



## RESEARCH ARTICLE

# Dimensions of Perfectionism in Children and Adolescents with Obsessive-compulsive Disorder

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## Abstract

**Objective:** To measure the association of perfectionism with obsessive-compulsive and depressive symptoms in children and adolescents with obsessive-compulsive disorder (OCD). **Method:** Sample consisted of 94 youth (44 boys, 49 girls; mean age = 13.2 y, SD = 2.5 y) with a DSM-IV diagnosis of OCD. Perfectionism beliefs were measured with both the Adaptive/Maladaptive Perfectionism Scale (AMPS) and a 14-item version of the Child and Adolescents Perfectionism Scale (CAPS-14). Using a hierarchical linear-regression model, we measured the association of perfectionist beliefs with severity of OCD and depressive symptoms. **Results:** Both AMPS and CAPS-14 scores were associated with the severity of OCD symptoms in our sample. In addition, CAPS-14 scores were associated with the severity of depressive symptoms, even when OCD symptoms were taken into account. **Conclusions:** Our findings lend further support to the hypothesis that perfectionism in youth with OCD is associated with variation in the severity of OCD and depressive symptoms.

**Key Words:** perfectionism, children, adolescents, obsessive-compulsive disorder, depression

## Résumé

**Objectif:** Mesurer l'association du perfectionnisme avec les symptômes obsessionnels-compulsifs et dépressifs chez les enfants et les adolescents souffrant du trouble obsessionnel-compulsif (TOC). **Méthode:** L'échantillon consistait en 94 adolescents (44 garçons, 49 filles; âge moyen = 13,2 ans, ET = 2,5 ans) ayant reçu un diagnostic de TOVC du DSM-IV. Les croyances perfectionnistes ont été mesurées à l'aide de l'échelle de perfectionnisme adapté/mésadapté (AMPS) et d'une version en 14 items de l'échelle de perfectionnisme des enfants et des adolescents (CAPS-14). Un modèle hiérarchique de régression linéaire a servi à mesurer l'association des croyances perfectionnistes avec la gravité du TOC et des symptômes dépressifs. **Résultats:** Les scores à l'AMPS et à la CAPS-14 étaient associés à la gravité des symptômes du TOC dans notre échantillon. En outre, les scores à la CAPS-14 étaient associés à la gravité des symptômes dépressifs, même quand les symptômes du TOC étaient pris en compte. **Conclusions:** Nos résultats renforcent l'hypothèse selon laquelle le perfectionnisme chez les adolescents souffrant du TOC est associé à une variation de la gravité du TOC et des symptômes dépressifs.

**Mots clés:** perfectionnisme, enfants, adolescents, trouble obsessionnel-compulsif, dépression

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## Introduction

### **Perfectionism in obsessive-compulsive disorder**

Obsessive-compulsive disorder (OCD) is a common, severe neuropsychiatric disorder with typical onset in youth (childhood and adolescence) (Geller et al., 2000). OCD is characterized by distressing obsessions (repetitive, intrusive thoughts, images or impulses) and compulsions (repetitive behaviors or mental activities). Youth with OCD have major functional impairment at home, school, and in social settings (Valderhaug & Ivarsson, 2005).

OCD has been historically linked to perfectionism. Perfectionism can be either adaptive or maladaptive (Rice & Preusser, 2002). People with adaptive perfectionism strive for order or organization, pursue attainable goals, and demonstrate good stress and affect management when their expectations are not met (Libby, Reynolds, Derisley, & Clark, 2004). In contrast, those with maladaptive perfectionism set goals that are unrealistic (Frost, Marten, Lahart, & Rosenblate), resulting in self-criticism and low self-esteem (Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998). Recent studies on the association of OCD and perfectionism in adults have yielded inconsistent results (Baptista, Magna, McKay, & Del-Porto, 2011; Taylor, McKay, & Abramowitz, 2005).

