

The Relationship between Perfectionism and Academic Achievement, Depression and Anxiety

Hamidreza Roohafza, MD^{*}, Hamid Afshar, MD^{*}, Masoumeh Sadeghi, MD^{*}
 Bahram Soleymani, PhD^{**}, Alireza Saadaty, PhD^{***}
 Mohammad Matinpour, MD^{****}, Ghorbanali Asadollahi, MD^{*****}

(Received: 9 August 2009 ; Accepted: 14 July 2010)

Objective: In Iran few studies have investigated the association among the dimensions of perfectionism with the academic achievement and other psychopathologies, such as depression and anxiety. This study has investigated these relationships in an Iranian school-age sample.

Methods: Using multistage cluster random sampling, 793 students completed the questionnaire anonymously in the classroom in 2007. The positive and negative perfectionism scale, the Revised Children's Manifest Anxiety Scale, the Children's Depression Inventory, and term point average (academic achievement) were assessed. Data was analyzed with descriptive statistics and multiple linear regressions, using SPSS.

Results: Negative and positive perfectionisms were found to be positive and negative predictors, respectively, for depression ($p < 0.001$) and anxiety ($p < 0.001$) and conversely, negative and positive predictors for academic achievement, respectively ($p < 0.001$).

Conclusion: Distinguishing positive and negative aspects of perfectionism is important in understanding the implications of perfectionism on academic achievement. Our findings indicate that although we must take care of unhealthy and neurotic consequences of negative perfectionism, such as depression and anxiety, which may have negative effects on academic achievement, but positive striving for perfection can help the students to improve their academic achievement.

Declaration of interest: None.

Iranian Journal of Psychiatry and Behavioral Sciences (IJPBS), Volume 4, Number 2, Autumn and Winter 2010: 31-36.

Keywords: Academic Achievement • Anxiety • Depression • Perfectionism

Introduction

Perfectionism is usually regarded as a personality style defined as strenuous efforts for being flawless and setting high standards for performance, accompanied by critical evaluation of one's behavior (1). Although perfectionism has been recognized to have a positive effect on adjustment or achievement, it has been usually considered as a neurotic tendency closely

associated with psychopathology (2). Hamachek proposed two types of perfectionism: a positive type that he named as "normal perfectionism" and a negative type that he labeled as "neurotic perfectionism" (3). While the excessive evaluative concerns and struggling for perfection are accompanied by pleasure in normal perfectionism, they are unpleasant in neurotic perfectionism. Today, a vast body of evidence has accumulated confirming that two basic forms of perfectionism can be distinguished (4). In a study about adaptive and maladaptive perfectionism, maladaptive perfectionists reported higher levels of psychological distress such as depression and anxiety, whereas adaptive perfectionists reported higher self-esteem than the other group (5).

In one study, Hewitt et al showed that perfectionism could be a moderator between insecure attachment and depressive mood. They have found that specific aspect of

Authors' affiliations : * Mental Health Department, Isfahan Cardiovascular Research Center, Isfahan University of Medical Sciences, ** Biostatistics and Epidemiology Department, School of Health, Isfahan University of Medical Sciences, *** Social Services & Health Care System, State Welfare Organization, **** COX Institute of Research and Development in Biomedical Sciences, Isfahan, ***** Department of psychiatry, Isfahan University of Medical Sciences.

• **Corresponding author :** Hamidreza Roohafza, MD, Assistant Professor of Psychiatry, Isfahan Cardiovascular Research Center, Isfahan University of Medical Sciences, Isfahan, IRAN.
 Tel : +98 311 3359797
 Fax : +98 311 3373435
 E-mail: roohafza@crc.mui.ac.ir

perfectionism (e.g., pressure from others to be perfect) interfered with stress condition (e.g., major life event) for prediction of increased depressive complain or negative affect. That is, greater depression or negative affect was reported by participants with higher combined levels of perfectionism and perceived stress (6).

Perfectionism has been reported to be related to academic achievement, so that college students with higher levels of positive perfectionism received higher scores in a mid-term exam than those with lower levels of positive perfectionism (7,8). A study on school students found that perfectionistic concerns which are the core facet of negative perfectionism were related to higher depression, while perfectionistic strivings which are the main aspect of positive perfectionism were related to a preference for challenging tasks, and higher grade point average (9,10). But there are not enough evidences to show that perfectionism and academic achievement may be mediated by factors such as depression and anxiety.

