

The Child-Adolescent Perfectionism Scale:
Development, Validation, and Association With Adjustment

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Abstract

Existing measures of perfectionism in children suffer from several inherent limitations. In the present paper, we describe the development and validation of the Child-Adolescent Perfectionism Scale (CAPS). The CAPS is a 22-item measure that assesses self-oriented perfectionism (i.e., high self standards) and socially prescribed perfectionism (i.e., the perception that others demand perfection). A series of four studies was conducted to confirm that the scale is multidimensional. In addition to attesting to the psychometric properties of the CAPS, these studies further revealed that the two dimensions are associated broadly with measures that reflect achievement tendencies, motivational orientations, and levels of personal and interpersonal adjustment. The results are discussed in terms of their implications for the assessment and conceptualization of perfectionism in children and adolescents.

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In the past few years, researchers have focused increasingly on the development of mental disorders by investigating the causes and correlates of adjustment problems in children and adolescents. A key issue within the extant literature has been the role of personality factors in the development of adjustment problems. Research with adolescents has examined the role of numerous variables, including such constructs as attributional style (Nolen-Hoeksema, Girgus, & Seligman, 1986; Seligman et al., 1984), and locus of control (McCauley, Mitchell, Burke, & Moss, 1988; Siegel & Griffin, 1984).

Overall, this research has significantly advanced our understanding of adjustment problems in children and adolescents. However, the existing literature is limited by the fact that many personality variables of potential importance have not been examined, in part due to the lack of suitable personality measures for children and adolescents. For instance, research in our laboratory has focused on individual differences in perfectionism in adults (see Hewitt & Flett, 1991b); attempts to study perfectionism in children have been hampered by the lack of appropriate perfectionism scales.

The purpose of the present paper is to describe the development and validation of a perfectionism measure for children and adolescents. Because perfectionism is a personality trait that should be present relatively early in life (Hollender, 1965), it follows that high levels of perfectionism should be present and detectable in some children. Indeed, examination of the developmental literature reveals numerous references to children and

adolescents with perfectionistic tendencies (e.g., Roedell, 1984; Siegler, 1988; Stephens, 1987) and DSM-III-R (American Psychiatric Association, 1987) lists perfectionism as a relevant factor in at least two disorders of childhood. Although perfectionism may have its positive aspects, perfectionism in children and adolescents is typically regarded as a negative or neurotic characteristic (e.g., Lo, 1969). The debilitating nature of this personality trait in children is underscored by the fact that perfectionism has been discussed with respect to such negative outcomes as pain (Liebman, 1978), suicide (Delisle, 1990; Stephens, 1987), anorexic tendencies (Faust, 1987; Heron & Leheup, 1984; Strober, 1980), school phobia (Atkinson, Quarrington, Cyr, & Atkinson, 1989), and chronic underachievement (Mandel & Marcus, 1988).

Past accounts of perfectionism in children have been primarily descriptive in nature. The relatively few empirical studies that have been conducted thus far have established that individual differences in perfectionism do exist in children and adolescents (e.g., Liebman, 1978; Siegler, 1988). Most published work to date has focused on a comparison of perfectionism in anorexic and normal adolescents (e.g., Garner, Olmstead, & Polivy, 1983; Heron & Leheup, 1984; Kiemle, Slade, & Dewey, 1987). This research has demonstrated that anorexic adolescents are characterized by high levels of perfectionism. Additional evidence of individual differences in perfectionism is provided by research on irrational beliefs (e.g., Hooper & Layne, 1983; Kassinove, Crici, & Tiegerman, 1977). This research has confirmed that only certain children have perfectionistic self-expectations. Finally, work with the Adelaide-Connors Parent Rating Scale has shown that a

compulsive form of perfectionism in children can be identified by parents and scores on this factor are correlated with symptoms such as sleeping difficulties, muscular tension, conduct problems, immaturity, and shyness in clinic-referred children (Glow, Glow, & White, 1987).

Although it has been established that differences in perfectionism can be detected, existing measures are inappropriate because they assess levels of perfectionism among children and adolescents in a relatively restricted manner. Current perfectionism measures for children and adolescents suffer from the same problems that previously plagued the perfectionism measures for adults. That is, they are limited in that they do not include essential aspects of the construct such as a motivational component (i.e., a decided need to be perfect; see Hewitt & Flett, 1990). Most importantly, there have been no attempts to examine perfectionism from a multidimensional perspective.

The importance of a multidimensional approach cannot be understated. Recent investigations of perfectionism in adults has demonstrated the benefits of distinguishing the personal and social components of trait levels of perfectionism (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1990; 1991b). For instance, research in our laboratory has focused on several dimensions including the distinction between self-oriented and socially prescribed perfectionism, as assessed by the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991b). Self-oriented perfectionism is the joint tendency to expect perfection from oneself and the motivation to attain perfectionistic standards. In contrast, socially prescribed perfectionism is the characterological perception that other people demand perfection from the self. The perceived imposition of perfectionistic expectancies on the self

involves an amotivational state of helplessness due to a sense of external control and the difficulty associated with meeting these standards. Research with the MPS has shown that self-oriented and socially prescribed perfectionism tend to be correlated positively in college student and psychiatric samples (Hewitt & Flett, 1991b; Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991). Although these dimensions are intercorrelated, factor analyses have confirmed that they are distinct dimensions (e.g., Hewitt et al., 1991) and they are associated differentially with a variety of measures (e.g., Flett, Hewitt, Blankstein, & Koledin, 1991; Hewitt & Flett, 1991a). For instance, only socially prescribed perfectionism is associated with a fear of negative evaluation and an external locus of control in adults (Hewitt & Flett, 1991b).

Not surprisingly, descriptions of young perfectionists include references to the social and personal aspects of perfectionism. As one example, Stephens (1987) described a female adolescent who attempted suicide. This adolescent appeared to exhibit high levels of both self-oriented and socially prescribed perfectionism:

My mother was a perfectionist and I have always tried to meet her

ideals. My room was always clean. But I was terribly depressed.

I had to be perfect even when I was depressed. I had to keep that rule--perfect. Of course, I never came close to what I expected. I was never able to give myself a pat on the back. I wasn't a good daughter. I never did anything right, never. On a scale of 1 to 10, I was a minus 17. (p. 114).

The above description is consistent with recent analyses of suicide and suicide intent that emphasize the role of impossibly high expectations that are derived from the self as well as from other people (Baumeister, 1990; Hewitt, Flett, & Turnbull-Donovan, in press).

Before researchers can explore the nature of perfectionism in children and adolescents, it is first necessary to create a multidimensional measure with acceptable psychometric properties. Given these observations, the purpose of the present paper is to outline the development, validation, and research application of a new measure entitled the Child-Adolescent Perfectionism Scale (CAPS). The CAPS is closely patterned after its adult equivalent, the MPS, and was designed to assess both self-oriented and socially prescribed perfectionism.

The development, validation, and research applications of the CAPS are outlined below in four separate studies. Study 1 examines the psychometric properties of the CAPS in a large sample of children and adolescents. The main purpose was to utilize factor analytic procedures to confirm the multidimensional nature of the instrument. Study 1 also includes information about reliability and reading level analyses. Study 2 and Study 3 were designed primarily to provide some evidence for the construct validity of the CAPS subscales. In addition, the criterion validity of the CAPS was examined in Study 3 by examining the link between perfectionism and measures involving anorexic eating attitudes and appearance self-esteem. Finally, in Study 4, we demonstrate the usefulness of the CAPS dimensions as indices of adjustment problems in adolescents.

As noted above, the main purpose of Study 1 was to establish the multidimensionality of the CAPS inventory. In addition, the procedures used to develop the scale content are described and additional psychometric evidence is reported.

Method

Subjects

Sample One

The first sample consisted of a random sample of school children from the Toronto area. In total, a sample of 247 children and adolescents (112 boys, 135 girls) participated in this study. Subjects ranged from grade three to grade twelve. The mean age of the subjects was 13.28 years ($SD = 3.23$).

Sample Two

The temporal consistency of the CAPS subscales was examined by administering the scale to a group of subjects on two separate occasions separated by a five week interval. A total of 39 children were recruited from a rural school for participation in a study of perfectionism in children and their parents that is reported elsewhere. The children were 11 years old or older. The mean age of the subjects was 13.53 years ($SD = 2.08$).

