

# Perfectionism, Feelings of Not Mattering, and Suicide Ideation: An Integrated Test of the Perfectionism Social Disconnection Model and the Existential Model of Perfectionism

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## Abstract

The Perfectionism Social Disconnection Model (PSDM) and the Existential Model of Perfectionism and Depressive Symptoms (EMPDS) are promising models of perfectionism and psychopathology. However, research examining suicide ideation within the PSDM is scarce, and no research has examined suicide ideation as an outcome in the EMPDS. Moreover, tests of the PSDM and EMPDS have been conducted separately and most research has examined the PSDM and EMPDS using cross-sectional or two-wave longitudinal designs, which do not provide a satisfactory test of mediation. In the current study, we addressed these limitations by testing whether perfectionism confers vulnerability to suicide ideation via feelings of mattering and anti-mattering (from the PSDM) and via difficulty accepting the past (from the EMPDS) in a three-wave longitudinal design in two independent samples of undergraduate students and community adults. Participants completed measures on three occasions over 6 weeks. Findings revealed that socially prescribed perfectionism indirectly predicted suicide ideation via difficulty accepting the past in both samples. In addition, in the undergraduate sample only, socially prescribed perfectionism indirectly

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predicted higher suicide ideation via anti-mattering, and self-oriented perfectionism indirectly predicted higher suicide ideation via mattering. Based on our findings, we advocate for future research to include suicide ideation in the PSDM and EMPDS, to integrate explanatory models, and to examine a mattering-specific EMPDS.

### **Keywords**

perfectionism, mattering, anti-mattering, accepting the past, suicide, longitudinal

## **Introduction**

Suicide is a major public health concern. Globally, over 700,000 people die by suicide per year, and many more attempt suicide (World Health Organization, 2021). Suicide is one of the leading causes of death worldwide, particularly in the student-aged population. Recent data, for instance, has found suicide to be the fourth leading cause of death in 15 to 29 year olds worldwide (World Health Organization, 2021). Evidence suggests rates of suicide are increasing in young people (e.g. Bridge et al., 2023; Office for National Statistics, 2019). As with suicide, recent evidence indicates that perfectionism is on the rise (Curran & Hill, 2019). Given that perfectionism is considered a risk factor for suicide ideation (Flett & Hewitt, 2024; Smith, Sherry, Chen, et al., 2018), the primary goal of the current study is to test possible mechanisms underpinning this relationship in samples of undergraduate students and community adults. We were especially interested in examining the role of feelings of mattering and feelings of not mattering within existing models. A secondary goal was to compare measures of mattering and anti-mattering in their links with suicide ideation as well as depressive symptoms and accepting the past.

### *Suicide Ideation and Perfectionism*

Despite challenges in defining suicide ideation, suicide ideation can broadly be regarded as thoughts of ending one's life ranging from passive thoughts to more active thoughts (Silverman, 2016; Turecki et al., 2019). While suicide ideation often precedes suicide attempts, many people who experience suicide ideation never attempt suicide (Joiner, 2005). Consequently, distinguishing between the two and studying different antecedents and mechanisms contributing to each is essential in research (Klonsky & May, 2014). There are numerous risk factors for suicide ideation, which include depression, hopelessness, and anxiety (Franklin et al., 2017). Some personality traits have also been identified as risk factors for suicide ideation. One important risk factor is perfectionism (Smith, Sherry, Chen, et al., 2018).

Perfectionism is a personality trait characterized by irrational standards and harsh self-criticism (Hewitt & Flett, 1991). An influential model of perfectionism is Hewitt and Flett's multidimensional model (Hewitt & Flett, 1991), which captures both intrapersonal and interpersonal trait aspects of perfectionism. It comprises three dimensions which differ based upon the direction of perfectionistic beliefs and behaviours: self-oriented perfectionism (i.e. requirement of perfection for the self), socially prescribed perfectionism (i.e. belief that others require perfection of oneself), and other-oriented perfectionism (i.e. requirement of perfection for others). Since its formation, dimensions of perfectionism have been examined extensively across various settings and samples (see Hewitt et al., 2017).

Suicide has long been theorized as one potential outcome for people who are highly perfectionistic (e.g. Blatt, 1995). Research has supported the perfectionism-suicide ideation

relationship in cross-sectional and longitudinal research (e.g. Beevers & Miller, 2004; Robinson et al., 2021; Wetherall et al., 2019). Smith, Sherry, Chen, et al. (2018) summarized these relationships in a meta-analytic review and found both self-oriented and socially prescribed perfectionism to be positively related to suicide ideation. However, socially prescribed perfectionism was a stronger and more consistent predictor of suicide ideation than self-oriented perfectionism. Socially prescribed perfectionism also predicted suicide ideation over time, whereas self-oriented perfectionism did not.

### *The Perfectionism Social Disconnection Model*

One theoretical model intended to explain the relationship between perfectionism and suicide ideation is the Perfectionism Social Disconnection Model (PSDM). This model suggests that socially prescribed perfectionism leads to social disconnection (i.e. feeling disliked, alienated, and detached from others), which in turn, leads to suicide ideation (Hewitt et al., 2006). Recent expanded models of the PSDM also suggest a role for self-oriented perfectionism (Hewitt et al., 2017). Self-oriented perfectionism is thought to generate social disconnection due to an extreme focus on achievement and subsequent costs of forming meaningful relationships with others (Sherry et al., 2016). However, socially prescribed perfectionism emerges as a stronger and more consistent predictor in this model, relative to self-oriented perfectionism, when examining both depressive symptoms and suicide ideation as outcomes (e.g. Etherson et al., 2022b; Flett et al., 2012; Robinson et al., 2021). Most research on the PSDM has examined depressive symptoms as an outcome, with research finding support for the inclusion of various markers of social disconnection (e.g. mattering, loneliness, and social hopelessness; Cha, 2016; Rnic et al., 2021; Smith, Sherry, McLarnon, et al., 2018). In contrast, research examining suicide ideation in the PSDM is much scarcer.