### **Perfectionism in youth with OCD**

There is evidence (Jacobs et al., 2009) that maladaptive perfectionism may impede response of adolescents to cognitive-behavior therapy (CBT), the most-effective intervention in pediatric OCD (Pediatric OCD Treatment Study (POTS) Team, 2004). However, very few studies on the association of OCD and perfectionism in youth have been performed. Two existing self-report measures of perfectionism for youth, the Child and Adolescent Perfectionism Scale (CAPS; Flett, Hewitt, Boucher, Davidson, & Munro, 1997) and the Adaptive/Maladaptive Perfectionism Scale (AMPS; Rice & Preusser, 2002) are adaptations of multidimensional instruments used to measure perfectionism in adults (Frost et al., 1990; Hewitt, Flett, Turnbull Donovan, & Mikail, 1991). Although both CAPS and AMPS include adaptive and maladaptive perfectionism subscales, they measure different perfectionism constructs. Whereas CAPS focuses on differences between internally motivated and socially prescribed goals, the AMPS measures cognitive dimensions related to the concept of perfectionism.

To the best of our knowledge, only one published study of child and adolescents OCD has relied on either the CAPS or the AMPS. Ye and colleagues (Ye, Rice, & Storch, 2008) studied 31 youth with OCD and reported that two AMPS subscales, Contingent self-esteem and sensitivity to mistakes, were significantly associated with increased OCD symptom severity. Libby et al. (Libby et al., 2004) compared 28 youth with OCD with 62 controls, but the study

had used the Multidimensional Perfectionism Scale (MPS) (Frost et al., 1990), a scale developed for use in adults. Thus, although there is sufficient evidence of the utility of studying the clinical aspects of perfectionism in adults, only scarce data exists on the association of perfectionism and OCD symptoms in youth.

### **The present study**

The underlying hypothesis of the study is that the study of perfectionism in youth with OCD has potential clinical relevance. With this in mind, the aim of the study was to measure the association of perfectionism with the severity of OCD and depressive symptoms in a sample of youth with OCD using both the CAPS and the AMPS. The primary hypothesis was that the severity of OCD symptoms would be significantly and positively associated with perfectionism measures. The secondary hypothesis was that maladaptive perfectionism would significantly account for the severity of depressive symptoms in youth with OCD.

## Methods

### **Participants**

Participants were a consecutive, single-site sample of youth who were seen for a consultation at the Pediatric OCD Consultation Team between April 2010 and March 2013. Inclusion criteria were a *DSM-IV* diagnosis of OCD and age between 9 and 17 years. Exclusion criteria included current diagnosis of bipolar, psychotic or autism spectrum disorders. Children with reading disability or difficulty reading the questionnaires had these read to them by our research assistant.

### **Procedure**

The local Research Ethics Board approved the study. We obtained written informed consent from parents of all participants. In addition, written informed consent and assent were obtained from youth  $\geq 16$  and youth  $< 16$  years of age, respectively. Participants completed self-report questionnaires before the consultation. *DSM-IV* Diagnoses were determined with the Schedule for Affective Disorders and Schizophrenia for School-Age Children – Present Version (K-SADS-P; Kaufman et al., 1997).

### **Measures**

Perfectionism was measured using a version of the CAPS (CAPS-14; O'Connor, Dixon, & Rasmussen, 2009) and the AMPS self-report instruments. In the original 22-item CAPS, youth are asked to rate their agreement with each item on a scale ranging from 1 (false – not at all true of me) to 4 (very true of me). CAPS differentiated self-oriented perfectionism (SOP) from socially prescribed perfectionism (SPP). SOP is defined as a strong internal motivation to be perfect, all-or-nothing thinking and expectations of

high achievement. SPP is the generalized belief that others are imposing unrealistic demands on the self. High SOP and SPP scores have been associated with distress and maladjustment in youth (Boergers, Spirito, & Donaldson, 1998).

Factor analyses of the CAPS (McCreary, Joiner, Schmidt, & Ialongo, 2004; Rice & Preusser, 2002) did not support the two-factor solution (i.e., SOP and SPP) (O'Connor et al., 2009). Instead, an abbreviated 14-item version (CAPS-14; O'Connor et al., 2009) provided an optimal three-factor solution that was stable across sex and time in two separate groups (624 and 737 adolescents). The CAPS-14 retains the SPP construct, but differentiates SOP into adaptive self-oriented striving perfectionism ([SOSP], defined as positive striving for perfectionism) and maladaptive self-oriented critical perfectionism ([SOCP], defined as self-criticism). Indeed, evidence suggests that SOP is not homogenous (Dunkley, Blankstein, Masheb, & Grilo, 2006).