Procedure

The subjects in sample one completed the 31-item version of the CAPS, along with a variety of other measures. The subjects in sample two completed

a shortened 24-item version of the CAPS. The derivation of these versions is described below. Results pertaining solely to the CAPS will be reported in the present paper.

Subjects were asked to make five-point ratings of the various items. The five response options were "False--Not at all true of me," "Mostly false," "Neither true nor false," "Mostly true," and "Very true of me." Some of the items were worded in the reverse-direction but were reverse-keyed so that high scores on the CAPS items reflected higher perfectionism.

Results

Development and Refinement of the CAPS

Initially, the authors created an item pool of 60 items. These items were based on descriptions of perfectionists in terms of self-oriented and socially prescribed perfectionism, as well as re-wording of certain items from the adult version, the MPS. The items were then rated on seven-point scales by a pool of five graduate students. The items were rated in terms of their relevance, clarity of wording, and susceptibility to social desirability bias following a brief lecture on the characteristics of appropriate items. These ratings were used to reduce the item pool to 31 items (17 self-oriented items and 14 socially prescribed items).

Factor Analysis Results

A factor analysis was conducted on the item responses that the 247 subjects gave to the 31 item version. First, however, the items were reduced to 24 items by examining the frequencies of endorsements, as suggested by Jackson (1970). A principal-components factor analysis was next performed on

the individual item correlation matrix (with unities in the diagonal) to investigate the number of factors to extract. This analysis with the responses to the 24 items yielded five factors with eigenvalues exceeding unity, Kaiser's (1960) criterion for determining significant factors. However, Cattell (1966) observed that this criterion is often inconsistent due to differences in the number of variables being factored. Cattell proposed the scree test as an alternative method of determining the number of factors to retain. An examination of the plot of eigenvalues revealed that the scree appears to begin at the third factor which suggests that two factors should be retained (see Cattell and Jaspars, 1967).

The data were re-analyzed by specifying a two-factor solution with varimax rotation. The significant factor loadings are shown in Table 1. The estimate of standard error method was used in determining the statistical significance of factor loadings (Harman, 1976). A value of .350 was adopted as the criterion since a loading of this magnitude was found to represent statistical significance in the present sample at approximately the $p < .001$ level.

Insert Table 1 about here

The results provided general evidence of the factorial validity of the CAPS. The first factor accounted for 28.7% of the variance. Inspection of the individual items indicated that this factor closely resembled socially prescribed perfectionism. Ten items reflecting socially prescribed perfectionism and three items reflecting self-oriented perfectionism loaded

significantly on this factor. The latter three items also loaded significantly on the second factor, and this factor accounted for 12.2% of the variance. This factor represented self-oriented perfectionism in that it consisted of 12 items reflecting self-oriented perfectionism. No items reflecting socially prescribed perfectionism loaded significantly on this factor.

Additional Psychometric Analyses

On the basis of the factor analytic results, it was decided to reduce the scale to 22 items, with 12 items reflecting self-oriented perfectionism and 10 items reflecting socially prescribed perfectionism. Additional psychometric analyses were then performed on the responses to these 22 CAPS items. The internal consistency of each scale was assessed and it was established that the scales had adequate internal consistency for measures in the preliminary stages of development (Nunnally, 1978). The alpha coefficient (Cronbach, 1951) for the self-oriented scale was .85. The item-total correlations ranged from .36 to .76. The alpha coefficient for the CAPS socially prescribed perfectionism scale was .81. The item total correlations ranged from .28 to .59.

Analyses of variance found no gender difference for self-oriented perfectionism, $F(1, 245) = 0.57$, ns, but there was a significant gender difference for socially prescribed perfectionism, $F(1, 245) = 5.85$, $p < .05$, with boys reporting higher levels of socially prescribed perfectionism. The relevant means are displayed in Table 2 for the purpose of establishing norms.

Insert Table 2 about here

Finally, the correlations between the two subscales were computed. Significant associations were obtained when the measures were correlated with the data from the total sample, $r(245) = .44, p < .01$. Separate analyses by gender found greater overlap between the subscales for girls, $r(245) = .58, p < .01$, than for boys, $r(245) = .29, p < .01$.

Test-Retest Reliability

The test-retest correlations were computed for the subset of 39 children and adolescents who completed the CAPS on two separate occasions separated by five weeks. Evidence of the stability of each measure was obtained. The test-retest correlation was $r = .74, p < .01$, for self-oriented perfectionism and the test-retest correlation was $r = .66, p < .01$, for socially prescribed perfectionism.

Reading Level Analyses

Items were written with a simple sentence structure when the CAPS was constructed. Standard formulae (e.g., Flesch, 1979; Gunning, 1952) for reading level analyses confirmed that the measure was suitable for both children and adolescents. Both formulae indicated that a grade three reading level is required in order to comprehend the CAPS items.

Discussion

Overall, the results of Study 1 provided strong support for the psychometric properties of the CAPS. The data confirmed that individual differences in perfectionism do exist among children and these differences may be detected in a reliable and valid fashion. The factorial validity of the CAPS was supported by the factor analyses that revealed the presence of two

factors resembling self-oriented perfectionism and socially prescribed perfectionism. The only possible problem involved the finding that three items designed to tap self-oriented perfectionism loaded complexly on both perfectionism factors. This outcome could reflect a greater overlap between these dimensions in children as opposed to adults. Alternatively, it could simply reflect the procedures used to develop the CAPS. Whereas the items on the MPS were selected to minimize the overlap between subscales (see Hewitt & Flett, 1991b), this decision was arbitrary. Self-oriented items that loaded on both factors were retained on the CAPS because of their face validity and because they seem to tap relevant perfectionism content.

Examination of the association between the two dimensions indicated the self and social dimensions are more highly intercorrelated among girls. The greater overlap for girls may be due to the fact that a concern with social evaluation and extrinsic sources of motivation may be more central to the self-concepts and self-evaluative standards of girls than boys (Boggiano & Barrett, 1992). Although socially prescribed perfectionism may be more relevant for girls, comparisons of mean levels of perfectionism by gender revealed that boys reported higher mean levels of socially prescribed perfectionism, but the two groups did not differ significantly in terms of levels of socially prescribed perfectionism. The higher levels of socially prescribed perfectionism reported by boys is consistent with investigations of socialization practices which show that authority figures place greater achievement demands on boys (Block, 1983; Parsons, Adler, & Kaczala, 1982). Although speculative, it is possible that the smaller correlation between perfectionism dimensions for boys may indicate that boys are more likely than

girls to rebel and adopt their own standards rather than other people's standards. Whatever the case, it does appear that gender differences do exist in perfectionism and it is evident that future research needs to clarify the nature of these gender differences.

Study 2

Hewitt and Flett (1991b) stated that an important distinction between self-oriented and socially prescribed perfectionism is the link between these dimensions and motivational orientations. Whereas socially prescribed perfectionism is an amotivational state that is associated with feelings of learned helplessness and an ego orientation, self-oriented perfectionism is associated jointly with elements of self-determination and ego orientation. In terms of achievement situations, self-oriented perfectionism should be associated with greater effort and enjoyment in the learning process, given that self-oriented perfectionism includes a focus on self-determination and effort and enjoyment are two components that reflect intrinsic motivation (see Reeve, 1989). Several authors have called attention to the perfectionistic tendencies exhibited by individuals who are high in achievement and intrinsic motivation (e.g., Kaiser & Berndt, 1985; Pacht, 1984; Stipek & Hoffman, 1980).

At present, few studies have examined the positive aspects of the perfectionism construct. In light of the observations outlined above, the first goal of Study 2 was to provide some initial data on the link between dimensions of perfectionism and self-reported levels of school enjoyment and effort. A sample of high school students completed the CAPS and measures of enjoyment and effort (see Ryan & Connell, 1989). It was expected that

positive correlations would be present between self-oriented perfectionism and indices of effort and enjoyment.