In a study on 121 student in ninth-grade that have completed questionnaire about perfectionism at school, perceived parental pressure to be perfect, motivation, academic achievement, and well-being. Results showed that negative perfectionism was related to fear of failure, somatic symptoms, and depression; and perceived parental pressure was related to somatic symptoms. In other hand, positive perfectionism was correlated with hope of success, motivation, and academic achievement. Positive perfectionism showed a negative relation with depressive symptoms. The findings show that positive perfectionism in students is associated with positive characteristics and thus may form part of a healthy pursuit of excellence. Negative reactions to imperfection and perceived parental pressure to be perfect, however, are associated with negative characteristics and thus may challenge adolescents' motivation and well-being (11).

The present study included an exploratory analysis of the relationship between negative and positive perfectionisms with depression, anxiety, and academic achievement in Iranian boys and girls' student.

Materials and Methods

Participants

The study sample was comprised of guidance (grades 6-8) and high (grades 9-12) schools students studying in private, public, and talented-students schools of the urban and rural areas of the Isfahan County of Iran in 2007. We used multistage cluster random sampling to stratify the study population by type of school (private, public, or talented-students schools) and number of students, according to the data from Isfahan Office of Education (based on educational districts). These data also included personal and academic data of students in all five educational districts of the city. Approximately 5 percent of students were randomly selected from these clusters. The total number of students was determined according to their gender and grade to the entire population of the students. In Iran, each of guidance and high schools has three grades. The sample size was calculated as 395 for each gender and then distributed into different grades.

Approvals were made with the ethical committee of the provincial University of Medical Sciences. All the students and their parents completed consent forms before participation. The students filled the questionnaires out during the class time, under supervision of their teachers.

Measures

The questionnaire we used included five parts: demographic characteristics, School Achievement, Children's Depression Inventory, Revised Children's Manifest Anxiety Scale, and The Positive and Negative Perfectionism Scale. Demographic characteristics included age, sex, number of the household, educational level of the child (primary vs. guidance school), father's job (unemployed, salaried employee, self-employed, or retired), mother's job (housewife, salaried employee, or retired), and the parents' educational level (0-5y, 6-12y, or >12y).

School achievement

In Iranian education system, each academic year includes two terms. At the end of every

term, final exams are taken and a Term point average (TPA) is calculated on a 20 scale. Finally, an annual Grade point average (GPA) is reported which is the mean of the grade points of the two terms in that academic year. To measure school achievement, the participants reported the point average they had received on their last term. To check the authenticity of reports, the questionnaires were compared with the academic documents of school archives.

Children's Depression Inventory (CDI)

The CDI is a 27-item self-report measure designed to assess cognitive, behavioral, and affective symptoms of depression (12). The CDI takes about 15 min to be filled in. Each item consists of three statements of different severity (scored 0–2) and the child is required to choose one statement that best describes him or her. Scores range from 0 to 54, with higher scores indicating more depressive symptoms. The CDI is the most widely used measure of depression in Iranian children, with good support for its reliability and validity (13).

Revised Children's Manifest Anxiety Scale (RCMAS)

The RCMAS is a self-report measure revised by Reynolds and Richmond (14). The original questionnaire, the Children's Manifest Anxiety Scales (CMAS) had been developed by Castenda et al (15). The RCMAS consists of 28 items that assesses anxiety. The questionnaire gives a global score with yes/no answers and the score ranges from 0 to 28 and higher scores indicate more anxiety. The questionnaire is reported to have acceptable reliability and validity (15).

The Positive and Negative Perfectionism Scale (PNP)

The PNP scale assesses perfectionism from a functional or behaviorist perspective (4). There are two subscales that represent the person's different experiences in the fields of positive and negative perfectionism which have been treated as resulting from linking positive and negative reinforcements with perfectionistic behaviors.

The PNP consists of 40 Likert-scale questions, with responses ranging from "strongly disagree" (=1), to "strongly agree" (=5). Scores were obtained by summing responses to the 18 questions representing positive perfectionism and the 22 questions depicting negative perfectionism. Cronbach's alphas for the positive and negative perfectionism scales have been reported as 0.89 and 0.86, respectively (16).

Data analysis

Descriptive analysis of data was done using SPSS statistical software for Windows, version 11.5 (SPSS Inc, Chicago, IL). The results has been reported as mean \pm SD for continuous variables and percentages for categorical ones.

A multiple linear regression analysis applying entire procedure was performed to find the perfectionism related variables which are independently associated with depression, anxiety, and TPA. The dependent variables were depression and anxiety scores and TPA. The independent variables were negative and positive perfectionism, age, and sex. $P \leq 0.05$ considered statistically significant, using two-sided tests.