Only three studies have examined suicidal thoughts or behaviours as an outcome in the PSDM (e.g. Etherson et al., 2022b; Robinson et al., 2021; Roxborough et al., 2012). Of these, two studies supported the inclusion of suicide ideation in the PSDM (Robinson et al., 2021; Roxborough et al., 2012). In the first, Roxborough et al. (2012) found that socially prescribed perfectionism and perfectionistic self-presentation indirectly predicted greater suicidal behaviour via social hopelessness and being bullied in child and adolescent outpatients. In the second study, Robinson et al. (2021) found both self-oriented perfectionism and socially prescribed perfectionism to indirectly predict greater suicide ideation via interpersonal hopelessness, but not general hopelessness, in adults with a history of suicide ideation. By contrast, in the third study, Etherson et al., 2022b did not find support for including suicide ideation in the PSDM in an undergraduate sample. Specifically, self-oriented and socially prescribed perfectionism did not indirectly predict suicide ideation via feelings of not mattering over time.

### *The Existential Model of Perfectionism and Depressive Symptoms*

In search of other possible explanations for these relationships, another important theoretical model which purports to explain the relationship between socially prescribed perfectionism and mental health problems is the Existential Model of Perfectionism and Depressive Symptoms (EMPDS; Graham et al., 2010). This model suggests that socially prescribed perfectionism leads to greater depressive symptoms through difficulty accepting the past (i.e. viewing life experiences as incoherent, unacceptable, dissatisfying, and meaningless). Research supports this model when depressive symptoms are an outcome (e.g. Graham et al., 2010; Sherry et al., 2015; Smith, Sherry, Hewitt, et al., 2020, Smith, Sherry, McLarnon, et al., 2018). Graham et al. (2010), for instance, conducted a four-week, four-wave longitudinal study that found perfectionistic concerns (a

dimension similar to socially prescribed perfectionism) predicted greater depressive symptoms through difficulty accepting the past in a sample of undergraduate students. More recently, [Smith, Sherry, Hewitt, et al. \(2020\)](#) also found socially prescribed perfectionism to indirectly predict greater depressive symptoms through difficulty accepting the past in a sample of community adults.

Suicide ideation has been proposed as an essential addition to the EMPDS ([Smith, Sherry, Hewitt, et al., 2020](#)). However, as yet, there has been no test of this model that includes suicide ideation as an outcome. Both theory and research suggest that suicide ideation may be a key outcome in the EMPDS. [Butler \(1963\)](#), for instance, theorized that an obsessive preoccupation with the past may lead to suicidality. In addition, research has found existential markers, such as reasons for living and the presence of and search for meaning in life, to predict decreases in suicide ideation over time ([Heisel et al., 2016](#); [Kleiman & Beaver, 2013](#)). Earlier research has also found socially prescribed perfectionism to interact with future positive thinking, over general recall of positive and negative memories, and reasons for living to predict greater suicide ideation ([Dean & Range, 1996](#); [O'Connor et al., 2007](#); [Rasmussen et al., 2008](#)). With this work in mind, the current study is the first to examine suicide ideation as an outcome in the EMPDS.

### *An Integrated Test of the PSDM and EMPDS*

Most explanatory models of the relationship between perfectionism and depressive symptoms, and perfectionism and suicide ideation, have been tested separately. It remains a strong possibility, though, that these models are complementary. However, whether this is the case is difficult to ascertain without testing mediating factors alongside each other. Such a test would show to what degree each unique pathway is important and whether social disconnection or existential mechanisms are more important in explaining the perfectionism-suicide ideation relationship. There are both research and practical implications for finding that one mechanism supersedes the other or that both remain important even when the other is considered. Ultimately, a more parsimonious explanation and more effective treatment as well as more comprehensive assessment may be available depending on the outcome. Therefore, in the current study, we integrated the PSDM and EMPDS and tested a multiple mediation model. Difficulty accepting the past is used as a marker of existential dissonance (from the EMPDS), and mattering and not mattering are used as markers of social disconnection (from the PSDM).

### *The Mediating Role of Mattering, Anti-Mattering, and Difficulty Accepting the Past*

Mattering captures the feeling that one is significant, depended on, and invested in by others ([Rosenberg & McCullough, 1981](#)). In contrast, anti-mattering is a newly conceptualized construct that signifies low feelings of mattering, in addition to feeling insignificant and marginalized by others ([Flett, 2018](#)). Anti-mattering is more destructive than low feelings of mattering and predicts unique variance in outcomes, such as negative thoughts and depressive symptoms ([Flett, Nepon, et al., 2022](#)). Feelings of mattering often overlap with constructs such as belongingness (e.g. [Drabentstott, 2019](#)). However, mattering is distinct and is focused on feeling significant and valued by others ([Prilleltensky, 2020](#)).

Despite mattering being integral to suicide prevention programs ([Flett, 2018](#)), research examining the relationship between mattering and suicide is lacking. Studies examining this relationship support the assertion that mattering is a protective factor for suicide ideation (e.g. [Elliott et al., 2005](#); [Joiner et al., 2009](#)). However, almost all studies examining the mattering-suicide ideation relationship have included feelings of mattering only (but not anti-mattering) and are

cross-sectional, except for one study (Etherson et al., 2022b). In addition, some studies examining the mattering-suicide ideation relationship have included a measure of mattering using proxy variables (e.g. perceived burdensomeness; Joiner et al., 2009) but have not specifically focused on mattering in relation to suicide. Hence, this study involves a more explicit focus on feelings of mattering and not mattering.

An additional focus of our study is to examine the relationship between mattering, anti-mattering, and difficulty accepting the past over time. It is thought that people who feel they do not matter have difficulty in accepting their interpersonal past. This is because when deriving perceptions of not mattering, individuals are likely to draw upon and ruminate about their past interpersonal encounters and experiences that fail to elicit a sense of care and affection (Flett, 2018; Flett et al., 2021). In this regard, it has been suggested that experiences of not mattering may be reflected in relational schemas based on how the self is perceived in interpersonal situations (Flett, 2018). Flett (2018) suggested that people who feel they do not matter may draw upon biased autobiographical memories that reflect a sense of not mattering. In addition, feeling insignificant to others is likely to undermine meaning and satisfaction in life (Graham et al., 2010). For these reasons, it can be expected that feelings of not mattering would be positively associated with difficulty accepting the past.