A related goal of Study 2 was to obtain a broader understanding of the perfectionism construct in children and adolescents by examining CAPS scores and students' specific reasons for their academic behavior, in addition to their general locus of control. Research on perfectionism in adults suggests that the locus of causality is another factor that differentiates the perfectionism dimensions. Socially prescribed perfectionism is associated with an external locus of control, while self-oriented perfectionism is more under personal control (Hewitt & Flett, 1991b). Recently, Ryan and Connell (1989) tested a model of locus of causality that views the autonomy dimension as a gradient involving external versus internal reasons for behavior. The four levels of the gradient are external reasons for action, introjected reasons for action, actions stemming from identification, and intrinsic reasons for action. These reasons are described below.

According to Ryan and Connell, external reasons for behaviors include fear of punishment and the desire to appease an external authority. Introjection reasons reflect "...internal, esteem-based pressures to act, such as avoidance of guilt and shame or concerns about self- and other-approval" (p. 750). More generally, introjection is viewed as a defense mechanism that involves the incorporation of other people's standards into self-standards. External reasons and introjection may be relevant to an understanding of perfectionism in light of evidence that adolescents who believe that they should be perfect also tend to have a high scores on measures reflecting a concern with approval (Robin, Koepke, & Moye, 1990).

In contrast to external reasons and introjection, identification is more autonomous and involves actions that stem primarily from personal goals and values. Finally, intrinsically motivated behaviors are performed simply because the behavior is fun and enjoyable. Ryan and Connell (1989) confirmed the presence of the autonomy gradient by analyzing the reasons for academic and social behaviors. They further demonstrated that the presence of external and introjected reasons for behavior predicted negative outcomes such as anxiety and denial, while identification and intrinsic reasons were more closely linked with positive outcomes, such as achievement effort and enjoyment.

It was expected that a detailed analysis of levels of perfectionism and reasons for academic behavior that vary in degree of autonomy would provide insight into the nature of the perfectionism construct. We decided to focus on the reasons behind academic behaviors rather than social behaviors because perfectionism is typically regarded as an achievement-based construct, even though the standards may be social in nature (i.e., socially prescribed perfectionism). We expected to find that self-oriented perfectionism would be associated with self-oriented reasons for behavior, such as identification with personal goals and intrinsic interest. In contrast, it was expected that socially prescribed perfectionism should be distinguished by an association with external reasons reflecting the avoidance of punitive reactions from others and introjection for reasons of social approval. This pattern of findings would be consistent with research on college students showing that socially prescribed perfectionism, but not self-oriented perfectionism was

associated with a fear of negative evaluation and a strong desire for social approval (Hewitt & Flett, 1991b).

The final goal of Study 2 was to obtain some additional evidence of the concurrent and discriminant validity of the two CAPS subscales. The validity of the CAPS was assessed by utilizing a modified version of the Ryan and Connell (1989) survey of reasons for academic behavior. In addition to responding to reasons involving intrinsic versus extrinsic factors, subjects were asked to indicate whether the behavior was performed because they wanted to be perfect (ie. self-oriented perfectionism) or their parents wanted them to be perfect (ie., socially prescribed perfectionism). Evidence for discriminant and concurrent validity would be present if the personal desire for perfection in academic tasks was correlated primarily with self-oriented perfectionism whereas the social reasons for perfection were correlated mostly with socially prescribed perfectionism.

Regarding the social reasons for perfection, it should be noted that separate responses were obtained for socially prescribed perfectionism originating from the mother versus the father. In a recent study with college students, Frost, Lahart, and Rosenblate (1991) obtained evidence suggesting that perceived exposure to a demanding mother rather than a demanding father may be the critical factor in the development of perfectionism. Unfortunately, these findings were limited by the fact that male subjects were not included in the Frost et al. (1991) study. In the present study, we expected that adolescents with high levels of socially prescribed perfectionism would report that they did their work because both parents expected them to be perfect.

Method

Subjects

The subjects were 98 students (49 boys, 49 girls) from two secondary schools in Toronto. The mean age of the subjects was 16.63 years ($SD = 1.03$).

All subjects were required to receive parental consent and to sign individual consent forms in order to participate in the study.

Materials and Procedure

Participation was voluntary and subjects were selected randomly for inclusion in the study. In addition to the CAPS, subjects were administered the following measures in a random order:

Academic Reasons Survey (ARS). As noted above, the ARS was adapted from Ryan and Connell. Subjects are provided with four probe questions (e.g., Why do you do your homework? Why do you work on your classwork? Why do you try hard to answer questions in class? Why do you try to do well in school?). Respondents are provided with various reasons reflecting intrinsic factors (e.g., Because it's fun. Because I enjoy it), identification (e.g., Because I want to understand the subject. To find out if I'm right or wrong), introjection (e.g., Because I want the teacher to think I'm a good student. Because I will feel bad about myself if I don't), and external factors (e.g., Because I'll get in trouble if I don't. Because that's the rule). Response options range from "not at all true" to "very true." The three additional reasons for each probe question were "Because I want to be perfect", "Because my mother expects me to be perfect", and "Because my father expects me to be perfect."

Nowicki-Strickland Locus of Control Scale (NSLCS; Nowicki & Strickland, 1973) is a 21-item measure of general beliefs about whether the locus of control is internal to the self or external to factors in the environment. Extensive evidence indicates that the measure is reliable and valid (Nowicki & Strickland, 1973).

Enjoyment Scale. The measure of school enjoyment were three items employed by Ryan and Connell (1989). Subjects make four-point ratings of items such as "I enjoy doing my classwork." Ryan and Connell reported that the internal consistency of the three item measure was .74

Effort Rating. The effort measure was the one-item index (i.e., I try very hard to do well in school) that was also used by Ryan and Connell (1989).

Results

Perfectionism and School Enjoyment

Pearson product-moment correlations were computed between the CAPS perfectionism measures and the measures of school enjoyment and school effort.

The results are displayed in Table 3 for the total sample, boys, and girls. Consistent with expectations, both self-oriented perfectionism in the total sample was correlated positively with both school effort and school enjoyment.

Greater effort was also associated with socially prescribed perfectionism, but there was no link between socially prescribed perfectionism and school enjoyment.

Insert Table 3 about here

Perfectionism and Autonomy-Related Reasons For Achievement Behavior

The correlations between the CAPS dimensions and the reasons for achievement behavior are also displayed in Table 3. Self-oriented perfectionism was associated with reasons involving identification, intrinsic factors, and introjection for boys with the largest correlations involving the introjection and intrinsic factors. The pattern of correlations was similar but not identical for girls: In addition to correlations with the identification, intrinsic, and introjection factors, self-oriented perfectionism was also correlated significantly with the external factor. Once again, the most striking correlation was between self-oriented perfectionism and introjection.

Similar analyses showed that socially prescribed perfectionism was associated with introjection and an external locus of control for both boys and girls. In addition, the link between socially prescribed perfectionism and external reasons was significant for girls.

Concurrent and Discriminant Validity

The concurrent and discriminant validity of the two CAPS dimensions were indicated by correlational analyses that examined the specific reasons for achievement behavior that involved perfectionism (i.e., personal desires for perfectionism, mother's desire for perfection, and father's desire for perfection). The results are shown in Table 4. As expected, self-oriented perfectionism was correlated highly with the personal desire for perfection and a smaller but significant correlation was also obtained between the CAPS self-oriented perfectionism measure and the mother's desire for perfection. The correlation involving the father's desire for perfectionism approached, but did not attain, significance.

Examination of the correlations involving the CAPS measure of socially prescribed perfectionism also provided evidence of concurrent validity. Socially prescribed perfectionism was correlated significantly with the mother's desire for perfection and the father's desire for perfection. Socially prescribed perfectionism was also associated significantly with the self-desire for perfection. The same general pattern of correlations emerged when the analyses were conducted separately by gender (see Table 4).

As can be seen in the last column of Table 4, especially strong evidence of the CAPS' discriminant validity was obtained when partial correlations were computed (i.e., removing variance associated with the other perfectionism dimension). The first-order correlations showed a significant correlation between the CAPS self-oriented perfectionism subscale and self-desire for perfection, but the correlations between this CAPS dimension and the parents' desire for perfection were nonsignificant. Similarly, the partial correlations involving socially prescribed perfectionism showed that this dimension was no longer correlated significant with the personal desire for perfection in school, but there were substantial correlations with the parents' desire for perfection.