The AMPS (Rice & Preusser, 2002) is a 27-item self-report scale that measures four perfectionism dimensions:

- 1) sensitivity to mistakes (negative emotions associated with making mistakes);
- 2) contingent self-esteem (task-based feelings and self-evaluation);
- 3) compulsiveness (preferences for order and organization; deliberate orientation on tasks); and,
- 4) need for admiration (need for approval, possible narcissistic tendencies).

Children rate their agreement with each item on a scale from 1 (really unlike me) to 4 (really like me). Internal consistencies of the AMPS subscales have been adequate to strong, and Cronbach's coefficient alphas range from .65 to .86 (Rice & Preusser, 2002; Rice, Kubal, & Preusser, 2004).

Severity of OCD symptoms was measured by the clinician-administered Children's Yale-Brown Obsessive-Compulsive Scale (CY-BOCS; Goodman, Price, Rasmussen, Riddle, & Rapoport, 1991). The CY-BOCS was administered to the parents and child, either jointly or separately, based on clinical judgment. The CY-BOCS rater was blinded to CAPS-14 and AMPS scores.

The total score of the self-report, 27-item Children's Depression Inventory (CDI; Kovacs, 1992) was used to assess depressive symptoms. Evidence (Richter, Cox, & Drenfeld, 1994) recommends the inclusion of a measure of depression in non case-control studies of OCD. Statistically significant perfectionism-OCD correlations could become non-significant when accounting for depression scores (Kawamura, Hunt, Frost, & DiBartolo, 2001). Furthermore, perfectionism may have trait-state features (i.e., stable individual differences that vary according to the severity of depressive symptoms) (Cox & Enns, 2003).

## Analysis

We did all statistical analyses with SPSS, (v.21). Statistical analysis was performed only for those measures for which Cronbach's  $\alpha$  coefficient was  $> .7$ . Because of poor  $\alpha$  value for the AMPS contingent self-esteem subscale ( $\alpha=.58$ ), we excluded this subscale from further analyses.

Possible sex and age effects on the severity of OCD, depressive and perfectionism scores were explored with independent sample *t*-tests. To test the primary hypothesis, we calculated Pearson's correlation coefficients as well partial correlation analyses (controlling for age, sex, and depressive symptoms). Then, we performed two hierarchical multiple regression analyses with total CY-BOCS scores as the dependent variable. The first entry included age, sex, and total CDI scores; the second, perfectionism scores (either CAPS-14 or AMPS subscales for the first and second analyses, respectively).

To test the second hypothesis, we performed two hierarchical multiple regression analyses with the total raw CDI score as the dependent variable. The first entry included age, sex, and total CY-BOCS scores; the second, perfectionism scores (either CAPS-14 or AMPS subscales).

## Results

### Sample characteristics

Participants consisted of 94 youth with OCD (45 boys, 49 girls, age range 9 to 17 y,  $M = 13.2$  y,  $SD = 2.5$  y), of which 20 (21%) also met DSM-IV criteria for social phobia, 11 (12%) for separation or generalized anxiety disorder, 30 (32%) for specific phobia, 25 (27%) had attention-deficit hyperactivity disorder (ADHD), eight (8%) had oppositional defiant disorder, 33 (35%) had a tic disorder, and 17 (18%) had a major depressive disorder.

### Measures

Table 1 summarizes descriptive statistics and internal consistency values. Cronbach's  $\alpha$  values for all subscales exceeded .71, with the exception of the AMPS' contingent self-esteem subscale ( $\alpha=0.58$ ). Inter-rater Kappa values for K-SADS-P diagnoses of OCD, depressive disorders, and ADHD ranged from .6 to .7 in our sample (85% agreement rate). Score distributions for all measures were not significantly skewed or kurtotic, and *Z*s ranged from  $|.066|$  to  $|2.00|$ .

### Effects of sex on measures

Independent sample *t*-tests measured differences in age and measurement scores between boys and girls. No significant sex effects were found for CY-BOCS, CAPS-14 or AMPS scores, but girls had significantly higher levels of depressive symptoms than boys (mean scores of 16.1(10.5) and 11.8(7.1), respectively,  $p = .02$ ).

