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## Perfectionistic Self-Presentation, Socially Prescribed Perfectionism, and Suicide in Youth: A Test of the Perfectionism Social Disconnection Model

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The role of interpersonal components of perfectionism in suicide outcomes among youth was assessed and the Perfectionism Social Disconnection Model (PSDM) was tested by determining whether the links between socially prescribed perfectionism (SPP) and perfectionistic self-presentation (PSP) and suicide outcomes are mediated by experiences of social disconnection, as indicated by social hopelessness and being bullied. PSP, trait perfectionism, suicide outcomes, and experiences of being bullied and social hopelessness were measured in 152 psychiatric outpatient children and adolescents. Correlational tests confirmed that PSP and SPP were associated with suicide outcomes and these interpersonal perfectionism components were associated significantly with bullying and social hopelessness. Support was also obtained for the PSDM. The relationship between the PSP facets, particularly nondisplay of imperfections, and suicide outcomes were mediated by being bullied. Additionally, the relationship between all interpersonal components of perfectionism and suicide risk was mediated by social hopelessness. Theoretical and clinical implications of interpersonal components of perfectionism and social disconnection in suicide outcomes for youth are discussed.

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Suicide is the third leading cause of death among adolescents in the United States (Nock et al., 2008). Over the past 50 years, suicide rates have more than tripled in youth between the ages of 15–19 with as many as 3,994 youth completing suicide in 2000 (Berman, Jobes, & Silverman, 2006; Nock & Banaji, 2007). Much research and clinical work have been carried out to improve our understanding of suicide behavior among adolescents; however, gaps continue to exist in our understanding of factors that lead to suicidal crises (Berman et al., 2006). Personality variables have long been considered important in determining risk for suicide ideation and attempts (Brezo, Paris, & Turecki, 2006), and both theoretical models and research findings have suggested that perfectionism is a personality construct that may be particularly relevant in understanding suicide outcomes (Blatt, 1995; Cox, Enns, & Clara, 2004; Enns, Cox, Sareen, & Freeman, 2001; Hewitt, Flett, Sherry, & Caelian, 2006), particularly among adolescents. Although specific mechanisms explaining the connection between perfectionistic behavior and suicide behaviors have not been fully explicated, several authors have presented models of suicide that suggest that perfectionism plays a role in suicide outcomes (e.g., Arie, Haruvi-Catalan, & Apter, 2005; Baumeister, 1990; Orbach, 1997). Hewitt and colleagues (2006) have proposed a model that incorporates the interpersonal components of perfectionism and suicide behavior, known as the Perfectionism Social Disconnection Model (PSDM). In the current study we assessed components of the PSDM in a sample of adolescent outpatients. This study is unique in terms of being the first attempt to examine suicide potential and perfectionistic self-presentation (PSP) in youth with a newly created measure of PSP designed specifically for children and youth (see Hewitt, Blasberg, et al., 2011).

### **PERFECTIONISM**

There is general consensus that perfectionism is a multidimensional personality variable (although see Shafran, Cooper, & Fairburn, 2002), and several such models of perfectionism have been described (e.g., Frost & Marten, 1990; Hewitt, Habke, Lee-Baggley, Sherry, & Flett, 2008). In our comprehensive model of perfectionistic behavior, we described perfectionism as involving trait and self-presentational components that reflect the need or drive to be perfect or to appear to others as being perfect (Hewitt & Flett, 1991; Hewitt et al., 2003) as well as cognitive components reflecting perfectionistic information processing (Flett, Hewitt, Blankstein, & Gray, 1998; Hewitt & Genest, 1990). Perfectionism traits, as conceptualized by Hewitt and Flett (1991), reflect the need to be perfect and are composed of self-oriented perfectionism (SOP, i.e., the requirement that the self be perfect), other-oriented perfectionism (OOP, i.e., the requirement that others be perfect), and (SPP, i.e., the perception that others require perfection of oneself). More recently, we have discussed other interpersonal components of perfectionism, namely PSP, that reflects the need to appear to be perfect. It is an interpersonal style that includes three distinct interpersonal facets of perfectionistic behavior: perfectionistic self-promotion (i.e., actively promoting a perfect image), nondisplay of imperfection (i.e., drive to avoid behavioral displays of imperfection), and nondisclosure of imperfection (i.e., drive to avoid verbal disclosures of imperfection; Hewitt et al., 2003). Many studies have shown that the perfectionism traits and self-presentational styles are independent and differentially associated with various kinds of distress and disorders (for reviews, see Flett & Hewitt, 2002; Hewitt et al., 2003).

# THE PERFECTIONISM SOCIAL DISCONNECTION MODEL

The PSDM (Hewitt et al., 2006), focuses on the interpersonal components of perfectionism and suggests that SPP (Hewitt et al., 2006) and the three facets of PSP (Hewitt et al., 2003) produce a variety of interpersonal problems such as interpersonal over-sensitivity and hostility (e.g., Flett, Hewitt, Garshowitz, & Martin, 1997; Habke & Flynn, 2002), which then results in marked social disconnection, alienation, or a sense of not belonging (Hewitt et al., 2006). The

<sup>&</sup>lt;sup>1</sup>Although other models have incorporated some interpersonal components (e.g., Frost, Marten, Lahart, & Rosenblate, 1990), our model focuses most particularly on interpersonal underpinnings of perfectionistic behavior. There are some conceptualizations that exist that suggest both adaptive and maladaptive types of perfectionism (see Enns & Cox, 2002, for a review) but these do not incorporate interpersonal underpinnings of perfectionism nor do they describe mechanisms that account for relationships to psychopathology or other forms of maladjustment.

