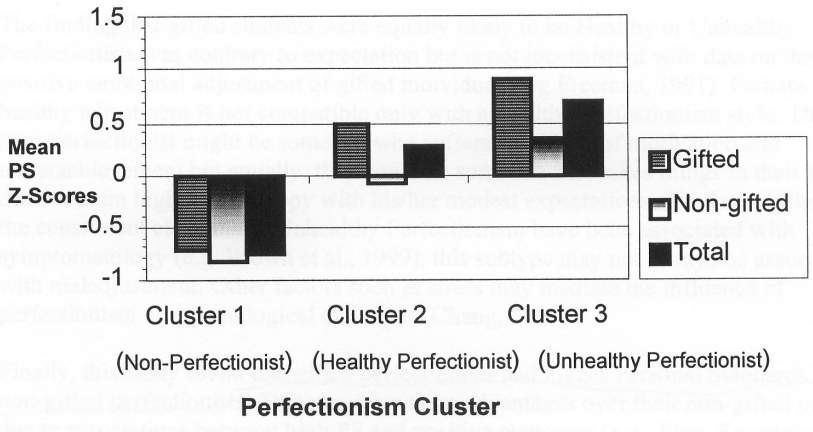

Figure 3. Giftedness and perfectionism profiles

DISCUSSION

The present study was designed to (i) identify the types of perfectionism observed in a sample of Australian school students, and (ii) to examine where gifted students fitted in the profiles of perfectionism. The hypothesis that gifted students would have higher PS than non-gifted students was supported, consistent with studies by LoCicero and Ashby (2000) and Roberts and Lovett (1994). Parker and Mills (1996) using a younger sample reported no significant differences. Participant age is unlikely to explain this inconsistency as PS scores did not increase with year level. Cultural factors might be important in these findings and need further exploration.

Gifted students also showed increased PEC scores with year level suggesting that gifted students may encounter greater parental pressure than non-gifted students to 'live up to' their abilities, pressures that are likely to increase with age. This may contribute to growing concerns about the implications of mistake making (Freeman, 1998), consistent with our finding that CMD increased with year level for gifted students. In non-gifted students, where PEC and CMD scores were lower at year eight than year six or eleven, results may reflect the curvilinear relationships between schooling level and psychosocial development found by other studies (Marsh, 1989). The finding suggests a need for future exploration of the relationship between ability and psychosocial development.

The study was able to replicate the perfectionism types reported in the literature (Hawkins et al., 2000; Parker and Mills, 1996; Rice and Mirzadeh, 2000). This is consistent with hypothesis that gifted students were more likely to be perfectionists than non-perfectionists. Parker and Mills (1996) found an even distribution of perfectionism types across ability groupings, a discrepancy which may be related to sample differences. They confined giftedness to those who performed highly on standardised tests. Our sample included those with talents that may have required high Personal Standards and Organisation for their discovery and development, for example, sport and music.

The finding that gifted students were equally likely to be Healthy or Unhealthy Perfectionists was contrary to expectation but is not inconsistent with data on the positive emotional adjustment of gifted individuals (Freeman, 1991). Perhaps healthy adjustment is not compatible only with a Healthy Perfectionism style. The Non-perfectionist might be someone who suffers from lack of motivation and underachievement but, equally, they could be someone who takes things in their stride, does not aim high, but is happy with his/her modest expectations. Similarly, although the constituent elements of Unhealthy Perfectionism have been associated with symptomatology (for example, Brown et al., 1999), this subtype may not always be associated with maladjustment. Other factors such as stress may mediate the influence of perfectionism on psychological outcomes (Chang, 2000).

Finally, this study found that gifted perfectionists had higher Personal Standards than non-gifted perfectionists. This may give them advantages over their non-gifted peers, due to associations between high PS and positive outcomes (for example, Flett, Sawatzky and Hewitt, 1995; Brown et al., 1999). For gifted Unhealthy Perfectionists, high PS might have different implications. In association with high CMD and PEC, high Personal Standards may contribute to greater distress, as it widens the gap between what the student aspires to achieve and what he/she perceives themselves as actually having achieved.

The current findings could be extended through further research. The finding of higher PS and greater membership of perfectionist types in gifted than non-gifted students requires replication, as insufficient studies have examined perfectionism and ability using a well-validated framework. Perfectionism's interaction with mediator variables such as stress, which may assist in the prediction of psychopathology or well-being, is also an area for fruitful research.

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