### Correlations between perfectionism and severity of OCD and depressive symptoms

Table 2 depicts Pearson's correlations between age and the measures in this study. Age was positively and significantly correlated with the severity of depressive ( $r = .312, p = .02$ ) and OCD ( $r = .221, p = .03$ ) scores but not perfectionism. Depressive symptoms were positively and significantly ( $p < .05$ ) correlated with the scores from all CAPS-14 and AMPS subscales, with the exception of the CAPS-14 SOSP scale.

OCD severity was positively and significantly ( $p < .05$ ) associated with all CAPS-14 and AMPS subscale scores, with the exception of the AMPS need-for-admiration subscale. However, controlling for depressive symptoms, age and sex (Table 3), positive and significant correlations ( $p < .050$ ) were observed for only CAPS-14 SOSP, CAPS-14 SOCP, and AMPS compulsiveness subscales.

### Results of regression analyses

The results of our regression analyses are summarized in Table 4. Regression diagnostics to examine statistical assumptions (examination of residuals and co-linearity diagnostics) did not reveal any concerns. Both CAPS-14 and AMPS scores accounted for significant variation in OCD symptoms ( $\Delta R^2 = .074, F(3,90) = 9.88, p = .016$ , and  $\Delta R^2 = .107, F(3,90) = 5.51, p = .002$ , respectively). CAPS-14 SOSP and the AMPS compulsiveness subscales were positively associated with the severity of OCD symptoms ( $\beta = .249, p = .024$ , and  $\beta = .363, p = .000$ , respectively).

CAPS-14, but not AMPS, scores accounted for a significant variance in depressive symptoms ( $\Delta R^2 = .346, F(3,90) = 8.43, p = .000$ , and  $\Delta R^2 = .047, F(3,90) = 2.44, p = .069$ , respectively). The standardized partial regression coefficients revealed that all three CAPS-14 subscales accounted for a significant variance in depressive symptoms. However, the direction of these effects was not uniform: whereas higher SOSP scores were associated with fewer depressive symptoms, higher SOCP and SPP scores were associated with increased severity of depressive symptoms ( $\beta = -.397, p = .000$ ;  $\beta = .333, p = .000$ ; and  $\beta = .233, p = .006$ ; respectively).

### Discussion

We studied the association of dimensions of perfectionism with OCD and depressive symptoms in a clinical sample of 94 children and adolescents with OCD. Using two different perfectionism measures, each grounded in a different theoretical framework, we found that perfectionism scores were significantly associated with the severity of OCD symptoms. In addition, CAPS-14, but not AMPS scores were significantly associated with the severity of depressive symptoms. Thus, our findings support the primary and secondary hypotheses of our study.

**Table 1. Sample scores descriptives**

Measure	Scores		$\alpha$
	Mean	SD	
Age	13.2	2.5	N/A
CY-BOCS	22.1	5.5	.74
CAPS-14 SOSP	10.1	3.2	.71
CAPS-14 SOCP	10.9	5.3	.78
CAPS-14 SPP	14.3	6.8	.85
AMPS–Sensitivity	21.8	5.3	.73
AMPS–Contingent SE	23.2	3.7	.58
AMPS–Compulsiveness	14.7	4.2	.73
AMPS–Admiration	9.3	3.8	.85
CDI	14.0	9.3	.90

*N* = 94 (age range = 9–17 y).  
SD = standard deviation;  
 $\alpha$  = Cronbach's coefficient; \*  $p < .05$ .

Both the CAPS-14 SOSP and the AMPS compulsiveness subscales were significantly associated with the severity of OCD symptoms. These two subscales may overlap: SOSP is defined as striving for order or organization and the pursuit of attainable goals. Similarly, compulsiveness is thought to represent "preferences for order, organization, and a deliberate methodological approach to, and concern about, task completion" (Rice & Preusser, 2002). The preference for task completion is similar to reports that patients with OCD are unable to stop performing their rituals (Reed, 1985; Hinds, Woody, Van Ameringen, Schmidt, & Szechtman, 2012).