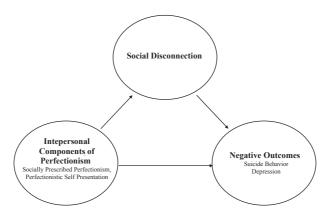


Figure 1. Components of the Perfectionism Social Disconnection Model being tested.

resultant social disconnection is thought to include both a subjective disconnection component (i.e., a phenomenological sense of detachment from others) and an objective disconnection component (i.e., actual severed or difficult relationships with others). The PSDM further postulates that social dismediates relationship connection the between perfectionism and various deleterious outcomes, including thoughts of suicide and suicide attempts. In other words, the mechanism by which perfectionism may lead to suicide outcomes is the interpersonal consequences that perfectionism creates—social disconnection, aloneness, and a lack of belonging (Hewitt et al., 2006). Thus, the model proposes that individuals who experience others as requiring them to be perfect or have an excessive need to appear to others as perfect, create social disconnection, alienation, and aloneness, resulting in distress in the form of suicidal ideation and attempts. An extension of this model is that perfectionists high in the need to appear perfect and who feel a great sense of social disconnection may be overrepresented among those individuals who attempt suicide without any apparent warning signs (Nock & Banaji, 2007). A depiction of the components of the PSDM that are evaluated in this study is presented in Figure 1. Parenthetically, this model would account for those individuals who seem to be functioning at a very high level but are functioning at a much lower

level likely characterized by extensive psychache and demoralization (see Blatt, 1995).

#### EVIDENCE FOR THE PSDM

Although the overall model has yet to be tested in relation to suicide behaviors (see Sherry, Law, Hewitt, Flett, & Besser, 2008), there is some indirect evidence for certain components of the PSDM. For example, there is increasing evidence that SPP, but not SOP or OOP, is associated with a variety of suicide outcomes (Flamenbaum & Holden, 2007; O'Connor, 2007), and among adolescents, several studies have shown that SPP is an important factor. For instance, Hewitt, Newton, Flett, and Callender (1997) found in a psychiatric sample of adolescents that SPP was associated with suicide ideation (r = .51 and .39, p < .01, for boys and girls,)respectively) and, along with hopelessness  $(\beta = .73, p < .001)$ , accounted for unique variance in suicide ideation (SPP:  $\beta = .21$ , p < .05). Further, Boergers, Spirito, and Donaldson (1998) found that SPP distinguished high-risk adolescent suicide attempters as indicated by a self-reported wish to die as the reason for the suicide attempt (d = .65). Lastly, a number of other studies have demonstrated the importance of SPP in suicidal ideation and attempts among adolescents (e.g., Enns, Cox, & Inavatulla, 2003; Hewitt, Flett, & Weber, 1994) and adults

(Dean & Range, 1996, 1999; Dean, Range, & Goggin, 1996; Hewitt, Flett, & Turnbull-Donovan, 1992). Although there is support for the link between SPP and suicide behavior, to our knowledge there is no research at present that evaluates the PSP facets with suicide behavior among adolescents or adults. Thus, the role of PSP facets in suicidality is a unique aspect of the current study.

In terms of other components of the model, there is evidence that SPP and PSP facets are associated with interpersonal outcomes such as excessive need for approval; fears of negative evaluation; and fears of rejection, abandonment, and actually being disliked by others (Hewitt & Flett, 1991; Hewitt et al., 2008). Moreover, the association between social disconnection and suicide outcomes hypothesized by the PSDM has been supported by both theoretical accounts and empirical research. For example, numerous models of suicidal behavior have underscored the importance of social disconnection and suicidal behavior (see Baumeister & Leary, 1995; Rutter & Behrendt, 2004). For example, Joiner (2005) proposed that social disconnection or a lack of belongingness and a sense of being a burden on others are important in producing suicidal behavior. The PSDM proposes that one contributing factor to lack of belongingness can be perfectionistic behavior. Likewise, there are numerous studies suggesting that social disconnection and alienation are associated with suicidal behavior (see Heinrich & Gullone, 2006).

Overall, there appears to be evidence that provides some indirect support for components of the PSDM in relation to suicide outcomes. The main purpose of the current work was to assess the validity of the PSDM. It was hypothesized that the expected relationship between SPP and suicide behaviors would be mediated by indicators of social disconnection. It was further hypothesized that the three PSP facets would all be associated with suicide behavior and that these relationships would be mediated by social disconnection.

Inclusion of the facets of PSP in this study also allows us to assess broadly the rel-

ative importance of PSP in suicide behaviors among adolescents. It is expected that PSP would be relevant to suicide behavior, especially among adolescents. In general, youth are concerned with and acutely attuned to social acceptance, social integration, and avoidance of public failures (Berndt, 1979), and adolescents' intolerance of their own public failure has been hypothesized to be relevant to suicide attempts and completions (Mack, 1986).

The current research was conducted using a sample of adolescent psychiatric patients and assessed SPP and PSP facets, various types of suicide behaviors, and social disconnection. We chose a general sample of adolescent psychiatric patients because suicide behaviors tend to be more common among these individuals in comparison with nonclinical samples. Moreover, perfectionism has been viewed a relevant personality variable that cuts across various disorders and psychological problems (see Egan, Wade, & Shafran, 2010), and it is seen as a core vulnerability factor in a variety of types of psychopathology (Hewitt et al., 2008; Hewitt, Mikail, & Flett, in press).