Insert Table 4 about here

Discussion

The results of Study 2 were generally consistent with expectations. For instance, the analyses of school enjoyment confirmed that self-oriented perfectionists were especially likely to report higher levels of school

enjoyment and effort. Adolescents with high self-standards appear especially likely to exhibit higher levels of motivation and self-determination in a manner suggesting that they are learning oriented and primarily interested in self-improvement.

The second goal of this study was to examine some of the reasons behind perfectionistic tendencies by adopting a framework developed by Ryan and Connell (1989). They stated that academic behavior could stem from autonomous factors involving self-direction or factors external to the self. Overall, the results indicated that introjection was the factor that motivated academic behavior for adolescent with high levels of self-oriented perfectionism and socially prescribed perfectionism. To reiterate, behaviors reflect introjection if they are performed to obtain approval from the self or others.

People use introjection as a means of avoiding guilt and shame. The link between perfectionism and feelings of shame and guilt has often been described (see Driscoll, 1989; Hamachek, 1978), but it has seldom been empirically demonstrated. It appears that the need for approval is a pervasive aspect of the perfectionism construct.

Although both CAPS scales were correlated significantly with the introjection measure, additional findings in Study 2 highlight the distinction between the perfectionism dimensions. In addition to introjection, self-oriented perfectionism was correlated positively with identification and intrinsic reasons for academic behavior. In contrast, socially prescribed perfectionism was not correlated with intrinsic reasons but it was correlated positively with extrinsic reasons for behaviour. Overall, the pattern of findings indicates that self-oriented perfectionism is a complex dimension

that involves elements of both self-determination and an ego-related concern about obtaining the approval of self and others. In contrast, socially prescribed perfectionism consists primarily of an extrinsic focus on the evaluative reactions and control exhibited by others.

The final goal of this study was to examine the validity of the CAPS subscales by examining academic responses that could reflect a personal desire for perfection or parental demands for perfection. The results of the partial correlation analyses were especially helpful in terms of demonstrating the discriminant validity of the CAPS subscales. Partial correlations were computed by removing variance due to socially prescribed perfectionism and it was found that the CAPS self-oriented scale was correlated substantially with the personal desire for perfection, but is was unrelated to parental desires for perfection. Conversely, analyses controlling for self-oriented perfectionism found that socially prescribed perfectionism was correlated with parental desires for perfect academic behavior, but it was not associated with personal desire for perfection. These data highlight the fact that the two CAPS scales are not redundant with each other, even though they are intercorrelated to a significant degree.

Parenthetically, it should be noted that the findings with the parental measures of perfectionism did not vary substantially as a function of whether the perfectionistic demands were being imposed by the mother or the father, according to the reports of the subjects in this study. Thus, the current findings do not accord entirely with the findings of Frost et al. (1991) who concluded that perfectionism, at least in girls, stems primarily from the

parental demands expressed by the mother. Clearly, further research is needed on this important developmental issue.

Study 3

The results of the first two studies indicate that it is warranted to adopt a multidimensional approach to the study of perfectionism in children and adolescents, and the two CAPS dimensions appear to be reliable and valid.

In Study 3, we sought to obtain additional evidence of the CAPS' validity by administering the instrument along with a perfectionism subscale from a previously existing measure, the perfectionism subscale of the Eating Disorder Inventory (Garner et al., 1983). Perhaps more importantly, we sought to demonstrate the usefulness of the CAPS by relating it to outcomes involving eating and appearance. As noted above, perfectionism has been mentioned frequently as a contributing factor in eating disorders such as anorexia and bulimia. For instance, it has been shown recently that female adolescents with an eating disturbance, relative to asymptomatic subjects, report higher levels of perfectionism (Steiger, Leung, Peuntes, & Gottheil, 1992). The general role of perfectionism in eating disturbance is beyond dispute. However, it may be particularly important to distinguish the personal and social aspects of perfectionism in this area; numerous authors have observed that it is the restrictive cultural and societal pressures towards thinness that may be linked most closely the maladaptive dieting tendencies exhibited by many girls (Brownell, 1991; Garner, Garfinkel, Schwartz, & Thompson, 1980; Irving, 1990; McCarthy, 1990; Rozin & Fallon, 1988; Wiseman, Gray, Mosimann, & Ahrens, 1992). Socially prescribed perfectionism may be especially salient for adolescents. The appearance-related concerns of adolescents are well-

documented (see Hill, Oliver, & Rogers, 1992, for a review). Adolescents who are sensitive to criticism and perceive that others expect perfection may be especially likely to adopt restrictive eating attitudes and a poor self-image.

In Study 3, a sample of adolescents completed the CAPS, the perfectionism subscale of the Eating Disorder Inventory, and measures of maladaptive eating attitudes, appearance self-esteem, social self-esteem, and the importance of appearance. This study sought to test the hypothesis that it is the social dimension of perfectionism that is most closely associated with anorexic tendencies and low appearance self-esteem. A secondary goal of this study was to test the predictive ability of the CAPS dimensions versus the EDI perfectionism scale. Specifically, we sought to determine whether the CAPS measures could account for a significant degree of variance in the outcome measures after taking variance associated with the EDI perfectionism measure into account.

Method

Subjects

The subjects were 131 students (59 boys, 72 girls) from a secondary school in Toronto. The mean age of the subjects was 15.96 years ($SD = 0.95$).

All subjects were required to receive parental consent and to sign individual consent forms in order to participate in the study.

Materials and Procedure

Participation was voluntary and subjects were selected randomly for inclusion in the study. In addition to the CAPS, subjects were administered the following measures in a random order:

Self-Importance of Appearance. Subjects were provided with 12 items assessing the importance of attractiveness (ie., having an attractive face, looking good in your clothes, etc.) and the importance of weight control (ie., being slim, watching what you eat, etc.). These items were used in a previous developmental study by Pliner, Chaiken, and Flett (1990) and were found to have an adequate degree of internal consistency in both adolescent and adult subsamples. Subjects make five-point ratings for each item. Higher scores on the overall scale reflect greater importance.

Janis-Field Feelings of Inadequacy Scale. Subjects also completed the 23-item measure of social self-esteem created by Janis and Field (1959). This scale has been employed in numerous studies. Higher scores reflect higher social self-esteem.

Appearance Self-Esteem. Appearance self-esteem was assessed with six items patterned after the Janis and Field measure. The appearance self-esteem measure was created by Pliner et al. (1990). Typical items include "How often do you have the feeling that you are unattractive?" and "How often are you dissatisfied with the way you look?" Higher scores reflect greater appearance self-esteem. Pliner et al. reported that the scale has an alpha coefficient of .66 and it is correlated significantly with social self-esteem in adults.

The Eating Attitudes Test (EAT). The 26-item Eating Attitudes Test (EAT, Garner & Garfinkel, 1979) was used to assess the extent of pathological concern about eating and body weight. Sample items include "I stay away from eating when I am hungry" and "I have the urge to vomit after meals." Factor analyses by the authors have identified three factors reflecting excessive tendencies toward dieting, bulimia, and overcontrol. It should be noted that

this measure is scored such that higher scores on this test show better adjustment and lower scores show pathological eating patterns.

Eating Disorder Inventory Perfectionism Subscale. At the end of this test, 6-items relating to perfectionism were included to identify pathological eating attitudes with perfectionistic tendencies (EDIPERF). Three items measure self-oriented perfectionism (e.g., I hate being less than the best at things) and three items appear to measure social aspects of perfectionism (e.g., Only outstanding performance is good enough in my family), yet the items are combined into a total score and they are typically not examined as separate factors.

Results

Concurrent Validity of the CAPS

As expected, correlational analyses confirmed that there were strong, significant correlations between the CAPS measures and the EDI perfectionism subscale. The respective correlations between self-oriented perfectionism and the EDI measure were $-.41$ for girls and $-.72$ for boys. The correlations between socially prescribed perfectionism and the EDI measure were $-.45$ for girls and $-.55$ for boys (all p 's $<.01$). The correlation between the two CAPS dimensions was $r = .32$ ($p<.05$) for boys and $r = .50$, $p<.01$ for girls.