Results

Table 1 shows the distribution of participants' demographic characteristics. Three hundred and ninety four boys (49.8%) and 399 girls (50.2%) participated in this study from which 34.5% were from guidance and the rest of them were from high schools. Mean age of studied student's was 14.58 ± 1.65 . The means, standard deviations, and alpha coefficients for two dimensions of perfectionism, anxiety, and depression were calculated and are presented in table 1. All scales had adequate reliabilities.

To better determine to what extent negative and positive perfectionism and academic achievement have contributed uniquely to each of the psychopathological measures, three regression equations were constructed (with age and sex adjust). These results are depicted in table 2. Negative perfectionism predicted depression and anxiety positively and significantly. Also, positive perfectionism

was a negative and significant predictor for any of these psychopathological measures. However, in the case of academic achievement, negative and positive perfectionism were negative and positive predictors, respectively.

Table 1: Characteristics of the study population

Continues variables	Mean	SD	Cronbach's Alpha
Age	14.58	1.65	
Term point average	17.60	2.19	
Negative perfectionism score	63.10	10.24	0.85
Positive perfectionism score	82.96	11.78	0.87
Depression score	12.34	5.84	0.91
Anxiety score	14.40	6.85	0.79
Categorical variables	N	%	
Sex			
Boy	394	49.8	
Girl	399	50.2	
Educational level			
Guidance school	273	34.4	
High school	520	65.6	
Educational level (mother)			
0-5y	221	27.9	
6-12y	400	50.4	
12< y	172	21.7	
Educational level (father)			
0-5y	153	19.2	
6-12y	404	51.0	
12< y	236	29.8	

Table 2: Regression equations using negative and positive perfectionism scores to predict depression, anxiety, and term point average

Depression			
Variable	β	T	p value
Negative perfectionism score	0.59	17.82	0.001
Positive perfectionism score	-0.38	-11.30	0.001
Age	0.10	2.19	0.03
Sex(girl)	0.03	0.83	0.41
Adjusted R ₂	0.31		
Anxiety			
Variable	β	T	p value
Negative perfectionism score	0.58	17.01	0.001
Positive perfectionism score	-0.28	-8.17	0.001
Age	0.08	1.67	0.05
Sex(girl)	0.05	1.13	0.13
Adjusted R ₂	0.28		
Term point average			
Variable	β	T	p value
Negative perfectionism score	-0.14	-3.78	0.001
Positive perfectionism score	0.20	5.46	0.001
Age	-0.27	-5.19	0.001
Sex (girl)	0.39	10.49	0.001
Adjusted R ₂	0.25		

Discussion

The results of our study show that negative perfectionism can be a positive predictor for depression and anxiety. Conversely, positive perfectionism can negatively predict anxiety and depression. However, in the case of academic achievement, negative and positive perfectionisms are negative and positive predictors, respectively. Aging may increase the possibility of anxiety and depression, but

it attenuates the academic achievement.

Perfectionistic tendencies in the school students may be maintained by a number of factors such as unrealistic models in the popular culture and the emphasis placed on achievement in the educational system (17). However, not all aspects of perfectionism are unhealthy, neurotic, or maladaptive causing psychopathology. On the contrary, striving for perfection can form part of a healthy pursuit of excellence and may be adaptive in achievement states, where perfectionistic strivings could provide students with additional motivation to do their best and thus achieve better grades (11). There were some important differences between positive and negative perfectionism; positive perfectionism was associated with fewer negative outcomes for achievement situation (7).

In regard to the relationship between perfectionism with depression, anxiety and academic achievement, our results are in agreement with the results of Accordino et al. study which indicates that positive perfectionism is significant positive predictor of academic achievement and negatively predict anxiety and depression. They reveal that any increase in students' positive perfectionism scores is associated with decrease in their depression levels, as well as increase in their self-esteems (11). Also, in another study, they have found that incongruity between performance and negative perfectionism was related to higher depression and anxiety levels in school students (10). Symptoms of depression in adolescents, such as impaired concentration, loss of interest, poor initiative, psychomotor retardation, low self-esteem, sense of worthlessness, and social withdrawal may significantly disturb cognitive performance and diminish academic achievement (18).

However, Stoeber et al. found that perfectionistic striving was related to self-reported motivation for the upcoming exams and number of hours spent studying per week (19). They showed that positive perfectionism was related to mastery orientation, work orientation, and higher grade point average (10), whereas negative perfectionism was unrelated to motivation and engagement, but showed significant correlations with stress,

depression, and anxiety (11). These results show the relationship between perfectionism dimensions with academic achievement and are in agreement with our result.