The current study was based on two indicators of social disconnection that were selected because of their apparent relevance to perfectionism and because they have both been implicated in suicidality, namely, experiences of being bullied by peers and social hopelessness or pessimism regarding current and future relationships. Being bullied (i.e., verbally, physically, or otherwise attacked by peers) is conceptualized as a destructive relationship problem related to social withdrawal, social isolation, and difficulties with friendships for victims of bullying (Olweus, 1993; Craig & Pepler, 2007). As such, being bullied may be a potent marker of one's lack of social connection with others. Extensive evidence is accumulating for the role of being bullied in suicide. A recent review of the findings of 31 studies confirmed that exposure to bullying is associated with suicide risk in children and adolescents, with odds ratio ranging from 1.4 to 5.6 (Kim & Leventhal, 2008), and a recent longitudinal

study confirmed that being bullied in child-hood is a long-term risk factor for suicide attempts and completed suicides in early adulthood (Meltzer, Vostanis, Ford, Bebbington, & Dennis, 2011).

The association between perfectionism and bullying is largely unknown and has not been tested with the exception of a study of university students showing that perfectionism was linked with retrospective accounts of being victimized by others (Miller & Vaillancourt, 2007). To our knowledge, the current study is unique in terms of being the first empirical attempt to examine this association in a clinical sample of adolescents and to examine both trait perfectionism and PSP.

The second indicator of social disconnection, social hopelessness, represents more of a subjective form of social disconnection. Socially hopeless individuals expect that "they will be unlikely to experience positive interpersonal relationships, to 'fit in' in social situations, and to be comfortable in the presence of others" (Heisel, Flett, & Hewitt, 2003; p. 223). Past research suggests that social hopelessness is associated with SPP and with suicide behavior (e.g., Heisel et al., 2003; Hewitt, Norton, Flett, Callander, & Cowan, 1998).

Overall, the major goal of the current study was to better understand the association of SPP and PSP facets to suicide outcomes by assessing the PSDM and determining whether these relationships are mediated by social disconnection. Furthermore, the inclusion of PSP also allows us to examine PSP and suicide behaviors among adolescent psychiatric patients.

## METHOD

## **Participants**

A sample of 158 child and adolescent psychiatric outpatients from the Anxiety and Depression Disorders Clinic at the British Columbia Children's Hospital, who had mixed clinical diagnoses, completed questionnaire packages. Six participants were

removed because of incomplete data. Participants in the current study included 152 youth (83 males, 69 females) between the ages of 8 and 20 (mean age = 12.87 years, SD = 2.97). The current study included primarily Caucasian Canadian (71.5%), European (9.2%), and Asian (6.6%) participants. Structured clinical interviews were not completed for diagnosis; however, participants were treated for depression and/or anxiety disorders.

#### Measures

Child-Adolescent Perfectionism Scale. The CAPS (Flett, Hewitt, Boucher, Davidson, & Munroe, 2000) is a 22-item selfreport measure that measures children and adolescents' motivation to be perfect using two subscales: SOP and SPP. A 5-point Likert scale is used to rate the items ranging from 1 (not at all like me) to 5 (very true of me) with higher scores reflecting greater perfectionism. The CAPS has been shown to predict perfectionism with an adequate level of reliability, internal consistency, and stability. For example, coefficients alpha for SOP are .85 and for SPP .81, and test-retest reliabilities range between .66 and .74, respectively. Further, the multidimensional nature of the CAPS has been demonstrated via factor analysis and as a further indication of construct validity; whereas SOP was associated with ratings of desire for perfection for oneself, SPP was associated with parents' ratings of perfection for oneself (Flett et al., 2000).

PSP Scale Junior Form. The PSPS-Jr. (Hewitt, Blasberg, et al., 2011) is an 18-item self-report scale that measures PSP styles in children and adolescents. Items are rated on a 5-point Likert Scale, ranging from 1 (not at all) to 5 (extremely). The PSPS-Jr. measures three facets: perfectionistic self-promotion, nondisplay of imperfection, and nondisclosure of imperfection. Each facet has been found to be internally consistent with coefficients alpha, .91, .82, and .72, respectively. Convergent validity of the PSPS-Jr. was demonstrated by its significant relationship

with trait perfectionism on the CAPS, and concurrent validity was demonstrated by the facets' ability to correlate with depression (see Hewitt et al., 2003; Hewitt, Blasburg, et al., 2011).

Child-Adolescent Suicidal Potential Index. The CASPI (Pfeffer, Jiang, & Kakuma, 2000) is a 30-item self-report measure of risk for suicidal behavior using three domains: anxious-impulsive depression, suicidal ideation and acts, and family distress. Participants are asked to respond "yes" or "no" to items. Acceptable internal consistency ( $\alpha = .90$ ) and adequate test-retest reliability (r = .76 over 2 weeks) have been reported. Correlations with related constructs such as depression and hopelessness demonstrated the scale's convergent validity. Construct validity has been demonstrated by the scale's ability to distinguish between youth with varying levels of suicidal behavior.