### *Notable Methodological Advances*

While research examining the PSDM and EMPDS has been valuable in advancing our understanding of the perfectionism-psychopathology relationship, most research testing these models have been examined using cross-sectional or two-wave longitudinal designs (e.g. Rnic et al., 2021; Robinson et al., 2021; Smith, Sherry, Hewitt, et al., 2020, Smith, Sherry, McLarnon, et al., 2018). Cross-sectional designs, however, are limited because they prevent causal inferences and do not establish temporal precedence (Maxwell & Cole, 2007). Moreover, two-wave longitudinal designs to test mediation involve temporal confounding, given that either the predictor and mediator variable or the mediator and outcome variable are examined simultaneously (Cole & Maxwell, 2003). As such, research examining the PSDM and EMPDS should ideally utilize three-wave longitudinal designs examining predictor, mediator, and outcome variables at separate time points (Cole & Maxwell, 2003). We address these methodological limitations by conducting a three-wave longitudinal test of mediation.

### *The Present Study*

Our study sought to examine whether socially prescribed perfectionism predicts suicide ideation via mattering, anti-mattering, and difficulty accepting the past in an integrated test of the PSDM and the EMPDS. Guided by theory (e.g. Graham et al., 2010; Hewitt et al., 2006) and research (e.g. Flett et al., 2012; Flett, Nepon, et al., 2022; Smith, Sherry, Ray, et al., 2020), we hypothesized that socially prescribed perfectionism (Wave 1) would indirectly predict higher suicide ideation (Wave 3) via anti-mattering and difficulty accepting the past (Wave 2), controlling for baseline depressive symptoms and suicide ideation. Given non-significant findings with self-oriented perfectionism in previous tests of the PSDM and EMPDS examining mattering, anti-mattering, and difficulty accepting the past as mediators (Etherson et al., 2022b; Flett et al., 2012; Smith et al., 2020), we hypothesized that no indirect effects with self-oriented perfectionism would emerge as significant.

## Method

### Participants and Procedure

Based on Fritz and MacKinnon (2007), sample sizes between 53 and 148 are required to detect an indirect effect of between .07 ( $a = .26$  and  $b = .26$ ) to .23 ( $a = .39$  and  $b = .59$ ) to achieve 0.8 power. Previous research on the PSDM and EMPDS reports indirect effects that range from  $<.010$  to .12 (Graham et al., 2010; Sherry et al., 2008; Smith, Sherry, Ray, et al., 2020).

The first sample were 240 undergraduate students (70% female;  $M_{\text{age}} = 20.15$  years,  $SD = 2.47$ ) enrolled at a university in the United Kingdom. Participants were predominantly White British (90.8%) and were in their first (47.5%), second (27.5%), third (10.8%), or fourth (14.2%) year of university.

The second sample were 250 community adults (72.1% female; 2 undisclosed;  $M_{\text{age}} = 38.34$  years,  $SD = 12.61$ ) from the United Kingdom recruited from Prolific Academic, an online recruiting platform for academics. Participants were predominantly White British (87.2%).

Preceding data collection, the study was approved by York St John university's research ethics committee. Participants provided informed consent and completed the study questionnaire on three occasions separated by 3 weeks. Undergraduate students completed paper-and-pen versions of the questionnaire. Community adults completed online versions of the questionnaire.

Demographics were reported at Time 1. In the undergraduate sample, of the 240 participants recruited at Time 1, 154 (64.17%) completed measures at Time 2, and 108 (45%) completed measures at Time 3. The average time lag between Time 1 and Time 2 was 21.00 days ( $SD = 0.00$ ), and between Time 2 and Time 3 was 23.65 days ( $SD = 5.71$ ). In the community adult sample, of the 250 participants recruited at Time 1, 225 of 250 (90.00%) completed Time 2, and 217 (86.80%) completed Time 3. The average time lag between Time 1 and Time 2 was 21.08 days ( $SD = 0.32$ ), and between Time 2 and Time 3 was 21.15 days ( $SD = 0.47$ ). A high attrition rate in the undergraduate sample occurred primarily due to absences from seminars and the third time point of data collection taking place just before the COVID-19 pandemic and associated lockdowns.

### Measures

**Multidimensional Perfectionism.** Multidimensional perfectionism was measured using a 5-item subscale of the short-form of Hewitt and Flett's (1991) Multidimensional Perfectionism Scale (HF-MPS-SF; Hewitt et al., 2008). This scale is formed of three dimensions: self-oriented perfectionism (5 items; e.g. 'I strive to be as perfect as I can be'), socially prescribed perfectionism (5 items; e.g. 'The better I do, the better I am expected to do'), and other-oriented perfectionism (5 items; e.g. 'I have high expectations for the people who are important to me'). Participants rated items on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Internal reliability of the HF-MPS-SF is typically high ( $\alpha = .80$  to  $.88$ ; Stoeber, 2018). Subscales of the HF-MPS-SF are strongly correlated with subscales from the original HF-MPS (Hewitt et al., 2008).

**Mattering.** Mattering was measured using the five-item General Mattering Scale (GMS; Marcus & Rosenberg, 1987). The GMS measures how much an individual perceives they matter to others (e.g. 'How important do you feel you are to other people?'). Participants responded to the GMS using a 4-point scale from 1 (*not at all*) to 4 (*a lot*). The GMS has good reliability and validity. For instance, some initial data indicate that internal reliabilities and three and six-week test-retest reliabilities are high ( $\alpha = .86$  to  $.88$ ;  $r = .78$  to  $.81$ ; Etherson, Smith, Hill, & Flett, 2022). Factor analysis indicates that the scale is unidimensional (Rosenberg & McCullough, 1981).



**Anti-mattering.** Anti-mattering was measured using the five-item Anti-Mattering Scale (AMS; Flett, Nepon, et al., 2022). The AMS parallels the GMS, but words items in a negative direction (e.g. ‘How often have you been treated in a way that makes you feel like you are insignificant?’). Participants responded to the AMS using a 4-point scale from 1 (*not at all*) to 4 (*a lot*). The AMS has high internal reliability ( $\alpha = .87$  to  $.91$ ) and strong one-week test-retest reliability ( $r = .65$ ; Flett, Nepon, et al., 2022). Flett, Nepon, et al. (2022) also found the AMS to incrementally predict variance in key outcomes beyond the GMS, in keeping with the notion that anti-mattering is not simply the opposite of mattering.

**Accepting the Past Scale.** Difficulty accepting the past was measured using Santor and Zuroff’s (1994) 16-item Accepting the Past Scale (ACPAST; 16-items, e.g. ‘Sometimes I have the feeling that I’ve never had the chance to live’). Items were rated on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). To ease interpretation, items indicating accepting the past were reversed to indicate greater difficulty accepting the past. The ACPAST has high internal reliability ( $\alpha = .93$ ; Smith, Sherry, Hewitt, et al., 2020) and strong four-week test-retest reliability ( $r = .80$  to  $.88$ ; Graham et al., 2010). Evidence supports the convergent validity, factorial validity, predictive validity, and incremental validity of the ACPAST (e.g. Graham et al., 2010).