Although all three CAPS-14 subscales were significantly associated with the severity of depressive symptoms, the direction of the association was not uniform. Two maladaptive dimensions of perfectionism (SOCP and SPP) were positively and significantly associated with the severity of depressive symptoms in our sample. Of note, the association of SOCP and SPP with depression in youth is not unique to OCD (O'Connor, Rasmussen, & Hawton, 2010; Roxborough et al., 2012). For example, SPP and SOCP were associated with depression and anxiety, respectively, among 515 adolescent school-aged children (O'Connor et al., 2010). Indeed, it has been suggested (Egan, Wade, & Shafran, 2010) that maladaptive perfectionism is a trans-diagnostic process, one that is a risk or maintaining factor for eating disorders, anxiety disorders, depression and OCD.

In contrast, SOSP, an adaptive dimension of perfectionism, was associated with fewer depressive symptoms in our study. Interestingly, SOSP was associated with higher OCD symptoms but was associated with less severe depressive symptoms. It is possible that SOSP is a protective factor against depressive, but not OCD symptoms in youth with OCD. Alternatively, worsening depression may result in

**Table 2 Correlation of OCD, perfectionism, depressive symptoms, and age**

	CY-BOCS		CAPS-14 SOSP		CAPS-14 SOCP		CAPS-14 SPP		AMPS-Sensitivity		AMPS-Compulsiveness		AMPS-Admiration		CDI		Age	
	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p
CY-BOCS	1		.278**		.402**		.332**		.321**		.456**		0.091		.572**		.221*	
CAPS-14 SOSP	-		.007		.000		.001		.002		0		0.382		.000		.032	
CAPS-14 SOCP	-		1		.547**		.344**		.392**		.467**		.532**		0.027		.012	
CAPS-14 SPP	-		-		.000		.001		.000		.000		.000		0.797		.906	
AMPS-Sensitivity	-		-		1		.361**		.569**		.529**		.430**		.431*		.184	
AMPS-Compulsiveness	-		-		-		.000		.000		.000		.000		.000		.077	
AMPS-Admiration	-		-		-		1		.494**		.238*		.296**		.382**		.039	
CDI	-		-		-		-		.000		.021		.004		.000		.706	
Age	-		-		-		-		1		.583**		.491**		.399*		.161	
	-		-		-		-		-		.000		.000		.000		.121	
	-		-		-		-		-		1		.340**		.312**		.077	
	-		-		-		-		-		-		.001		.002		.459	
	-		-		-		-		-		-		1		.231*		.119	
	-		-		-		-		-		-		-		.025		.253	
	-		-		-		-		-		-		-		1		.312**	
	-		-		-		-		-		-		-		-		.002	
	-		-		-		-		-		-		-		-		1	

N = 94. r = Pearson's correlation coefficient; p = significance levels; \* p < .05.; \*\*p < .01.

Instruments legend:  
 CY-BOCS = total score, CY-BOCS; CAPS-14 SOSP = CAPS-14, self-oriented perfectionism, striving; CAPS-14 SOCP = CAPS-14, self-oriented perfectionism, critical; CAPS-14 SPP = CAPS-14, socially prescribed perfectionism; AMPS-Sensitivity = AMPS, sensitivity for mistakes; AMPS-Contingent SE = AMPS, contingent self-esteem; AMPS-Compulsiveness = AMPS, compulsiveness; AMPS-Admiration = AMPS, need for admiration; CDI = Children's Depression Inventory, total raw score.

**Table 3 Partial Correlation of OCD, perfectionism, and depressive symptoms**

	CY-BOCS Total	CAPS-14 SOSP	CAPS-14 SOCP	CAPS-14 SPP	AMPS– Sensitivity	AMPS– Compulsiveness	AMPS– Admiration
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>
CY-BOCS total	1	.330 **	.209 *	.16	.123	.359**	–.061
		.001	.046	.131	.247	0	.566
CAPS-14 SOSP	–	1	.595**	.359**	.416**	.485**	.563**
			.000	.000	.000	.000	.000
CAPS-14 SOCP	–	–	1	.241*	.479**	.462**	.379**
				.021	.000	.000	.000
AMPS–Sensitivity	–	–	–	–	1	.527**	.452**
						.000	.000
AMPS– Compulsiveness	–	–	–	–	–	1	.296**
							.004
AMPS–Admiration	–	–	–	–	–	–	1

*N* = 94. *r* = Partial correlations, controlling for age, sex, and CDI (total raw scores);  
*p* = significance levels; \**p* < .05. \*\**p* < .01.

lower SOSP. Due to the cross sectional design we were unable to determine which of the two interpretations was more accurate. However, given that increased maladaptive perfectionism may adversely affect CBT treatment response in depressed adolescents (Jacobs et al., 2009), the association of depressive symptoms with higher maladaptive and lower adaptive perfectionism may suggest that depressed youth with OCD may present unique clinical challenges.