Suicide Ratings. An additional rating of suicidal behavior was used in the current study to assess likelihood of attempting suicide in the future. This rating has been used in prior research with youth (Hewitt et al., 1994). Participants were asked "How likely is it that you will attempt suicide someday?" They rated their response from 0 (not at all likely) to 5 (very likely). In the current study, the suicide rating and the CASPI correlated at r = .33, p < .001, supporting convergent validity of the suicide rating while also demonstrating that each measure assesses different aspects of suicide, both in type of behavior (attempt and ideation, respectively) and in time frame.

Ratings of Social Disconnection. Ratings were used to assess experiences of being bullied or teased by peers, and social hopelessness. Participants were asked "Have you ever been bullied or teased by other kids?" and "How often do you feel hopeless about your relationships?" Ratings ranged from 0 (Never) to 3 (Very Often). Items are similar to ratings used in other studies on bullying in youth (Brunstein-Klomek, Marrocco, Kleinman, Shonfeld, & Gould, 2007; Hewitt et al., (1998).

#### Procedure

Participants were recruited from an outpatient psychiatric clinic at a major metropolitan children's hospital in Vancouver, British Columbia, Canada. While attending the outpatient clinic, youth and their parents were informed of the study and given the opportunity to participate. If consent and assent were given by the parent and youth, respectively, the youth was asked to complete a questionnaire package and return it by mail. The study received IRB approval from the Behaviour Research Ethics Board at the University of British Columbia.

#### **RESULTS**

## Descriptive Statistics

Means, standard deviations, and coefficients alpha are presented in Table 1.<sup>2</sup> Results suggest that the present sample is comparable with other child and adolescent clinical samples in terms of mean levels of variables (e.g., Hewitt, Blasberg, et al., 2011; Hewitt et al., 2002). Additionally, Cronbach's alpha coefficients were found to be adequate for each measure ranging between .71 and .97.

### Correlational Statistics

Table 1 also includes the intercorrelations among variables for the sample. SOP had no significant relation to either of the two suicide variables, being bullied or social

<sup>&</sup>lt;sup>2</sup>The frequencies of responses for singleitem ratings were as follows: to the question "How likely is it that you will attempt suicide someday?" 118 participants answered 0 (not likely at all), 19 answered 1, 2 answered 2, 3 answered 3, 4 answered 4, and 6 answered 5 (very likely); to the question "Have you ever been bullied or teased by other kids?" 29 participants answered 0 (never), 47 answered 1, 42 answered 2, and 33 answered 3 (very often); and to the question "How often do you feel hopeless about your relationships?" 61 participants answered 0 (never), 43 answered 1, 30 answered 2, and 18 answered 3 (very often).

Means, Standard Deviations, Coefficients Alpha, and Correlations Coefficient for Measures of Perfectionism, Suicide Outcomes, and Indicators of Social Disconnection FABLE 1

	1	2	3	4	5	9	7	8	M	SD	×
Self-oriented perfectionism									34.30	9.07	.84
Socially prescribed perfectionism	.30***	1							24.83	8.67	.87
Perfectionistic self-promotion	.46***	.38***							20.04	8.75	.92
Nondisplay of imperfections	.41***	.10	.63***	I					18.17	6.03	80
Nondisclosure of imperfections	.23**	.20*	***09	.50***					11.25	4.10	.71
Suicide risk	.11	.36***	.33***	.23**	.32***				11.68	89.9	83
Future likelihood of suicide	.13	.18*	.14	.05	.17*	.33***			0.51	1.22	n/a
Being bullied	.04	.13	.20*	.27**	.17*	.35***	.16***	l	1.52	1.03	n/a
Social hopelessness	80.	.27**	.29***	.26**	.30***	.65***	.35***	.30***	1.03	1.03	n/a

 $^{*}p < .05, ^{**}p < .01, ^{***}p < .001,$ n/a = not applicable.

hopelessness. All of the interpersonal components of perfectionism were significantly correlated with suicide risk. Only some of these components were significantly associated with the future likelihood of attempting suicide, namely SPP and nondisclosure of imperfections. Furthermore, the three facets of PSP, but not SPP, were significantly correlated with being bullied, and all four components of interpersonal perfectionism were associated with social hopelessness. In addition, being bullied and social hopelessness were both correlated with the two suicide variables. Finally, it is interesting to note that SPP did not overlap substantially with the facets of PSP in this clinical sample. To determine whether SPP and the three facets were uniquely associated with suicide, we conducted a multiple regression analysis. In the first predictor block, SOP and SPP accounted for 13% of the variance in suicide risk, F(2, 149) = 11.12, p < .001, and SPP was uniquely related to suicide risk,  $\beta = .36$ , t(151) = 4.51, p < .001. In the second predictor block, perfectionistic self-promotion, nondisplay of imperfection, and nondisclosure of imperfection accounted for an additional 8% of the variance in suicide risk,  $R^2 = .21$ ,  $\Delta R^2 = .08$ , F(3, 146) = 5.16, p < .01, and both SPP,  $\beta = .32$ , t(151) = 3.85, p < .001, and nondisclosure of imperfection,  $\beta = .19$ , t(151) = 1.99, p < .05, accounted for unique variance.

## Testing the PSDM

The principal goal of the study involved assessing relationships between interpersonal components of perfectionism and suicide outcomes and whether these were mediated or had an indirect effect via social disconnection—objectively indicated through the experience of being bullied and subjectively indicated through the experience of social hopelessness.

