Patient perfectionism and clinician impression formation during an initial interview

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Objectives. The negative impact of pre-treatment patient perfectionism on therapeutic alliance and outcomes has been well documented. However, there is much to learn about how patient perfectionism impacts the development of the therapeutic alliance. Our study addressed this by examining the extent to which trait and self-presentational components of perfectionism influence clinician's perceptions of patients during an initial interview.

Design. In a re-analysis of data from Hewitt *et al.*, 2008, Psychiatry, 71, 93–122, participants were 90 treatment-seeking adults (aged 19–64, M_{age} = 36.2; 40 men) recruited from outpatient mental health clinics. Each patient had a one-on-one, semi-structured interview with a clinician that lasted approximately 50 min.

Method. Patients completed self-report measures assessing trait perfectionism, perfectionistic self-presentation, and symptom distress before the interview. Patients were then invited to discuss reasons for seeking treatment and to reflect on the two most challenging situations in their lives in which they had not coped well. Following the interview, clinicians indicated their overall impressions of patients by responding to three self-report questions and rated patients' distress and hostility via nine adjectives.

Results. After controlling for patients' symptom distress, other-oriented perfectionism and non-display of imperfection had small positive relationships with clinician-rated hostility; self-oriented perfectionism, socially prescribed perfectionism, and non-disclosure of imperfection had small-to-moderate negative relationships with clinician impressions. Additionally, path analysis revealed other-oriented perfectionism and non-display of imperfection indirectly predicted less favourable clinician impressions through clinician-rated hostility.

Conclusions. Findings highlight the importance of evaluating and addressing trait and self-presentation components of perfectionism early in the therapeutic process.

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Practitioner points

- Higher levels of other-oriented perfectionism and non-display of imperfection were associated with greater clinician-rated hostility during an initial interview.
- Patient hostility mediated the relationship between patients' other-oriented perfectionism, non-display of imperfection, and less favourable clinician impressions.
- Our study highlights the importance of assessing and attending to patient perfectionism and displays of hostility during the earliest stages of therapeutic contact.

Backround

Perfectionism in the therapeutic context

Perfectionism has been established as an important 'pre-treatment personality characteristic' in the NIMH Treatment of Depression Collaborative Research Program (TDCRP; Blatt & Zuroff, 2002). According to the TDCRP studies (e.g., Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998; Blatt, Zuroff, Quinlan, & Pilkonis, 1996), patients' pre-treatment *perfectionistic attitudes*, assessed by the Dysfunctional Attitudes Scale (Weissman & Beck, 1978), predicted less patient improvement in depressive symptoms and social adjustment as well as overall psychological functioning across treatment modalities (i.e., cognitive behavioural therapy, interpersonal therapy, and pharmacotherapy). Specifically, the relationship between patients' pre-treatment perfectionistic attitudes and treatment outcome could be explained by patients' contribution to therapeutic alliance and patients' satisfaction with their social network (Shahar, Blatt, Zuroff, Krupnick, & Sotsky, 2004). More recently, Hewitt *et al.* (Advance online publication) found all three dimensions of trait perfectionism (i.e., self-oriented perfectionism, socially prescribed perfectionism, and other-oriented perfectionism) indirectly hindered symptom reduction in group treatment for depression through a perceived lack of quality friendships.

Though patient perfectionism has been implicated in therapeutic alliance (Shahar *et al.*, 2004) and treatment success (Blatt *et al.*, 1998; Hewitt *et al.*, Advance online publication), there is a paucity of research on *when* and *how* patient perfectionism impedes the development of the therapeutic alliance. While some researchers suggest patient perfectionism has a negative impact on the quality of the alliance later in treatment (e.g., Blatt *et al.*, 1998; Zuroff *et al.*, 2000), others demonstrate that patients high in perfectionism may already harbour negative or unrealistic expectations of therapy even before the initial clinical encounter (Hewitt, Habke, Lee-Baggley, Sherry, & Flett, 2008; Shannon, Goldberg, Flett, & Hewitt, 2018; Zuroff, Shahar, Blatt, Kelly, & Leybman, 2016). Shannon *et al.* (2018) reported college students with elevated *perfectionistic self-presentation* (i.e., the interpersonal expressions of perfectionism; Hewitt *et al.*, 2003) were more reluctant to seek help due to negative attitudes towards mental health treatment. Hewitt *et al.* (2008) suggested adult outpatients with elevated perfectionistic self-presentation had greater negative expectations and perceived threat, as well as greater emotional distress prior to the first clinical interview (Hewitt *et al.*, 2008). Patient's negative expectations about treatment may disrupt the alliance by making it more difficult for patients to form a trusting relationship with the clinician and to fully participate in the therapeutic process (Aubuchon-Endsley, & Callahan, 2009; Constantino *et al.*, 2011). Moreover, the strength of the alliance after the first session was predictive of premature patient dropout and treatment outcome (Hilsenroth & Cromer, 2007). Thus, it is imperative for researchers and clinicians to better understand factors that impede early alliance development with patients high in perfectionism.