Our findings differ from those of previous studies (Libby et al., 2004; Ye et al., 2008) that reported that the AMPS sensitivity-to-mistakes subscale was positively and significantly associated with increased severity of depressive and OCD symptoms. This can be accounted for by the larger sample size in our study (*N* = 94 vs. *N* = 28 and *N* = 31) and the use of an adult perfectionism instrument in one of the studies (Libby et al., 2004). In addition, the regression model in the present study differed from the one reported by Ye and colleagues (Ye et al., 2008) by the inclusion of depressive symptoms and the exclusion of the AMPS contingent-self-esteem subscale.

Our findings should be interpreted as preliminary, given the limitations of the study. The current sample size, although much larger than that of previous studies, is still relatively small, which limited our ability to measure effects of factors such as comorbidity and discrete depression and OCD dimensions. In addition, we did not include data on the association of discrete OCD dimensions (e.g. aggression, contamination, symmetry, etc.) due to incomplete information on those aspects. Also, the cross-sectional design of the

study is not informative on the temporal sequence of perfectionism and depressive symptoms in youth with OCD. However, the association of depressive symptoms with higher maladaptive and lower adaptive perfectionism could potentially inform clinicians who treat youth with OCD about what to expect when their patients are depressed. Finally, since we did not include a healthy control group or youth with other non-OCD anxiety disorders, the present study does not address the question of whether increased symptoms of perfectionism are specific to children and adolescents who are diagnosed with OCD. Instead, our findings should be viewed as part of a growing body of literature that suggests that perfectionism is a trans-diagnostic processes.

## Conclusions

This was the first study to measure perfectionism in youth with OCD using more than one conceptual framework. We found that symptoms of perfectionism were associated with a variation in the severity of OCD symptoms. In addition, maladaptive and adaptive perfectionism were associated with an increase and decrease in depressive symptoms, respectively. To better understand dimensions of dysfunction and resilience in children and adolescents with OCD, future studies should include larger sample sizes, employ a longitudinal design and compare OCD with other diagnostic groups.

**Table 4 Summary of regression analyses\***

Dependent variable	Prft measure	Model	df	$\Delta R^2$	Sig	Sex	Age	CAPS-14						AMPS-									
								CDI		CY-BOCS		SOSP		SOCP		SPP		Mis		Comp		Adm	
								B	SE	$\beta$	p	B	SE	$\beta$	p	B	SE	$\beta$	p	B	SE	$\beta$	p
CY-BOCS	CAPS-14 subscales	1. Sex, age, CDI	(3, 90)	.074	.016	.89	.146	.298	NA	.424	.017	.034	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		2. CAPS-14				.961	.196	.064		.184	.12	.079											
CY-BOCS	AMPS subscales	1. Sex, age, CDI	(3, 90)	.107	.002	.774	.173	.89	NA	.024	.884	.667	NA	NA	.474	-.217	NA	NA	.474	-.217	NA	NA	NA
		2. AMPS				.961	.189	.961															
Total CDI	CAPS-14	1. Sex, age, CY-BOCS	(3, 90)	.137	.000	2.134	.636	NA	.669	.58	.321	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		2. CAPS-14				1.428	.286	.144	.264	.168	.114												
Total CDI	AMPS	1. Sex, age, CY-BOCS	(3, 90)	.047	.069	2.984	.712	.89	.77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		2. AMPS				1.546	.311	.961	.16														
						.162	.194	.194	.457														
						.057	.024	.024	.000														

N = 94. Model = order of independent variables entered; df: degrees of freedom;  $\Delta R^2$  = R square change; Sig = significance of change attributed to perfectionism measures; Unstandardized regression coefficient (B)\*, unstandardized standard error (SE)\*,  $\beta$  = standardized partial regression coefficient\*; p=significance of  $\beta$  \*; NA = Not applicable. \* values were used for each of the predictor variables, rather than for the overall analysis.

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