According to Baron and Kenny (1986), three conditions must be satisfied prior to testing mediation. First, the independent variable (perfectionism) must be significantly associated with the dependent variable (suicide), denoted as *c-path*. Second, the independent variable (perfectionism) must be associated with the mediating variable (social disconnection), denoted as *a-path*. Third, the mediating variable (social disconnection) must be associated with the dependent variable (suicide) when controlling for the independent variable (perfectionism), denoted as *b-path*. Mediation is present when the association between the independent variable (perfectionism) and the dependent variable (suicide) when controlling for the mediating variable (social disconnection), denoted as *c'-path*, is significantly reduced as compared to *c-path*.

More recently, the requirement of the first condition has been debated and questioned (e.g., Collins, Graham, & Flaherty, 1998; MacKinnon, Krull, & Lockwood, 2000; Shrout & Bolger, 2002). There are several instances when the relationship between the independent and dependent variable may not be empirically apparent, while an indirect effect through an intervening variable could exist statistically. Although the data in the current study was not measured temporally, perfectionism can be conceptually considered as a distal process. As personality develops early in life, its effect is likely to be transmitted and spread across several mechanisms over the lifespan. Some of these mechanisms may even be inconsistent with each other (i.e., holding opposing effects, and weakening the apparent total effect of the independent variable on the dependent variable). Thus, in this study, the authors opted to proceed with meditational analysis whether the c-path was found to be significant or not (a-path and b-path must still be significant), as recommended by Shrout and Bolger (2002).

Mediated effects were tested via bootstrap analyses, indicated in recent literature as particularly appropriate for testing mediation without the requirement of a significant *c-path* or assumptions of normality (Mallinckrodt, Abraham, Wei, & Russell, 2006; Preacher & Hayes, 2008). Random sampling with replacement was used to create 5,000 bootstrap samples from the original data set. Bootstrap samples were used to estimate

bias-corrected standard errors for indirect effects and 95% confidence intervals (CIs) for indirect effects. Following Preacher and Hayes (2008), mediation was tested by evaluating the significance levels of indirect effects. Indirect effects were calculated by multiplying the coefficients from *a-path* by *b-path*. CIs were also placed around indirect effects.

Table 2 and Figures 2 through 5 show the results of the bootstrapping analysis to test the significance of the mediation effects. *Path a* and *b* coefficients are indicated and in instances when both are significant, further information from the analyses are provided (coefficients of *c-path*, *c'-path*, and CIs). All analyses were conducted with age and gender as covariates.

In analyses with being bullied as the mediating variable, the three facets of PSP were found to be significantly partially mediated in the prediction of suicide risk, with 95% CI. Additionally, an indirect effect for nondisplay of imperfections on future likelihood of attempting suicide was significant, 95% CI.

With social hopelessness as the mediating variable, indirect effects were significant for all four components of interpersonal perfectionism in terms of both suicide risk and future likelihood of attempting suicide. In the prediction of suicide risk, partial mediations were found for SPP, perfectionistic self-promotion, and nondisclosure of imperfection, while nondisplay of imperfection was fully mediated by social hopelessness. In terms of the future likelihood of attempting suicide, SPP and nondisclosure of imperfections were fully mediated. Perfectionistic self-promotion and nondisplay of imperfections were found to have an indirect effect on future likelihood of attempting suicide via social hopelessness.

#### **DISCUSSION**

We examined the relationships among perfectionism traits, facets of PSP, social disconnection, and suicide outcomes in a

Path Coefficients and Confidence Intervals of Mediational Analyses, Controlling for Age and Gender

Independent variable	a-path	b-path	c-path	c'-path	95% CI	a-path	b-path	c-path	c'-path	95% CI
Intervening variable Denendent variable Suicide rick			Being Bullied	pə			Soc	Social Hopelessness	ssness	
Socially prescribed perfectionism	.02	2.10***				.03**	3.80***	.28***	.16**	
Perfectionistic self-promotion	.02*	2.03***	.24***	.19***	.01, .10	.03***	3.87***	.24***	.11*	
Nondisplay of imperfections	.05***	2.08***	.27***	.17*	.04, .19	.05***	4.04***	.27**	.07	.09, .30
Nondisclosure of imperfections	*40.	2.06***	.52***	.43***	.01, .20	****20.	3.86***	.52***	.24*	.15, .45
Dependent variable: Future likelihood										
Socially prescribed perfectionism	.02	.19*				.03**	.30**	.02*	.01	.003, .02
Perfectionistic self-promotion	*05	.18				.03***	.31**	.02	.01	.003, .02
Nondisplay of imperfections	.05***	$.20^*$	.01	.003	.002, .03	.05***	.34**	.01	003	.01, .04
Nondisclosure of imperfections	.04*	.17				.07***	.29**	.05*	.03	.01, .05

All coefficients represent unstandardized beta weights.  $^*p < .05, ^{**}p < .01, ^{***}p < .001$ , bolding denotes significant indirect effects.

clinical sample of adolescents. The current study replicates past findings that SPP is related to suicide outcomes in youth, but it also establishes for the first time that PSP facets are associated with suicide outcomes in youth. That is, adolescents with higher levels of suicide potential were also characterized by a tendency to portray themselves as flawless and avoid displaying or disclosing imperfections. Moreover, the current study provides validation of the PSDM with respect to suicide outcomes by demonstrating that the relationship between interpersonal components of perfectionism and suicide risk or future likelihood of attempting suicide was mediated by social disconnection as evidenced by experiences of being bullied or social hopelessness.