**Suicide Ideation.** Suicide ideation was measured using the 25-item Adult Suicide Ideation Questionnaire (ASIQ; 25 items, e.g. ‘Thought about killing myself, but would not’; Reynolds, 1991). Items were rated on a 7-point scale from 0 (*never had this thought*) to 6 (*almost every day*). The ASIQ assesses the frequency of specific suicidal thoughts over the past month. Research supports the psychometric properties of the ASIQ in non-clinical samples (e.g. Chen et al., 2017). The ASIQ, for instance, has high internal reliability ( $\alpha = .87$ ; Chen et al., 2017) and strong six-week test-retest reliability ( $r = .87$ ; Etherson et al., 2022b).

**Depressive Symptoms.** Depressive symptoms were measured using a 10-item short-form of the Centre for Epidemiological Studies Depression Scale (CES-D-SF; e.g. ‘I was bothered by things that don’t usually bother me’; Cole et al., 2004). Participants rated items on a 4-point scale from 0 (*rarely or none of the time*) to 3 (*most or all of the time*). Research supports the reliability and validity of the CES-D-SF (Cole et al., 2004). The CES-D-SF, for instance, has high internal reliability ( $\alpha = .88$  to  $.89$ ) and six-week test-retest reliability ( $r = .86$ ; Etherson, Smith, Hill, & Flett, 2022) and is strongly correlated with the original subscale ( $r = .94$ ; McGrath et al., 2012).

## Data Screening

In the undergraduate sample, 0.04%–0.17% was missing across waves. Little’s (1988) missing completely at random (MCAR) test provided evidence that the data was MCAR  $\chi^2(658) = 659.012, p = .174$ . The community sample had no missing data. We excluded one participant from the undergraduate sample and six participants from the community sample with a Mahalanobis distance above the critical value of  $\chi^2(24) = 51.1786, p < .001$ . This yielded a final sample of 239 undergraduate students (70.0% female;  $M_{\text{age}} = 20.15$  years,  $SD = 2.47$ ) and 244 community adults (72.1% female; 1 undisclosed;  $M_{\text{age}} = 38.47$  years,  $SD = 12.68$ ).

## Data Analytic Strategy

The model was tested using path analysis with full information maximum likelihood estimation in Mplus version 8.0 (Muthén & Muthén, 1998-2018). The significance of indirect effects was determined using bias-corrected bootstrapping with 20,000 resamples (Shrout & Bolger, 2002).

Bias-corrected bootstrapping was used as a non-parametric alternative, as the distribution of indirect effects is often positively skewed. If the 95% bias-corrected bootstrapped confidence interval within its upper and lower distribution for an indirect effect does not cross zero, it suggests mediation (Shrout & Bolger, 2002).

## Results

### Descriptive Statistics

Means, standard deviations, Cronbach's alpha, and bivariate correlations are in Table 1. Means were comparable at Time 1 across samples in relation to all study measures. Cronbach's alphas are high ( $\alpha$  range = .81 to .98). Test-retest reliabilities were strong, ranging from  $r = .66$  to  $.86$  in the undergraduate sample and  $r = .73$  to  $.93$  in the community sample. This is particularly noteworthy in terms of the high temporal stability of scores on both the mattering and anti-mattering scores for both samples. For instance, the GMS scores at Time 1 and Time 3 were strongly correlated for undergraduate students ( $r = .74$ ) and community adults ( $r = .78$ ). Similarly, the AMS scores at Time 1 and Time 3 were strongly correlated for students ( $r = .66$ ) and community adults ( $r = .75$ ).

Based on Cohen's (1992) guidelines for small, medium, and large correlations ( $r = .10, .30, .50$ ), socially prescribed perfectionism displayed moderate positive correlations with anti-mattering in both samples across all time points. Socially prescribed perfectionism also displayed moderate and moderate-to-large positive correlations with difficulty accepting the past across time points in the undergraduate sample and small-to-moderate positive correlations with difficulty accepting the past in the community sample. In addition, anti-mattering displayed moderate-to-large and large positive correlations with difficulty accepting the past in the undergraduate sample and large positive correlations with difficulty accepting the past in the community sample.

### Undergraduate Sample

After controlling for baseline depressive symptoms and suicide ideation, the following results emerged. The indirect effect of socially prescribed perfectionism on suicide ideation via mattering ( $\beta = -.01$  [95% CI  $-.07, .02$ ],  $SE = .02$ ) was non-significant. However, the indirect effect of socially prescribed perfectionism on suicide ideation via anti-mattering ( $\beta = .07$  [95% CI  $.01, .18$ ],  $SE = .04$ ) and difficulty accepting the past ( $\beta = .02$  [95% CI  $.00, .11$ ],  $SE = .02$ ) was significant. The indirect effect of self-oriented perfectionism on suicide ideation via anti-mattering ( $\beta = .00$  [95% CI  $-.04, .07$ ],  $SE = .03$ ) and difficulty accepting the past ( $\beta = -.01$  [95% CI  $-.08, .01$ ],  $SE = .02$ ) was non-significant. Conversely, the indirect effect of self-oriented perfectionism on suicide ideation via mattering ( $\beta = .05$  [95% CI  $.01, .16$ ],  $SE = .03$ ) was significant (see Figure 1).