Correlations were computed between the three perfectionism measures (CAPS self-oriented, CAPS socially prescribed, and the EDI mixed measure of perfectionism) and the various outcome measures. The results are shown in Table 5 for the total sample, boys, and girls. The results showed that self-

oriented perfectionism was associated with self-importance of appearance in the total sample. This correlation was significant for boys, but not for girls, perhaps because girls gave higher overall ratings to the importance of appearance and there was less variability in their responses.

Insert Table 5 about here

Analyses with the CAPS measure of socially prescribed perfectionism confirmed that this dimension is involved in eating, appearance, and social self-esteem. In the total sample, for instance, socially prescribed perfectionism was associated with lower social self-esteem, lower appearance self-esteem, overall anorexic eating attitudes, and subscale measures of bulimic tendencies, and overcontrolling tendencies. Although direct comparison of the strength of the correlations revealed no significant differences, examination of Table 5 indicates that a greater number of significant correlations were obtained when the CAPS measure of socially prescribed perfectionism was employed rather than the EDI perfectionism subscale.

Hierarchical Regression Analyses

Next, a series of hierarchical regression analyses was conducted to determine whether the CAPS measures could predict a significant degree of unique variance in the four outcome measures (ie., self-importance of appearance, social self-esteem, appearance self-esteem, and overall EAT scores) after removing common variance shared with the EDI perfectionism scale. In each analysis, the EDI perfectionism measure was entered as the

sole term in the first predictor block. The two CAPS measures were then entered simultaneously in a second predictor block to determine their ability to predict remaining variance.

The results for the regression analysis involving appearance self-esteem as the outcome measure are shown in Table 6. The EDI perfectionism measure did not predict a significant degree of variance. In contrast, the CAPS predictor was marginally significant and accounted for 4% of the variance, F change = 3.03, $p < .06$. Examination of the individual CAPS measures within the predictor block revealed that socially prescribed perfectionism was a significant predictor, $F = 5.59$, $p < .05$.

Insert Table 6 about here

The analysis conducted on social self-esteem scores revealed that both the EDI and the CAPS predictor blocks predicted a significant amount of unique variance in levels of social self-esteem, accounting respectively for 6% and 8% of the variance. Once again, the socially prescribed dimension was the individual measure that was significant within the CAPS predictor block, $F = 10.93$, $p < .01$.

The analysis conducted on self-ratings of appearance importance revealed similarly that both the EDI and the CAPS predictor blocks accounted for significant variance. The EDI perfectionism subscale accounted for 4%, F change = 5.00, $p < .05$, and the CAPS block accounted for another 5% of the variance, F change = 3.41, $p < .05$. In contrast to the previous regression

findings, it was the self-oriented perfectionism measure that was the significant individual predictor within the block, $F = 6.81$, $p < .05$.

The analysis conducted on total EAT scores was the only analysis in which the CAPS predictor block was not significant. However, the EDI perfectionism measure was significant and accounted for 4% of the variance.

Discussion

The main purpose of Study 3 was to examine the association between the CAPS perfectionism subscales and variables related to dysfunctional eating behavior and concern with appearance in adolescents. In addition, the findings with the CAPS measures were compared to those obtained with the EDI perfectionism subscale. As expected, evidence for the CAPS' construct validity was obtained in that both self-oriented perfectionism and socially-prescribed perfectionism were correlated significantly with the perfectionism subscale of the EDI. It is not surprising that both measures were associated positively with the EDI measure because the EDI subscale has item content that reflects both self-oriented and socially prescribed perfectionism.

Another goal of this study was to examine the link between the perfectionism dimensions and various measures reflecting personal appearance and eating behavior, including the self-importance of appearance, appearance self-esteem, social self-esteem, and anorexic eating attitudes. The findings were generally consistent with the vast literature on eating and appearance that emphasizes the role of cultural and societal pressures towards thinness.

The main finding was that a high level of socially prescribed perfectionism was correlated significantly with dysfunctional eating attitudes, low appearance self-esteem, and low social self-esteem in both boys and girls.

Our findings indicate that socially imposed standards of perfection are associated with restrictive beliefs about eating and negative views of self-worth in terms of public aspects of the self, including appearance and social behavior. The link between socially prescribed perfectionism and negative responses in the eating and appearance domains is generally consistent with observations that cultural pressures towards thinness may be at the root of the dysfunctional eating behavior exhibited by many adolescents.

The importance of developing a new, multidimensional measure of perfectionism for children and adolescents was perhaps best illustrated by the results of the regression analyses. The final goal of this study was to demonstrate the usefulness of the CAPS measure by showing that the subscales could predict significant variance in the outcome measures, even after removing overlapping variance assessed by the perfectionism subscale inherent in the CAPS. These analyses showed that the CAPS perfectionism dimensions were capable of accounting for unique variance in eating and appearance outcomes after removing variance due to the EDI perfectionism subscale. These findings are especially noteworthy because the EDI scale has been used as the primary measure of perfectionism in most eating and appearance studies. The fact that the CAPS accounted for additional, unique variance raises the possibility that some important findings have been obscured in past studies that have relied exclusively on the EDI perfectionism scale.

These data were not too surprising. The CAPS measures differ from the EDI measure in several respects. Specifically, the perfectionism dimensions are assessed separately and they are both measured with numerous items that were carefully selected on the basis of their statistical properties. In

addition, the self-oriented perfectionism measure differs in that it also includes a salient motivational component, consistent with the content of self-oriented perfectionism when assessed in adults (Hewitt & Flett, 1990, 1991b).

The only significant correlation involving self-oriented perfectionism was between this perfectionism dimension and the self-rated importance of appearance and weight control. This, of course, is an expected relationship and indicates that as self-oriented perfectionism increases, concerns regarding the importance of one's appearance also increase. Moreover, somewhat surprisingly, this was evident for boys, but not for girls. This may be due to the fact that the majority of girls are concerned with their appearance; whereas only perfectionistic boys are concerned with appearance.

Finally, it should be noted that few other gender differences were present in the pattern of correlations. However, the current findings must be interpreted within the context of significant gender differences in mean scores on the appearance variables. Consistent with past studies, other analyses of the data confirmed that girls report more negative views of their appearance. Also, they attached greater importance to their appearance and reported more anorexic tendencies (also see Pliner *et al.*, 1990). The obtained gender difference in appearance importance is particularly revealing because it suggests that appearance-related issues are more central to the self-esteem of girls. Thus, the obtained correlations between the perfectionism and appearance measures likely have more practical significance for girls.

Research in our laboratory with samples of adults has shown reliably that socially prescribed perfectionism is associated with a host of adjustment problems, including anxiety, depression, and symptoms of borderline personality disorders (Hewitt & Flett, 1991b; in press). Perhaps the link between this dimension and suicidal tendencies is the best indicator of the robustness of the relation between socially prescribed perfectionism and maladjustment. Investigations have shown that socially prescribed perfectionism is a significant predictor of suicidal intent in psychiatric patients, even after removing variance due to levels of depression and hopelessness (Hewitt et al., in press). The link between self-oriented perfectionism and poor psychological adjustment is more complex. Although one study found higher levels of self-oriented perfectionism in clinically depressed patients (Hewitt & Flett, 1991a), other studies have detected no significant zero-order correlation between self-oriented perfectionism and depressive symptomatology (e.g., Flett, Hewitt, Blankstein, & Mosher, 1991). A key factor is the presence or absence of life stress. Self-oriented perfectionists without significant life stress are no more depressed than nonperfectionists. However, self-oriented perfectionism and high life stress combine interactively to produce higher levels of depression in college students and psychiatric patients.

In Study 4, we sought to demonstrate the generalizability of these findings in an adolescent population. Several authors have suggested a link between perfectionism and low psychological adjustment in adolescents and children. For instance, Kaiser and Berndt (1985) concluded that unrealistically high expectations may predispose high-achieving adolescents to

poor self-esteem, loneliness, and depression. Similarly, Robins and Hinkley (1989) examined depressive symptomatology and irrational beliefs in a sample of 61 children ranging from 8 to 12 years of age. Robins and Hinkley (1989) found that depression was correlated positively with the presence of beliefs involving perfectionism and high self-expectations (also see Leon, Kendall, & Garber, 1980).