The primary goal of this study was to test the PSDM by determining whether the experiences of being bullied or teased by peers, or of social hopelessness, mediated the relationship between interpersonal components of perfectionism and suicide outcomes. The first step in testing this meditational model was to establish that these interpersonal perfectionism dimensions were associated significantly with social hopelessness and reports of being bullied. This was indeed the case, though the association with bullying was found for all facets of PSP and not for SPP. To our knowledge, these data represent the first evidence of a link between a history of bullying and needing to appear perfect. This finding accords with predictions from the social reaction model of the development of perfectionism, which is based on the premise that perfectionism develops in response to mistreatment or exposure to chaotic circumstances (see Flett, Hewitt, Oliver, & Macdonald, 2002). The cross-sectional nature of the current study does not allow us to determine whether bullying led to PSP or vice versa, so there is a clear need for longitudinal research to help illuminate why this perfectionistic style is linked with a report history of being bullied and teased.

Subsequent analyses testing the PSDM showed that the relationships between the facets of PSP and suicide risk

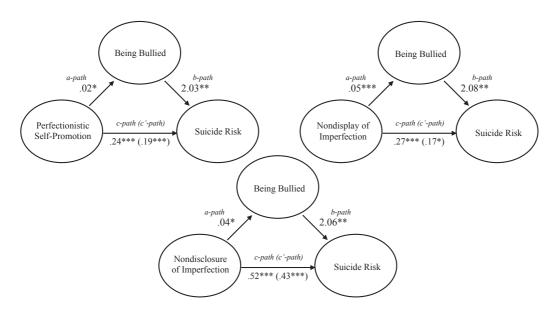


Figure 2. Illustration of the relationship among the three facets of perfectionistic self-presentation, being bullied or teased, and suicide risk, controlling for age and gender. *Note*. All coefficients represent unstandardized beta weights. A full line denotes both *c-path* and *c'-path* as significant, a dashed line denotes *c-path* but not *c'-path* as significant, and no line denotes neither *c-path* nor *c'-path* as significant, between independent variable and dependent variable. \*p < .05, \*\*p < .01, \*\*\*p < .001.

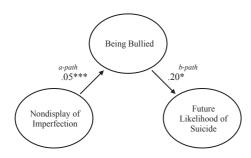


Figure 3. Illustration of the relationship among interpersonal nondisplay of imperfections, being bullied or teased, and the future likelihood of attempting suicide, controlling for age and gender. *Note*. All coefficients represent unstandardized beta weights. A full line denotes both *c-path* and *c'-path* as significant, a dashed line denotes *c-path* but not *c'-path* as significant, and no line denotes neither *c-path* nor *c'-path* as significant, between independent variable and dependent variable. \**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

were mediated by experiences of being bullied, suggesting that PSP leads to being bullied or teased by peers, which in turn leads to suicide risk. Similarly, an indirect effect on the future likelihood of attempting suicide was found through nondisplay of imperfections and being bullied or teased by peers.

Thus, being bullied may be a particularly important intervening variable in the prediction of suicide outcomes when it comes to nondisplay of imperfections. These findings support the proposed PSDM, showing that interpersonal components of perfectionism may lead to social disconnection in the form of being bullied leading to suicide outcomes.

As noted above, the finding that being bullied was involved in the mediation pathway between PSP, particularly nondisplay of imperfection, and suicide outcomes can be understood in a number of ways. First, PSP has been shown to play a unique role in psychological difficulties in general, including depression and anxiety (Hewitt, Blasberg, et al., 2011), which may lead youth to becoming targets of bullying (Swearer, Song, Cary, Eagler, & Mickelson, 2001). Research on bullying consistently states that bullies do not select their victims randomly; they tend to be particularly good at detecting weakness and vulnerability in others and targeting those individuals. Youth who are at risk for being bullied tend to exhibit signs of anxiety, social withdrawal, and poor self-concepts

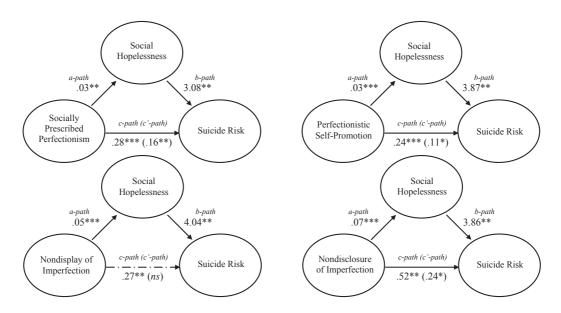


Figure 4. Illustration of the relationship among the four interpersonal components of perfectionism, social hopelessness, and suicide risk, controlling for age and gender. *Note*. All coefficients represent unstandardized beta weights. A full line denotes both *c-path* and *c'-path* as significant, a dashed line denotes *c-path* but not *c'-path* as significant, and no line denotes neither *c-path* nor *c'-path* as significant, between independent variable and dependent variable. \*p < .05, \*\*p < .01, \*\*\*p < .001.