Of course, our study had some limitations. This study relied exclusively on self-report questionnaires to assess depression, anxiety, and perfectionism which need to be more investigated. In addition, studying the parents' expectations and their pressure -from the students' point of view- may help us to learn more about perfectionism and its relation with academic achievement.

Conclusion

Positive perfectionism is negatively associated with anxiety and depression, whereas negative perfectionism is related to anxiety and depression and are negative predictors of academic achievement. Moreover, Positive perfectionism was related to higher achievement as reflected in higher academic point grades. Our findings support this idea that although we must take care of unhealthy and neurotic consequences of negative perfectionism, but positive striving for perfection can help the students to improve their academic position and avoid failure and low well-being situations (20).

Acknowledgments

The study presented in this paper was funded by the Isfahan Behavioral Sciences Research Centre. The authors would like to thank Dr. Jalil Shoahasani, Dr. Ahmad Abedi and Reza Jafariharand who helped in performing this study. We are indebted to Hasti Roohafza for her kind cooperation to draft this manuscript.

References

1. Hewitt PL, Flett GL. Perfectionism in the self and social contexts: Conception, assessment, and association with psychopathology. *J Pers Soc Psychol* 1991; 60: 456-70.

2. Onwuegbuzie AJ, Daley CE. Perfectionism and statistics anxiety. *Pers Individ Dif* 1999; 26: 1089-102.
3. Hamachek D. Psychodynamics of normal and neurotic perfectionism. *Psychology* 1978; 15: 27-33.
4. Terry-Short L, Owens R, Slade P, Dewey M. Positive and negative perfectionism. *Pers Individ Dif* 1995; 18: 663-8.
5. Grzegorek JL, Slaney R B, Franze S, Rice KG. Self-criticism, dependency, self-esteem, and grade point average satisfaction among clusters of perfectionists and nonperfectionists. *J Couns Psychol* 2004; 51: 192-200.
6. Hewitt PL, Flett GL. Perfectionism and stress processes in psychopathology. In: Flett GL, Hewitt PL, editors. *Perfectionism: Theory, research, and treatment*. Washington, DC: American Psychological Association; 2002. p. 255-84.
7. Bieling PJ, Israeli A, Smith J, Antony MM. Making the grade: the behavioral consequences of perfectionism in the classroom. *Pers Individ Dif* 2003; 35: 163-78.
8. Slaney RB, Rice KG, Mobley M., Trippi J, Ashby JS. The Revised Almost Perfect Scale. *Meas Eval Counsel Dev* 2001; 34: 130-45.
9. Fedewa BA, Burns LR, Gomez AA. Positive and negative perfectionism and the shame/guilt distinction: adaptive and maladaptive characteristics. *Pers Individ Dif* 2005; 38: 1609-19.
10. Accordino DB, Accordino MP, Slaney RB. An investigation of perfectionism, mental health, achievement, and achievement motivation in adolescents. *Psychol Sch* 2000; 37: 535-45.
11. Stoeber J, Rambow A. Perfectionism in adolescent school students: Relations with motivation, achievement, and well-being. *Pers Individ Dif* 2007; 42: 1379-89.
12. Kovacs M. *Children's depression inventory (CDI) manual, multi-health systems*. North Tonawanda, NY; 1992.
13. Abdollahian E, Yazdani Farabi Sh, Amiri Moghadam R. [Prevalence of depression among primary school children in

- Mashhad.] Andisheh va Raftar 2002; 28: 42-8. Persian.
14. Reynolds C, Richmond B. What I think and feel: A revised measure of children's manifest anxiety. *J Abnorm Child Psychol* 1978; 6: 271-80.
 15. Casteneda A, Palermo DS, McCandless BR. Complex learning and performance as a function of anxiety in children and task difficulty. *Child Dev* 1965; 27: 327-32.
 16. Besharat MA. Evaluating psychometric properties of Farsi version of the Positive and negative perfectionism scale. *Psychol rep* 2005; 97: 33-42.
 17. Kawamura KY, Frost RO, Harmatz MG. The relationship of perceived parenting styles to perfectionism. *Pers Individ Dif* 2002; 32: 317-27.
 18. Fröjd SA, Nissinen ES, Pelkonen MU, Marttunen MJ, Koivisto AM, Kaltiala-Heino R. Depression and school performance in middle adolescent boys and girls. *J Adolesc* 2008; 31: 485-98.
 19. Stoeber J, Otto K. Positive conceptions of perfectionism: approaches, evidence, challenges. *Pers Soc Psychol Rev* 2006; 10: 295-319.
 20. Shafran, R, Cooper Z, Fairburn CG. Clinical perfectionism: a cognitive-behavioural analysis. *Behav Res Ther* 2002; 40: 773-91