Given this general association, the question remains as to whether one or both perfectionism dimensions will be associated with maladjustment. As noted above, research with adults has tended to find the strongest evidence for a link between socially prescribed perfectionism and maladjustment. Similarly, the results of Study 3 indicated that only socially prescribed perfectionism was associated with low social self-esteem and low appearance self-esteem in adolescents. On the basis of this evidence, we expected that socially prescribed perfectionism would be associated broadly with the indices of psychopathology. No significant correlations were expected between self-oriented perfectionism and the adjustment indices, in part because levels of life stress were not assessed in this study.

Method

Subjects

The subjects were 107 students (45 boys, 62 girls) from grade eight classes in Barrie, Ontario. The mean age of the subjects was 13.47 years ($SD = 0.90$). All subjects were required to receive parental consent and to sign individual consent forms in order to participate in the study.

Materials and Procedure

Participation was voluntary and subjects were selected randomly for inclusion in the study. In addition to the CAPS, subjects were administered the Basic Personality Inventory (BPI; Jackson, 1989). The BPI is a 220-item broad-based measure of self-reported psychopathology. It has 11 subscales that provide measures of hypochondrias (i.e., a preoccupation with physical complaints), depression (i.e., pervasive sadness and hopelessness), denial (i.e., awareness and acceptance of feelings as part of the self), interpersonal problems (i.e., the ability to relate to others and accept criticism), alienation (i.e., departure from typical societal values), persecutory ideation (i.e., level of trust in others and perceived support), anxiety (i.e., self-control in normal and crisis situations), thinking disorder (i.e., distraction and disorder of thought), impulse expression (i.e., failure to consider the future consequences of actions before doing them), social introversion (i.e., interaction skills and need for affiliation), self-depreciation (i.e., negative self-evaluation and dissatisfaction with personal achievements), and deviation (i.e., level of unusual or bizarre behavior). Numerous studies have attested to the instrument's reliability and validity. For instance, Holden, Reddon, and Jackson (1983) have provided evidence for the content validity of BPI item content. Austin, Lescheid, Jaffe, and Sas (1986) conducted a factor analysis of the BPI in a sample of adolescent juvenile offenders and obtained three general factors reflecting psychiatric symptomatology (i.e., hypochondriasis, persecutory ideas, anxiety, thinking disorder, and deviation), depression (i.e., depression, social isolation, and self-depreciation), and social symptomatology (i.e., interpersonal problems, alienation, and impulse expression). In the present

study, scores were reported for the individual BPI subscales as well as the three summary scores.

Results

The Pearson product-moment correlations between the two CAPS measures and the various BPI measures are shown in Table 7. It can be seen that there were few significant correlations involving self-oriented perfectionism. The only associations of note were that alienation and self-depreciation were both associated with self-oriented perfectionism, but greater perfectionism was associated with less alienation and less self-depreciation.

Insert Table 7 about here

In contrast, there were many significant findings that emerged with socially prescribed perfectionism. This CAPS dimension was associated with symptoms of thinking disorder, deviation, depression, persecutory ideas, social introversion, self-depreciation, and hypochondriasis. Importantly, neither perfectionism dimension was correlated significantly with denial, suggesting that the scale items are not contaminated substantially by a tendency to engage in defensive responding.

The contrasting natures of self-oriented and socially prescribed perfectionism are perhaps best indicated by the results displayed in Table 6.

Because these two CAPS dimensions were correlated positively, $r = .45$, $p < .001$, we were interested in examining the link between each perfectionism dimension and adjustment after controlling variance reflecting the other perfectionism dimension. The first-order correlations are shown in Table 8.

Overall, self-oriented perfectionism was associated significantly with numerous BPI measures, but in a manner suggesting that self-oriented perfectionism is relatively adaptive. In contrast, socially prescribed perfectionism was also correlated with many of the same measures, but in a manner suggesting that socially prescribed perfectionism is maladaptive.

Insert Table 8 about here

Discussion

The fourth and final study sought to examine how the two perfectionism dimensions related to self-reported levels of psychopathology in an adolescent sample. The findings confirmed that socially prescribed perfectionism is associated broadly with poor personal adjustment. Zero-order and first-order correlation analyses showed that socially prescribed perfectionism was correlated significantly with BPI summary indices reflecting depression, interpersonal problems, and psychiatric symptomatology. That is, a tendency to perceive that others demanded perfection from the self was associated with a wide variety of adjustment problems. These findings are noteworthy in at least two respects. First, our results are similar to the findings of research investigations examining perfectionism and symptoms of psychopathology in adults. For instance, Hewitt and Flett (1991b) reported significant correlations between socially prescribed perfectionism and all of the subscales of the Symptom Check List--90 Revised (Derogatis, 1983) in college students.

More generally, the current results attest to the pervasive influence that perceived social expectations have on the personal and social development of adolescents. Whereas past research has focused primarily on punitive reactions and unfair expectations in the family context, the current findings suggest that maladjustment may stem from a generalized tendency to perceive imposed standards of perfection in a variety of situations, including the family environment.

Other findings in Study 4 highlighted the need to distinguish between socially prescribed and self-oriented perfectionism. In contrast to the pervasive association between socially prescribed perfectionism and maladjustment, the zero-order and partial correlation analyses indicated that self-oriented perfectionism in this sample was associated with greater personal adjustment. For instance, in the total sample, self-oriented perfectionists reported significantly lower levels of alienation and self-deprecation. These findings highlight not only the positive aspects of this perfectionism dimension, they also attest to the differences between self-oriented and socially prescribed perfectionism.

Study 4 was similar to the two preceding studies in that all three investigations were conducted with adolescent subjects. A logical question is whether similar findings can be detected in younger populations. Other research in our laboratory has sought to establish that socially prescribed perfectionism is associated with maladjustment in younger children. Parallel research with children in grades three through five has also investigated perfectionism and personal adjustment in children and adolescents. In one study, for instance, we administered the CAPS, the Perceived Competence Scale,

and the Piers-Harris Self-Concept Scale to 77 children in grades three through six (Flett, Hewitt, Davidson, & Gold, 1992). As expected, analyses confirmed that socially prescribed perfectionism may be an important contributor to children's negative self-concepts. Greater socially-prescribed perfectionism was associated with lower levels of general, academic, and social competence and with lower self-esteem in a number of areas of functioning. Children with high levels of socially prescribed perfectionism also reported substantially higher levels of anxiety and lower levels of happiness. Overall, then, although additional research is required, it appears that similar findings may be obtained when perfectionism is studied in children as opposed to adolescents.

General Discussion

Taken together, the results of these studies provide some important insight into the nature of perfectionism in children and adolescents. First, although almost all children may strive for perfection from time to time, it is evident that stable individual differences exist in perfectionism and these differences can be detected in children aged seven and older. The findings with the CAPS are consistent with the view that perfectionism is a personality trait that may be present relatively early in life.

Second, our data confirmed that it is possible to identify distinct dimensions of perfectionism in children and adolescents in a reliable and valid manner. Both self-oriented and socially prescribed perfectionism may be assessed with an adequate degree of reliability and validity with the CAPS. Clearly, these dimensions are positively correlated such that many children are characterized jointly by high levels of both dimensions. Research with

adults has found similarly that the perfectionism dimensions tend to be intercorrelated (Hewitt & Flett, 1990; 1991b). This intercorrelation notwithstanding, the pattern of findings obtained between the CAPS scales and numerous measures indicates that the CAPS subscales are associated differentially with a variety of constructs, thus highlighting the need for a multidimensional approach.

The main focus of this research was to develop indices of perfectionism in children and adolescents. At the same time, some important substantive findings emerged from this research. For instance, numerous findings indicated that self-oriented perfectionism is relatively adaptive in nature. That is, self-oriented perfectionism was associated with higher levels of motivation, as seen in Study 2, and the partial correlation analyses in Study 4 indicated that self-oriented perfectionism may be correlated negatively with maladjustment when levels of socially prescribed perfectionism are controlled.

On the basis of this evidence, it may be concluded that certain aspects of self-oriented perfectionism may have inherently rewarding aspects and may be associated with positive outcomes. These data are clearly at variance with descriptive reports that focus on the self-critical tendencies of self-oriented perfectionists (see Hewitt & Flett, 1991b). Perhaps subsequent research may be able to identify subtypes of self-oriented perfectionists; some adolescents may pursue high goals without being self-punitive, while other adolescents may be characterized jointly by excessive self-standards and a self-critical nature.