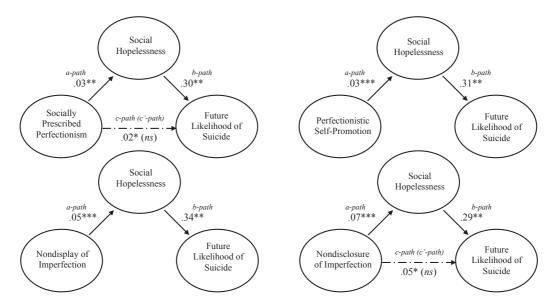


Figure 5. Illustration of the relationship among four interpersonal components of perfectionism, social hopelessness, and the future likelihood of attempting suicide, controlling for age and gender. *Note*. All coefficients represent unstandardized beta weights. A full line denotes both *c-path* and *c'-path* as significant, a dashed line denotes *c-path* but not c'-path as significant, and no line denotes neither *c-path* nor c'-path as significant, between independent variable and dependent variable. \*p < .05, \*\*p < .01, \*\*\*p < .001.

(Kansas State Department of Education, 2008). PSP, particularly nondisplay of imperfection, predicts low self-esteem (Hewitt

et al., 2003). Also, like other victims of bullying, youth who endorse nondisplay of imperfection tend to be socially anxious and have

higher overall levels of anxiety (Hewitt, Blasberg, et al., 2011). Those individuals high in PSP may not be able to convince others of their supposed perfection. That is, others seem to be able to see through the façade of perfection (Hewitt & Flett, 1991), which results in generating animosity or dislike in others (Hewitt et al., 2008). This suggests that individuals with excessive levels of PSP create a neurotic paradox whereby the excessive desire for belonging and connectedness increases their perfectionistic behavior, which actually creates social disconnection and rejection from others.

When considered in terms of the mediating role of social hopelessness, all interpersonal components of perfectionism were found to lead to social hopelessness that mediated their respective relationships with suicide risk and future likelihood of attempting suicide. Perhaps youth who are socially anxious and have a strong need to present themselves as perfect, but lack confidence in their ability to do so, experience more hopelessness, frustration, and difficulties in their interpersonal relationships because of a perceived lack of ability to present the self as desired and are thus at greater risk for suicide. Research has demonstrated various links among SPP, social hopelessness, and suicide outcomes (e.g., Heisel et al., 2003; Hewitt et al., 1998), and this study extends these findings to PSP and empirically supports the PSDM.

The finding that SPP, and not SOP, is related to suicide outcomes was replicated (Boergers et al., 1998; Dean & Range, 1996, 1999; Hewitt et al., 1992; Hewitt et al., 1997; Hewitt et al. 1998; Hunter & O'Connor, 2003). The well-supported distinction between intra- (i.e., SOP) and interpersonal (SPP) perfectionism in relation to suicide outcomes speaks to the importance of developing models such as the PSDM that can help clarify observed differences between inter- and intrapersonal perfectionism and the relationship to negative outcomes such as suicide behaviors.

An overarching goal of this study was to investigate whether PSP facets are related

to suicide outcomes. PSP was found to be correlated with suicide outcomes, particularly suicide risk. We demonstrated that it is the perfectionistic interpersonal behavior that is associated with social disconnection, which in turn is associated with suicide behavior. These findings supporting the link between the PSP facets and suicide behavior may have important implications for many of the suicides that occur without warning, especially by those who most other people would have described as functioning "perfectly well," and thus would be reluctant to seek help. Miotto and Preti (2008) have suggested that when it comes to suicidal tendencies among adolescents, the defensiveness and denial of adolescents may reflect attempts to hide behind a socially acceptable façade. Friedman (2006) observed that much of the mental illness of adolescents goes unrecognized and that adolescents are often "notoriously secretive" (p. 2718) about their own psychopathology and suicidal tendencies. The nondisclosure component was consistently associated with unwillingness to seek help for psychological difficulties (DeRosa, Flett, Hewitt, & Miezitis, 2011; Hewitt, Blasberg, et al., 2011). Moreover, research has found that active self-concealment is responsible for greater psychological distress in perfectionists (Kawamura & Frost, 2004). According to Horesh, Zalsman, and Apter (2004), an important risk factor for adolescent suicidal behavior is the inability to communicate feelings and thoughts to people close to oneself, which is also prominent in perfectionists. Consistent with previous research, current findings suggest that youth with a need to be seen as perfect by others have a higher risk of suicide.

The findings of the regression analyses, whereby both SPP and the nondisclosure of imperfections were uniquely related to suicide risk, are consistent with the work of Arie et al. (2005) who indicated that both perfectionism and an inability to self-disclose were particularly salient features of adolescent suicide attempters and completers. They indicated that one of the prominent features of perfectionism among suicide

completers was an expressed inability to live up to expectations, and that a lack of self-disclosure led to a sense of isolation and a greater degree of loneliness and suffering. Thus, the findings of this study are consistent both with Arie's notions and with the PSDM.

Another goal of the current study was to determine whether the interpersonal components of perfectionism are related to social disconnection. Regarding the being bullied indicator, it was found that each PSP facet was positively related, while perfectionism traits were not. Past research has shown that perfectionism traits are related to peer victimization (Miller & Vaillancourt, 2007), but these findings are limited to adult memories of childhood peer victimization. The discrepancy with present findings may reflect differences in measurement or sample age. More importantly, our study is the first to demonstrate a relationship between PSP and being bullied. It appears that PSP facets have a different impact on how youth are treated by peers in an interpersonal context. PSP facets may be significantly related to being bullied because these interpersonal expressions are more noticeable to other youth (Hewitt et al., 2003), and thus the maladaptive interpersonal style of rigidly portraying perfection may attract negative attention from peers in the form of being bullied or teased.