### Community Sample

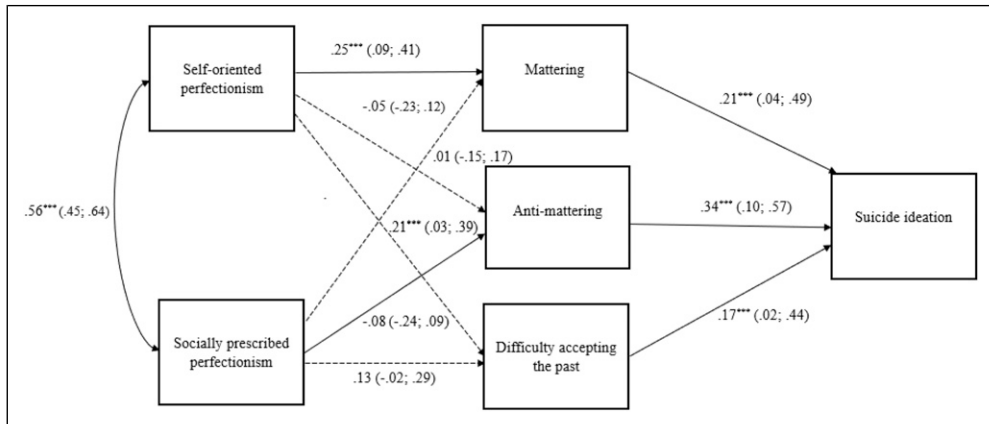
As with the undergraduate sample, the following results emerged after controlling for baseline depressive symptoms and suicide ideation. The indirect of socially prescribed perfectionism on suicide ideation via mattering ( $\beta = .00$  [95% CI  $-.00, .02$ ],  $SE = .01$ ) and anti-mattering ( $\beta = -.01$  [95% CI  $-.03, .01$ ],  $SE = .01$ ) was non-significant. However, the indirect effect of socially prescribed perfectionism on suicide ideation via difficulty accepting the past ( $\beta = .02$  [95% CI  $.00, .05$ ],  $SE = .01$ ) was significant. The indirect effect of self-oriented perfectionism on suicide ideation via mattering ( $\beta = -.00$  [95% CI  $-.02, .01$ ],  $SE = .01$ ) anti-mattering



**Table 1. Descriptive Statistics, Bivariate Correlations, and Scale Reliabilities.**

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean	SD	$\alpha$	
<b>Time 1</b>																												
1. SOP	—	.53**	.59**	-.04	.11	.03	.03	-.13*	.81**	.43**	.53**	-.02	.15*	-.03	-.00	-.06	.80**	.50**	.53**	-.05	.16*	.01	-.05	-.14*	4.27	1.43	.93	
2. SPP	.56**	—	.53**	-.17**	.26**	.23**	.20**	.08	.47**	.80**	.50**	-.15*	.29**	.20**	.21**	.17*	.47**	.76**	.46**	.46**	-.12	.30**	.24**	.24**	.11	3.98	1.22	.84
3. OOP	.42**	.60**	—	-.03	.10	.09	.08	-.07	.51**	.47**	.81**	-.02	.21**	.07	.08	-.03	.59**	.57**	.81**	-.00	.18**	.09	.04	-.06	3.94	1.11	.81	
4. MAT	.13*	-.09	.08	—	-.63**	-.56**	-.59**	-.47**	-.05	-.22**	-.02	.78**	-.58**	-.56**	-.57**	-.47**	-.01	-.19**	-.10	.78**	-.56**	-.57**	-.55**	-.47**	2.71	.73	.87	
5. ANTI	.05	.32**	.14*	—	.62**	.69**	.49**	.10	.29**	.08	.61**	.80**	.58**	.59**	.59**	.50**	.07	.23**	.09	-.61**	.75**	.57**	.56**	.46**	2.19	0.83	.92	
6. DATP	.02	.29**	.26**	-.37**	.58**	—	.73**	.58**	.02	.25**	.09	-.54**	.59**	.90**	.67**	.60**	.02	.21**	.10	-.50**	.60**	.89**	.69**	.58**	2.85	0.79	.92	
7. DEP	.02	.25**	.21**	-.50**	.70**	.72**	—	.63**	.05	.27**	.05	-.59**	.67**	.68**	.84**	.63**	.01	.15*	.10	-.55**	.63**	.67**	.80**	.60**	1.10	0.64	.89	
8. SI	.02	.20**	.09	-.37**	.49**	.56**	.63**	—	-.02	.09	-.03	-.45**	.46**	.58**	.57**	.90**	-.05	.07	.01	-.49**	.47**	.59**	.55**	.87**	0.67	0.81	.98	
<b>Time 2</b>																												
9. SOP	.80**	.51**	.44**	.05	.25**	.15	.16	.13	—	.51**	.57**	.03	.09	.01	-.02	-.01	.83**	.51**	.54**	-.02	.15*	.03	-.05	-.05	4.31	1.50	.94	
10. SPP	.52**	.78**	.54**	-.08	.39**	.24**	.23**	.15	.67**	—	.55**	-.18**	.32**	.25**	.22**	.14*	.46**	.82**	.47**	-.15*	.32**	.27**	.26**	.11	3.96	1.28	.86	
11. OOP	.44**	.51**	.72**	.04	.11	.23**	.11	.16	.51**	.60**	—	.04	.14*	.09	.00	-.01	.58**	.58**	.80**	.05	.09	.09	-.01	-.03	4.02	1.16	.84	
12. MAT	.17*	-.06	.02	.75**	-.36**	-.30**	-.31**	-.09	-.02	.06	—	.62**	-.55**	-.56**	-.56**	-.44**	.00	-.16*	-.04	.82**	-.56**	-.56**	-.55**	-.47**	2.80	0.68	.86	
13. ANTI	.16	.37**	.24**	-.45**	.69**	.47**	.57**	.52**	.23**	.33**	.18*	-.39**	—	.58**	.65**	.46**	.11	.28**	.16*	-.60**	.73**	.55**	.58**	.45**	2.16	0.80	.91	
14. DATP	.06	.27**	.32**	-.35**	.42**	.81**	.58**	.45**	.13	.23**	.23**	-.36**	.45**	—	.70**	.59**	-.01	.23**	.08	-.54**	.66**	.93**	.72**	.62**	2.82	0.79	.92	
15. DEP	.05	.25**	.18*	-.44**	.57**	.60**	.79**	.58**	.15	.20*	.07	-.42**	.58**	.60**	—	.59**	-.06	.14*	.03	-.52**	.62**	.67**	.87**	.60**	1.03	0.63	.89	
16. SI	.06	.27**	.19**	-.38**	.46**	.50**	.58**	.86**	.10	.14	.11	-.32**	.56**	.47**	.56**	—	-.01	.09	.00	-.48**	.49**	.59**	.61**	.92**	0.65	0.78	.98	
<b>Time 3</b>																												
17. SOP	.73**	.56**	.46**	.07	.20*	.22*	.16	.11	.79**	.60**	.49**	.23*	.18	.09	.06	.10	.57**	.63**	.63**	.02	.12	-.02	-.07	-.05	4.29	1.49	.94	
18. SPP	.48**	.73**	.49**	-.05	.33**	.31*	.22*	.23*	.61**	.79**	.47**	.06	.34**	.28**	.25*	.25*	.76**	.59**	.59**	-.12	.34**	.25**	.19**	.09	4.00	1.29	.86	
19. OOP	.37**	.50**	.67**	.04	.15	.20*	.09	.24*	.48	.47**	.72**	.13	.15	.21*	.15	.26*	.57**	.63**	.63**	-.04	.19**	.10	.06	.03	3.91	1.22	.86	
20. MAT	.10	-.15	.02	.74**	-.42**	-.34**	-.42**	-.42**	.02	-.13	.05	.82**	-.39**	-.27*	-.51**	-.32**	.08	-.06	.00	-.56**	-.56**	-.56**	-.56**	-.48**	2.74	0.70	.88	
21. ANTI	.03	.34**	.12	-.29**	.66**	.43**	.56**	.46**	.24*	.37**	.01	-.30**	.74**	.31**	.61**	.46**	.17	.32**	.14	-.29**	.14	-.29**	.68**	.53**	2.17	0.80	.92	
22. DATP	.06	.37**	.25**	-.35**	.46**	.82**	.57**	.56**	.24*	.34**	.24*	.42**	.82**	.56**	.82**	.53**	.28**	.42**	.29**	-.35**	.47**	.72**	.60**	.21	0.86	.93		
23. DEP	.02	.33**	.08	-.41**	.53**	.60**	.71**	.59**	.17	.31**	-.08	-.23*	.53**	.52**	.74**	.59**	.16	.30**	.04	-.46**	.56**	.68**	.60**	.60**	1.02	0.68	.90	
24. SI	.01	.36**	.27**	.30**	.39**	.55**	.50**	.69**	.02	.16	.08	.21*	.54**	.50**	.56**	.79**	.13	.31**	.29**	.23*	.54**	.60**	.60**	.71	0.90	.98		
Mean	4.42	3.88	4.19	2.80	2.21	2.68	1.15	0.52	4.32	3.83	3.33	2.72	2.13	2.68	1.18	0.50	4.25	3.92	3.54	2.71	2.17	2.59	1.60	0.59	—	—	—	
SD	1.35	1.22	1.18	0.62	0.75	0.69	0.58	0.82	1.27	1.29	1.15	0.66	0.72	0.65	0.54	0.73	1.54	1.36	1.25	0.67	0.75	0.70	0.55	0.85	—	—	—	
$\alpha$	.93	.84	.83	.83	.87	.89	.85	.98	.93	.89	.84	.87	.90	.89	.83	.98	.95	.90	.88	.89	.90	.91	.86	.98	—	—	—	