In contrast to the positive aspects of self-oriented perfectionism, other findings indicated clearly that socially prescribed perfectionism is a

deleterious factor in personal adjustment. Our data indicated that socially prescribed perfectionism is associated with such maladaptive outcomes as depression, psychiatric symptoms, anorexic eating attitudes, and low self-esteem in the social domain. It remains for future research to identify the factors that contribute to these differences between perfectionism dimensions.

Our interpretation of these data is that self-oriented perfectionism reflects primarily a motivation for mastery motivation, while socially prescribed perfectionism is more extrinsically based and reflects a controlling orientation that involves the need to please others. Research on motivational orientations has consistently shown that a mastery orientation incorporates a task-oriented approach that leads to positive outcomes. In contrast, a controlling orientation is maladaptive and tends to promote ego involvement and feelings of learned helplessness (Boggiano & Barrett, 1985; Deci & Ryan, 1987; Dweck & Elliot, 1983). Children with a high level of self-oriented perfectionism are working toward their own self-determined goals in an intrinsic fashion whereas children with a high level of socially prescribed perfectionism may be resentful because goals are being imposed on them and the focus is on avoiding punishment and gaining reinforcement rather than self-improvement and self-development.

The results of Study 2 are consistent with this distinction. This study examined how the dimensions of perfectionism were associated with reasons for achievement that varied in associated levels of autonomy. The results showed that self-oriented perfectionism was associated with intrinsic reasons for achievement behavior and higher report levels of effort and enjoyment in achievement-related situations. Socially prescribed perfectionism was

distinguished by its association with extrinsic reasons and an association with external locus of control.

Although self-oriented perfectionism includes a greater element of self-determination than does socially prescribed perfectionism, it would be difficult to argue that self-oriented perfectionism consists solely of intrinsic motivation. The results from Study 2 indicated further that introjection is one of the primary processes that is common to both self-oriented and socially prescribed perfectionism. Introjection involves excessive needs for approval from both self and others. A need for approval, even from the self, suggests an element of defensiveness or ego-involvement in self-oriented perfectionism. Overall, it seems that self-oriented perfectionism is a rather complex dimension that includes both an element of self-determination in conjunction with a desire for approval from the self and from significant others. In contrast, the focus of socially prescribed perfectionism is entirely extrinsic; it reflects mainly the need for social approval among individuals with a concern about meeting the standards imposed on the self by significant others.

Limitations and Future Research Directions

Although the present research has provided insight into the conceptualization and assessment of perfectionism in children and adolescents, several important issues remain to be investigated with the CAPS. The process of personality scale development is an ongoing process and there is a continuing need for refinement and further investigation of any personality measure. In this regard, the CAPS is no exception. Some important

characteristics of the scale remain to be examined. Most importantly, there is a need for multitrait-multimethod investigations that examine the CAPS dimensions with respect to actual standard setting behavior. Studies of this nature will constitute an important test of the validity of this measure. In addition, other work needs to examine the long-term stability of scores on the CAPS dimensions to confirm that perfectionism is a stable individual difference characteristic that reflects a personality trait.

Although psychometric investigations may result ultimately in a revised version, the current version of the CAPS appears to have respectable psychometric properties and further use of the scale appears to be warranted.

The advent of this measure will enable researchers to empirically test some important issues. For instance, one issue is the development of perfectionism in the family context. We are currently conducting research on levels of perfectionism in children, as assessed by the CAPS, and levels of perfectionism in their parents, as assessed by the MPS. Such research promises to provide some interesting clues into the developmental course of perfectionism.

The advent of the CAPS will also enable researchers to test self-regulation and diathesis-stress models of personality and adjustment in children and adolescents. Research and theory on self-control (e.g. Flett, Hewitt, Blankstein, & O'Brien, 1991; Rehm, 1977) has suggested that maladjustment stems from the joint presence of high standards and maladaptive coping responses. Similarly, diathesis-stress models have postulated that negative outcomes such as anxiety and depression stem from the joint interaction of perfectionism and life stress (Flett, Hewitt, & Dyck, 1989;

Hewitt & Dyck, 1986) The CAPS may be administered along with measures of self-control and life stress in children and adolescents to examine the accuracy of these models with respect to the two perfectionism dimensions in youngsters.

Finally, the CAPS should prove especially useful from an applied perspective. The CAPS may be administered along with other measures to identify and diagnose children with exceptionally high levels of perfectionism. Similarly, it could be employed to determine the success of interventions that are designed specifically to reduce problematic levels of perfectionism in children (Barrow & Moore, 1983).

In summary, past measures of perfectionism in children suffered from many of the same problems that plagued initial measures of perfectionism in adults.

The purpose of the present research was to develop and demonstrate the usefulness of a multidimensional measure of perfectionism in children and adolescents. The resultant measure, the CAPS, appears to be sound in terms of its psychometric properties. The utility of the CAPS dimensions was suggested by the fact that the subscales were associated with achievement-related variables and indices of psychopathology across a series of studies. Hopefully, the availability of the CAPS will provide the impetus for important new developments in the study of perfectionism.

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Footnotes

¹ The MPS also includes another dimension known as other-oriented perfectionism (ie., high standards for others). At present, the CAPS does not include a subscale measuring other-oriented perfectionism because our examination of the developmental literature revealed references to self-oriented perfectionism (e.g., Liebman, 1978; Siegler, 1988) and socially-prescribed perfectionism (Wentzel, 1989), but few references to other-oriented perfectionism. The developmental course of other-oriented perfectionism is a question for future research.

Perfectionism in Children

Table 1

Factor Loadings For CAPS Items Following Varimax Rotation

<u>Item</u>	Factors	
	Factor 1 (Social)	Factor 2 (Self)
I try to be perfect in every thing I do	.01	.73
I want to be the best at every thing I do	.13	.71
I feel that people ask too much of me	.58	-.05
I feel that I have to do my best all the time	.08	.67
There are people in my life who expect me to be perfect	.68	.07
I always try for the top score on a test	.00	.56
It really bothers me if I don't do my best all the time	.24	.56
My family expects me to be perfect	.80	.07
People expect more from me than I am able to give	.73	.02
I don't always try to be the best*	.03	-.40
I get upset if there is even one mistake in my work	.44	.41
Other people think I have failed if I do not do my very best all the time	.59	.11
Other people always expect me to be perfect	.79	.21
I always try to be as perfect as I can	.09	.67
People around me expect me to be great at everything	.61	.29
When I do something, it has to be perfect	.39	.56
I can't stand to be less than perfect	.50	.38
I am always expected to do better than others	.60	.32
Even when I pass, I feel that I have failed if I didn't get one of the highest marks in the class	.31	.38
My parents don't always expect me to be perfect in every thing I do*	-.53	.24
My teachers expect my work to be perfect	.47	.25
I do not have to be the best at everything I do*	-.09	-.38
Eigenvalue	6.31	2.69
Percentage of Variance	28.7	12.2

Note. Based on the responses of 247 subjects. Asterisks indicate reverse-keyed items.

Table 2

Means and Standard Deviations of the CAPS Perfectionism Measures for Boys, Girls, and the Total Sample Across Studies

Measure	Boys		Girls		Total	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
<u>Study One</u>						
Self-Oriented	34.51	9.56	35.03	7.80	34.27	8.43
Socially Prescribed	26.54	8.84	24.45	8.36	24.77	8.42
<u>Study Two</u>						
Self-Oriented	37.41	8.05	35.61	9.03	36.66	8.57
Socially Prescribed	23.35	7.74	24.63	7.70	23.99	7.71
<u>Study Three</u>						
Self-Oriented	34.64	10.48	34.96	7.37	34.82	8.87
Socially Prescribed	26.95	8.54	24.47	8.29	25.58	8.46
<u>Study Four</u>						
Self-Oriented	36.09	9.54	36.69	7.23	36.44	8.28
Socially Prescribed	29.89	8.88	26.73	7.71	28.06	8.33

Note. Higher scores reflect greater perfectionism.