Regarding social hopelessness, all interpersonal components of perfectionism were significantly positively related to feeling hopeless about future interpersonal outcomes. This is consistent with past conceptualizations of SPP as entailing a form of social hopelessness regarding an inability to be accepted by others (Hewitt, Blasberg, et al., 2011). The relationship between PSP and both social disconnection variables is consistent with the conceptualization that this is a neurotic interpersonal style related to socially maladaptive outcomes (Hewitt et al., 2003).

Overall, this study has highlighted the significant impact that interpersonal components of perfectionism have on social discon-

nection and suicide outcomes in youth. This has important implications for how problems with perfectionism are addressed in clinical settings. For example, it is clear that the assessment of interpersonal components of perfectionism may be critical in an appropriate evaluation of suicide risk. The adolescent suicide research is replete with references to the perfectionism of adolescents as a contributing factor and the current findings certainly underscore the importance of these perfectionism components (see Arie et al., 2005). Perhaps most significantly, the assessment of perfectionistic self-presentational among adolescents may provide clues for adolescents who may be at risk for suicide but do not demonstrate some of the traditional warning signs or make others aware of their suicidal wishes. Perfectionistic individuals may perceive revealing vulnerability to suicide as an imperfection and weakness, and may not display signs or even admit to direct questioning about suicidal behavior and may take every measure to conceal their vulnerability, particularly among those with high scores on nondisplay and nondisclosure of imperfections. Too often we read anecdotal accounts of the "superstars" who appear not to have a care in the world, but, inexplicably, attempt or complete suicide. Berman and Jobes (1991) discuss perfectionism among high-achieving "star" students whose suicides are often very shocking to those left behind. It is often only after the fact that the degree of pain and torment the person was experiencing becomes clear (Apter et al., 1993; Blatt, 1995). Assessment of the perfectionistic self-presentational facets may aid in the identification of adolescents who may appear to be functioning well, or even extremely well, and not distressed, but are, in fact, experiencing profound pain and potential for suicide.

The current study also suggests that people who are struggling with perfectionistic behavior would also be helped by changes in specific personality features, such as their need to be perfect or their need to appear to others as perfect to obtain interpersonal goals such as feeling connected or a sense of belongingness (see Hewitt et al., 2006,

2008). Hewitt, Mikail, et al. (2011) have demonstrated the effectiveness of a psychodynamic/interpersonally oriented group psychotherapy program for perfectionism that shows the treatment significantly reduces both perfectionism traits and PSP as well as attendant distress. This treatment focuses not on the perfectionistic behavior per se, but rather on the interpersonal precursors or underpinnings of perfectionism that involve thwarted needs to belong or to be connected with others. Although there has been some research on cognitive-behavioral approaches to treating perfectionism with limited findings (e.g., Riley, Lee, Cooper, Fairburn, & Shafran, 2007), the psychodynamic-interpersonal approach that focused specifically on perfectionism seems particularly promising as the effect sizes for improvements were much larger. (see Hewitt, Mikail, 2011). This approach is consistent with other psychodynamic-interpersonal approaches to treating perfectionism which focus on interpersonal precursors of perfectionism (Blatt & Ford, 1994; Greenspon, 2008; Hewitt et al., in press; Sorotzkin, 1985).

It should be noted that other research we have completed suggests that the PSP facets that are associated with suicidal behavior in adolescents are also associated with difficulties in establishing a therapeutic alliance (Hewitt et al., 2008). This suggests that although the assessment of these perfectionism components are important in determining suicide risk, elevated levels of the facets may interfere with the treatment of the perfectionism. Although certainly more research is necessary, it would seem that focusing on the interpersonal components of perfectionism may be particularly fruitful in aiding potentially suicidal adolescents.

# LIMITATIONS AND FUTURE DIRECTIONS

The limitations of the current study should be noted along with a consideration of avenues for future work. One limitation is that single ratings of being bullied, social hopelessness, and future likelihood of attempting suicide were used. The fact that significant results were found despite the single-item measures points to the strength of this particular finding and suggests that future research would further clarify this finding using more extensive measures. Further, the bullying rating asks about being bullied or teased in the same question. These two concepts may be confounded in participants' answers; clarification is required to determine whether adolescents perceive these concepts as separate or alike. If a selfreport measure were used in combination with in vivo observation of peer/teacher reports of bullying, this would strengthen the measurement of bullying and circumvent the issue that perfectionistic youth may be more likely to interpret social cues as signs of being rejected or bullied (Miller & Vaillancourt, 2007). Although the mediation analysis used in this study suggests causal links between perfectionism and social disconnection, the cross-sectional nature of the present research makes determination of causation difficult. Also, as noted earlier, the temporal sequence of perfectionism and social disconnection could be clarified in future research by conducting a longitudinal study measuring perfectionism at time one, and suicide ideation and bullying or social hopelessness at time two. Also, there are many other ways that social disconnection can be measured beyond the measures used in this study. Measures examining subjective and objective experiences of loneliness, perceived social support, social alienation, quality of relationships, levels of conflict and other measures may play a relevant role in understanding the relationship between interpersonal components of perfectionism, social disconnection, and suicide outcomes.

#### **CONCLUSION**

The current study provides support for the PSDM by showing that social disconnection mediates the relationship

between interpersonal components of perfectionism and suicide behaviors. Moreover, there was evidence that SPP and facets of PSP are associated with suicide behavior among youth. This suggests that the PSDM is an important model to account for the unique role of interpersonal components of perfectionism in understanding the trajectory toward suicide outcomes in youth.

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