Note. Bivariate correlations, means, standard deviations, and alpha reliabilities are presented below the diagonal for the undergraduate sample and above the diagonal for the community sample. SOP = Self-oriented perfectionism; SPP = Socially prescribed perfectionism; OOP = Other-oriented perfectionism; MAT = Mattering; ANTI = Anti-mattering; DATP = Difficulty accepting the past; DEP = Depressive symptoms; SI = Suicide ideation. Means are reported at item level. Test-retest correlations appear in bold. Correlations are based on pairwise deletion. Two-tailed. \* $p < .05$ ; \*\* $p < .01$ .



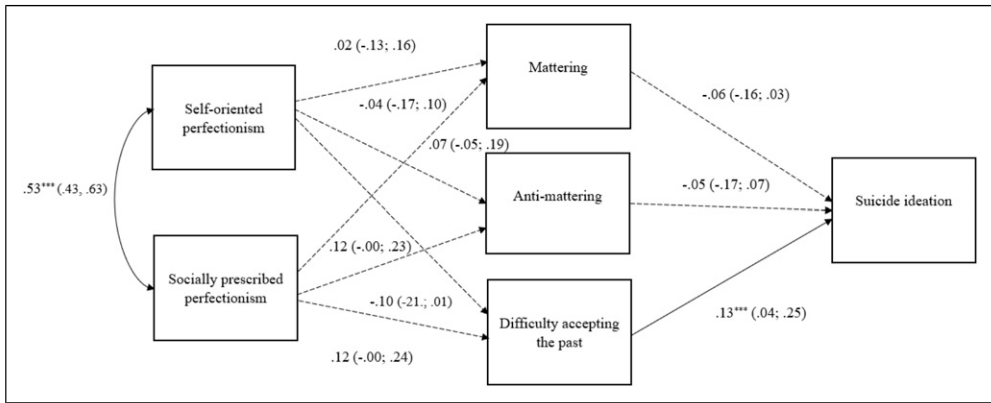
**Figure 1.** Path diagram depicting associations among variables in the **undergraduate sample**. The path from self-oriented perfectionism (Wave 1) to suicide ideation (Wave 3), the path from socially prescribed perfectionism (Wave 1) to suicide ideation (Wave 3), the path from depressive symptoms (Wave 1) to suicide ideation (Wave 3), the path from suicide ideation (Wave 1) to suicide ideation (Wave 3), the path from depressive symptoms (Wave 1) to mattering, anti-mattering, and difficulty accepting the past (Wave 2) and the path from suicide ideation (Wave 1) to mattering, anti-mattering, and difficulty accepting the past (Wave 2) was omitted from the figure for clarity. Likewise, correlations among depressive symptoms (Wave 1) and suicide ideation (Wave 1), self-oriented perfectionism (Wave 1) and depressive symptoms (Wave 1), socially prescribed perfectionism (Wave 1) and suicide ideation (Wave 1), socially prescribed perfectionism (Wave 1) and suicide ideation (Wave 1), mattering (Wave 2) and anti-mattering (Wave 2), mattering and difficulty accepting the past (Wave 2), and anti-mattering and difficulty accepting the past (Wave 2) were omitted from the figure for clarity. The path from self-oriented perfectionism (Wave 1) to suicide ideation (Wave 3) was  $\beta = -.15$  [95% CI  $-.29, .01$ ], from socially prescribed perfectionism (Wave 1) to suicide ideation (Wave 3) was  $\beta = .09$  [95% CI  $-.04, .21$ ], from depressive symptoms (Wave 1) to suicide ideation (Wave 3) was  $\beta = -.13$  [95% CI  $-.31, .03$ ], and from suicide ideation (Wave 1) to suicide ideation (Wave 3) was  $\beta = .66^{***}$  [95% CI  $.35, .86$ ]. The correlation among depressive symptoms (Wave 1) and suicide ideation (Wave 1) was  $r = .63^{***}$ , among self-oriented perfectionism (Wave 1) and depressive symptoms (Wave 1) was  $r = .02$ , among socially prescribed perfectionism (Wave 1) and depressive symptoms (Wave 1) was  $r = .25^{***}$ , among self-oriented perfectionism (Wave 1) and suicide ideation (Wave 1) was  $r = .01$ , among socially prescribed perfectionism (Wave 1) and suicide ideation (Wave 1) was  $r = .20^{***}$ , among mattering (Wave 2) and anti-mattering (Wave 2) was  $r = -.24^{***}$ , among mattering (Wave 2) and difficulty accepting the past (Wave 2) was  $r = -.18^{***}$ , and among anti-mattering (Wave 2) and difficulty accepting the past (Wave 2) was  $r = .14$ . All estimates are standardized.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , two-tailed.