Table 3

Correlations Between Perfectionism and Control Measures

REASON AND MOTIVATION MEASURES	Perfectionism Measures				
	SELF	SOCIAL	SELF PERF DESIRE	MOTHER'S PERF DESIRE	FATHER'S PERF DESIRE
<u>Total Sample</u>					
Identification	.37**	-.05	.26*	.01	-.07
Intrinsic	.42**	-.05	.40**	-.03	-.05
Introjection	.62**	.37**	.57**	.45**	.39**
External	.16	.27**	.15	.34**	.32**
Locus of Control	.04	-.37**	.09	-.25*	-.35*
Enjoyment	.42**	.05	.35**	.17	.13
Effort	.54**	.26*	.39**	.18	.12
<u>Boys</u>					
Identification	.48**	-.13	.37*	.01	-.17
Intrinsic	.56**	-.06	.57**	-.06	-.08
Introjection	.59**	.33*	.57**	.42**	.38**
External	.11	.18	-.06	.40**	.28
Locus of Control	.15	-.36*	.07	-.41**	-.46**
Enjoyment	.41**	.06	.41**	.15	.13
Effort	.53**	.26	.45**	.26	.12
<u>Girls</u>					
Identification	.37**	.00	.25	.17	.13
Intrinsic	.33*	-.06	.27	.05	-.01
Introjection	.65**	.40**	.72**	.52**	.42**
External	.29*	.34*	.47**	.41**	.46**
Locus of Control	-.09	-.38**	.04	-.22	-.33*
Enjoyment	.44**	.04	.30*	.22	.14
Effort	.65**	.25	.42**	.18	.17

Note. * $p < .05$, ** $p < .01$. Based on the responses of 98 subjects (49 boys, 49 girls).

Table 4

Zero-Order and First-Order Correlations Between CAPS Measures and Other Perfectionism Measures

Perfectionism Measure	Perfectionism Dimension			
	Zero-Order		First-Order	
	Self	Social	Self	Social
<u>Total Sample</u>				
Self-Desire For Perfection	.64**	.28**	.60**	.04
Mother's Desire	.31**	.56**	.12	.50**
Father's Desire	.23	.64**	-.04	.62**
<u>Boys</u>				
Self-Desire For Perfection	.64**	.16	.63**	-.07
Mother's Desire	.26	.67**	.04	.64**
Father's Desire	.17	.73**	-.11	.72**
<u>Girls</u>				
Self-Desire For Perfection	.62**	.44**	.53**	.20
Mother's Desire	.34*	.50**	.14	.41**
Father's Desire	.25	.59**	-.04	.55**

Note. * $p < .01$, ** $p < .05$. Correlational tests are two-tailed and are based on the responses of 98 subjects (49 boys, 49 girls).

Table 5

Correlations Between Perfectionism and Self-Concept Measures for the Total Sample

Self-Concept Measure	Perfectionism Dimension		
	Self	Social	EDI Perf
<u>Total Sample</u>			
Self-Importance of Appearance	.29**	.09	-.19*
Social Self-Esteem	-.16	-.36**	.24**
Appearance Self-Esteem	-.12	-.24**	.12
Eating Attitudes (Total)	-.16	-.19*	.20*
Dieting Tendencies	-.15	-.10	.16
Bulimic Tendencies	-.09	-.24**	.14
Overcontrol Tendencies	-.08	-.21*	.18
<u>Boys</u>			
Self-Importance of Appearance	.49**	.14	-.42**
Social Self-Esteem	-.16	-.49**	.25
Appearance Self-Esteem	-.02	-.38**	.21
Eating Attitudes (Total)	-.25	-.22	.28*
Dieting Tendencies	-.23	-.12	.19
Bulimic Tendencies	-.22	-.21	.26*
Overcontrol Tendencies	-.12	-.28*	.28*
<u>Girls</u>			
Self-Importance of Appearance	.07	.13	-.03
Social Self-Esteem	-.17	-.31**	.24**
Appearance Self-Esteem	-.24*	-.28*	.08
Eating Attitudes (Total)	-.08	-.30*	.19
Dieting Tendencies	-.10	-.22	.20
Bulimic Tendencies	.01	-.30**	.08
Overcontrol Tendencies	-.03	-.20	.09

Note. * $p < .05$, ** $p < .01$.

Table 6

Hierarchical Regression Analyses with EDI Perfectionism Measure and CAPS Measures as Predictors of Self-Esteem and Appearance Measures

Variables	R2 change	F change	F	Beta
<u>Outcome:</u>				
Appearance Self-Esteem				
<u>Predictors:</u>				
EDI Perfectionism	.01	1.81	1.81	.118
CAPS Perfectionism	.04	3.03*		
Self-Oriented			0.12	-.037
Socially Prescribed			5.59**	-.236
<u>Outcome:</u>				
Social Self-Esteem				
<u>Predictors:</u>				
EDI Perfectionism	.06	7.76***	7.76***	.238
CAPS Perfectionism	.08	5.53***		
Self-Oriented			0.02	.013
Socially Prescribed			10.93***	-.318
<u>Outcome:</u>				
Appearance Self-Importance				
<u>Predictors:</u>				
EDI Perfectionism	.04	5.00**	5.00**	-.193
CAPS Perfectionism	.05	3.41**		
Self-Oriented			6.81**	.276
Socially Prescribed			0.22	-.046
<u>Outcome:</u>				
Eating Attitudes (Total)				
<u>Predictors:</u>				
EDI Perfectionism	.04	5.33**	5.33**	.199
CAPS Perfectionism	.01	0.77		
Self-Oriented			0.18	-.045
Socially Prescribed			1.21	-.110

Note. * $p < .06$; ** $p < .05$; *** $p < .01$.

Table 7

Correlations Between Perfectionism and BPI Measures For Total Sample, Boys,
and Girls

BPI Measure	Perfectionism Dimension					
	Self			Social		
	<u>T</u>	<u>M</u>	<u>F</u>	<u>T</u>	<u>M</u>	<u>F</u>
<u>Individual Subscales</u>						
Hypochondriasis	.02	-.22	.22	.20*	.17	.27*
Depression	-.13	-.27	.07	.27**	.25	.22
Denial	.02	.03	.04	-.06	-.13	-.13
Interpersonal Problems	-.15	-.25	-.06	.18	.21	.08
Alienation	-.26**	-.45**	-.07	.15	.14	.02
Persecutory Ideas	-.03	-.10	.06	.27**	.33*	.19
Anxiety	.12	.00	.22	.15	.23	.15
Thinking Disorder	.08	-.04	.18	.32**	.41**	.25
Impulse Expression	-.18	-.29	-.09	.10	.06	.11
Social Introversion	-.04	-.18	.21	.26**	.23	.20
Self-Depreciation	-.22*	-.44**	.10	.24*	.15	.28*
Deviation	-.15	-.31*	.09	.28**	.23	.26
<u>Summary Scores</u>						
Psychiatric Symptoms	.01	-.18	.21	.31**	.34*	.29*
Depression	-.14	-.32*	.15	.29**	.24	.28*
Social Symptomatology	-.24*	-.39**	-.08	.17	.16	.08

Note. * $p < .01$, ** $p < .05$. Correlational tests are two-tailed and are based on the responses of 107 subjects (45 boys, 62 girls).

Table 8

First-Order Correlations Between Perfectionism and BPI Measures

BPI Measure	Perfectionism Dimension Partial Correlations	
	Self	Social
<u>Individual Subscales</u>		
Hypochondriasis	-.08	.22*
Depression	-.29**	.37**
Denial	.05	-.08
Interpersonal Problems	-.26**	.28**
Alienation	-.37**	.31**
Persecutory Ideas	-.17*	.31**
Anxiety	.06	.11
Thinking Disorder	-.08	.32**
Impulse Expression	-.26**	.21
Social Introversion	-.18*	.31**
Self-Depreciation	-.37**	.39**
Deviation	-.32**	.39**
<u>Summary Scores</u>		
Psychiatric Symptoms	-.15	.35**
Depression	-.32**	.41**
Social Symptomatology	-.35**	.32**

Note. * $p < .01$, ** $p < .05$. Correlational tests are two-tailed and are based on the responses of 107 subjects.