( $\beta = -.00$  [95% CI  $-.03, .00$ ],  $SE = .01$ ) and difficulty accepting the past ( $\beta = -.01$  [95% CI  $-.04, .00$ ],  $SE = .01$ ) was non-significant (see Figure 2).

## Discussion

The purpose of the current study was to provide a longitudinal test of an integrated PSDM and EMPDS with suicide ideation as the outcome. We hypothesized that socially prescribed perfectionism would indirectly predict suicide ideation via anti-mattering and difficulty accepting the past, controlling for baseline depressive symptoms and suicide ideation. We also hypothesized that no indirect effects would emerge with self-oriented perfectionism as a predictor. Hypotheses were partially supported. Findings revealed that socially prescribed perfectionism indirectly predicted



**Figure 2.** Path diagram depicting associations among variables in the **community sample**. The path from self-oriented perfectionism (Wave 1) to suicide ideation (Wave 3), the path from socially prescribed perfectionism (Wave 1) to suicide ideation (Wave 3), the path from depressive symptoms (Wave 1) to suicide ideation (Wave 3), the path from depressive symptoms (Wave 1) to mattering, anti-mattering, and difficulty accepting the past (Wave 2) and the path from suicide ideation (Wave 1) to mattering, anti-mattering, and difficulty accepting the past (Wave 2) was omitted from the figure for clarity. Likewise, correlations among depressive symptoms (Wave 1) and suicide ideation (Wave 1), self-oriented perfectionism (Wave 1) and depressive symptoms (Wave 1), socially prescribed perfectionism (Wave 1) and depressive symptoms (Wave 1), self-oriented perfectionism (Wave 1) and suicide ideation (Wave 1), socially prescribed perfectionism (Wave 1) and suicide ideation (Wave 1) and mattering (Wave 2) and anti-mattering (Wave 2), mattering and difficulty accepting the past (Wave 2), and anti-mattering and difficulty accepting the past (Wave 2) were omitted from the figure for clarity. The path from self-oriented perfectionism (Wave 1) to suicide ideation (Wave 3) was  $\beta = -.07$  [95% CI  $-.17, .01$ ], from socially prescribed perfectionism (Wave 1) to suicide ideation (Wave 3) was  $\beta = .08$  [95% CI  $-.01, .16$ ], from depressive symptoms (Wave 1) to suicide ideation (Wave 3) was  $\beta = .02$  [95% CI  $-.10, .12$ ] and from suicide ideation (Wave 1) to suicide ideation (Wave 3) was  $\beta = .77^{***}$  [95% CI  $.66, .85$ ]. The correlation among depressive symptoms (Wave 1) and suicide ideation (Wave 1) was  $r = .63^{***}$ , among self-oriented perfectionism (Wave 1) and depressive symptoms (Wave 1) was  $r = .20^{***}$ , among self-oriented perfectionism (Wave 1) and suicide ideation (Wave 1) was  $r = -.13$ , among socially prescribed perfectionism (Wave 1) and suicide ideation (Wave 1) was  $r = .08$ , among mattering (Wave 2) and anti-mattering (Wave 2) was  $r = -.38^{***}$ , among mattering and difficulty accepting the past was  $r = -.24^{***}$ , and among anti-mattering and difficulty accepting the past was  $r = .22^{***}$ . All estimates are standardized.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , two-tailed.

higher suicide ideation via difficulty accepting the past in both samples. Socially prescribed perfectionism also indirectly predicted higher suicide ideation via anti-mattering in the undergraduate sample. Unexpectedly and anomalously, self-oriented perfectionism indirectly predicted higher suicide ideation via mattering in the undergraduate sample.

### Extending Research on the PSDM and the EMPDS

The finding that socially prescribed perfectionism indirectly predicted suicide ideation via anti-mattering in the undergraduate sample aligns with theory and research (e.g., Flett et al., 2012; Hewitt et al., 2006; Roxborough et al., 2012). This suggests that students who perceive others to be excessively demanding experience feelings of not mattering to others because of the perception that others can never be pleased (Flett, 2018). Feelings of not being valued or cared about by others

can be particularly distressing and, when engrained over time, may ultimately lead to intense psychological pain and thoughts of suicide. This finding, however, contrasts with [Etherson et al., 2022b](#) study, which did not find socially prescribed perfectionism to significantly predict suicide ideation via anti-mattering. While we utilized the same timeframe as [Etherson et al., 2022b](#), the rank-order stability for suicide ideation in the current study was lower, possibly allowing for greater variance to be explained. In addition, the university sample in [Etherson et al., 2022b](#) exhibited particularly low mean scores of suicide ideation, which likely attenuated relationships due to range restriction ([Lewis-Beck et al., 2003](#)). In this regard, the PSDM may be more adept at explaining these relationships in samples experiencing greater levels of suicide ideation.

Our study did not find an indirect relationship between socially prescribed perfectionism and suicide ideation via anti-mattering in the community sample. This finding was unexpected and contrasts with previous cross-sectional research examining the PSDM in community samples (e.g. [Cha, 2016](#); [Rnic et al., 2021](#); [Robinson et al., 2021](#)). However, there are possible reasons why this finding did not emerge. In the current study, the community sample had a higher rank-order stability ( $r = .87$  to  $.92$ ) relative to the undergraduate sample ( $r = .69$  to  $.79$ ), leaving less variance to be explained in suicide ideation. It is also possible that the lack of finding here may be due to the inclusion of difficulty accepting the past as a mediator alongside mattering and anti-mattering, which accounted for most of the variance in the model. As such, existential markers appear more important to the community sample than feelings of not mattering. In support of this possibility, research suggests that as people move from younger adulthood to middle-aged adulthood, they become more focused on the past and are, therefore, more prone to ruminate over past experiences (see [Park et al., 2017](#)). In this regard, it may be expected that markers of existentialism are more pertinent to middle-aged samples relative to young adult samples.

The finding that socially prescribed perfectionism indirectly predicted suicide ideation via difficulty accepting the past across both samples is in line with prior research on the EMPDS (e.g. [Graham et al., 2010](#)) and research which has found socially prescribed perfectionism to predict suicide ideation via existential mediators (e.g., reasons for living; [Dean & Range, 1996](#)). This suggests that people higher in socially prescribed perfectionism often struggle to form positive, satisfying, and meaningful representations of the past and are prone to experiencing profound psychological pain, including thoughts of suicide. It is important for future research to examine other existential mediators in this relationship. This was also the first study to include suicide ideation as an outcome in the EMPDS. Findings provide strong support for its inclusion in this model. Future research, then, should also refine and rename the EMPDS to include suicide ideation.

Testing the integrated model and combining the PSDM and EMPDS provided some notable insights. While previous research has found support longitudinally for the PSDM in community samples (e.g. [Cha, 2016](#)), to date, the PSDM has been examined in isolation. In our integrated model, the EMPDS emerged as the stronger explanatory pathway in the community sample. As such, of the two, the EMPDS may be particularly important among older adults who are thought to place greater emphasis on the past (e.g. [Park et al., 2017](#)). This finding has important practical implications and suggests that this model may best inform intervention efforts in middle-aged adults and may be more effective if the intervention increases an individual's ability to accept the past. While research is lacking, there is indication that life review intervention studies effectively decrease mental health problems (e.g. [Westerhof et al., 2010](#)). Future research is needed to establish whether interventions focused on accepting the past prevent suicide ideation in adults.

The finding that self-oriented perfectionism predicted higher suicide ideation via mattering in the undergraduate sample was unexpected. While this finding is in line with research which found self-oriented perfectionism to predict suicide ideation ([Smith, Sherry, Chen, et al., 2018](#)), it contrasts with evidence that mattering acts as a protective factor against suicide ideation ([Elliott](#)

et al., 2005). This finding also diverges from Etherson et al., 2022b, who found that the indirect effect of self-oriented perfectionism and suicide ideation via mattering was non-significant in a sample of undergraduate students utilizing the same timeframe. Though it is not clear why mattering had a positive relationship with suicide ideation here, in weighing likely causes, it is most likely that this finding is a statistical artefact because of controlling for many variables in the data, including baseline depressive symptoms and suicide ideation (i.e. suppression).<sup>1</sup> In this regard, it is notable that mattering and suicide ideation were negatively correlated at a bivariate level for all three time points.

A secondary goal of this study was to compare the results obtained with the GMS and the AMS. Results indicated that the AMS had stronger links with depressive symptoms and suicide ideation. One key issue involved examining the relationship between anti-mattering and difficulty accepting the past over time. As expected, anti-mattering was robustly associated with greater difficulty accepting the past, whereas mattering was associated with less difficulty accepting the past in both samples across all time points. This finding is novel within the mattering literature but is in keeping with established empirical links between feelings of not mattering and ruminative brooding (Flett, 2018; Flett et al., 2021). One interesting possibility is that an unresolved need to matter from past experiences may shape relational schemas and how the self is perceived in present and future interpersonal encounters (Flett, 2018). Overall, the finding suggests a need for future research to consider and evaluate a mattering-specific EMPDS model of depressive symptoms and suicidality.

Our main focus was to test substantive links within and across time periods among the variables. However, the results of this study also have clear assessment implications. Regarding psychometric issues, there is considerable evidence of the high temporal stability of the predictor variables, including the measures of mattering and anti-mattering. As noted above, these measures have seldom been evaluated in longitudinal research. We believe that these results signify that mattering and anti-mattering, at least over approximately six weeks, represent relatively stable individual differences, and mattering should be regarded as more of a reflection of self-concept than fluctuating symptom-related changes in mood. These types of issues merit re-examination over longer periods to determine if this is the case.

A very different set of issues is involved when the focus shifts to clinical and counselling assessments of university students and community adults. While our substantive results were complex and varied across samples, we believe that this study stands as another illustration of the risk that may exist if a student or adult is perfectionistic or higher in feelings of not mattering or both. When viewed from a person-focused perspective, our results are very much in keeping with concerns raised about people with high levels of socially prescribed perfectionism (see Flett et al., 2022) and people who feel like they don't matter to other people (see Flett, 2018). Clearly, these vulnerability factors need to be considered and evaluated from a person-focused and variable-focused perspective when seeking to identify those at most risk to mental health issues.

## Limitations and Future Directions

Our study has certain limitations. First, we assessed all study variables using self-report measures, which may contribute to social desirability and common-method bias. Future research should utilize multi-source designs, such as informant reports. Second, as suggested above, the time lag between measurement occasions was relatively short (three waves separated by three weeks), which may have affected the observed results (Maxwell & Cole, 2007). Future research may benefit from using alternate timeframes to test the PSDM and EMPDS. Third, we employed non-clinical samples of undergraduate students and community adults. Future research should attempt

to replicate the relationships found in clinical samples to determine how much findings generalize. There is also merit in evaluating these relationships in adolescents.

## Conclusion

Our study provides the first longitudinal integrated test of the PSDM and the EMPDS examining suicide ideation as an outcome. Findings revealed that socially prescribed perfectionism indirectly predicted suicide ideation via anti-mattering in the undergraduate sample. In addition, socially prescribed perfectionism indirectly predicted suicide ideation via difficulty accepting the past in the community sample. Our findings advocate for the inclusion of suicide ideation in the EMPDS, the need to integrate explanatory models of perfectionism and suicide, and the need to examine a mattering-specific EMPDS.

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## Note

1. When we reran the indirect effect of self-oriented perfectionism on suicide ideation via mattering, setting all other pathways into suicide ideation at Time 3 to zero, the indirect effect became negative, controlling for baseline suicide ideation ( $\beta = -.02$  [95% CI  $-.04, -.01$ ],  $SE = .01$ ) and the path between mattering and suicide was also negative  $\beta = -.12$  [95% CI  $-.18, -.05$ ].

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