Perfectionism as a multidimensional construct

Over the past two decades, perfectionism has been increasingly recognized as a multidimensional personality construct encompassing both intra- and interpersonal components (e.g., Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991; Hewitt, Flett, & Mikail, 2017). The two most widely used measures of perfectionism are the Frost-Multidimensional Perfectionism Scale (Frost *et al.*, 1990) and the Hewitt & Flett's Multidimensional Trait Perfectionism Scale (Hewitt & Flett, 1991). Trait perfectionism, as conceptualized by Hewitt and Flett (1991), consists of *self-oriented perfectionism* (the requirement for the self to be perfect), *other-oriented perfectionism* (the requirement for others to be perfect), and *socially prescribed perfectionism* (the perception that others demand perfection of oneself). Likewise, a wealth of evidence has established self-oriented and socially prescribed perfectionism as transdiagnostic vulnerability factors for depression and suicide behaviours (see Limburg, Watson, Hagger, & Egan, 2017; Smith *et al.*, 2016; Smith *et al.*, 2018 for reviews).

Whereas trait perfectionism dimensions focus on motives and dispositions related to attaining perfection (Hewitt & Flett, 1991), perfectionistic self-presentation involves the defensive process of needing to appear perfect or to hide imperfections from others. According to Hewitt *et al.* (2003), perfectionistic self-presentation includes three dimensions: *Perfectionistic self-promotion* (proactively promoting a perfect image), *non-display of imperfections* (concerns over behavioural displays of imperfection), and *non-disclosure of imperfections* (concerns over verbal disclosure of imperfections). Research has demonstrated these perfectionistic self-presentation dimensions are unique predictors of depression and suicide behaviours beyond trait perfectionism (e.g., Roxborough *et al.*, 2012).

Multidimensional perfectionism and interpersonal hostility

To date, most prior studies on perfectionism and interpersonal problems rely solely on undergraduate self-reports, and few studies have examined how the interpersonal problems associated with perfectionism may manifest in the therapeutic context. One of the interpersonal problems consistently associated with perfectionism is a tendency towards hostile-dominant behaviours (Habke & Flynn, 2002; Hill, Zrull, & Turlington, 1997; Nealis, Sherry, Sherry, Stewart, & Macneil, 2015; Sherry, Mackinnon, & Gautreau, 2016). Specifically, Hill *et al.* (1997) described possible gender differences in interpersonal problems typically associated with elevated trait perfectionism. Using the interpersonal circumplex (e.g., Inventory of Interpersonal Problems), Hill *et al.* (1997) found self-oriented perfectionism was associated with more hostile-dominant behaviours (e.g., controlling, manipulating, aggressing towards, and trying to change others) in college men and more friendly dominant behaviours (e.g., being overly responsible for others, gregarious-extraverted, and eager to please others) in college women. Socially prescribed perfectionism was linked to hostile, domineering, and socially avoidant behaviours in men and diverse interpersonal problems and distress in women.

Unlike self-oriented and socially prescribed perfectionism, other-oriented perfectionism is generally not associated with self-reported interpersonal distress (e.g., Habke & Flynn, 2002; Hill *et al.*, 1997). However, other-oriented perfectionism is consistently linked to 'dark' personality traits including narcissistic grandiosity, Machiavellianism, and psychopathy, as well as low agreeableness and a lack of empathy for others (e.g., Hill *et al.*, 1997; Nealis *et al.*, 2015; Stoeber, 2015). Other-oriented perfectionism is also linked to greater marital conflicts and distress reported by spouses (Habke & Flynn, 2002). Like self-oriented and socially prescribed perfectionism in men, other-oriented perfectionism is

also more strongly associated with hostile, domineering, and vindictive behaviours (Hill *et al.*, 1997). Furthermore, compared with trait perfectionism dimensions, fewer studies have examined specific interpersonal consequences associated with perfectionistic self-presentation and none has explored possible gender differences in interpersonal behaviours linked with perfectionistic self-presentation. Nevertheless, perfectionistic self-promotion has been aligned with traits characterizing narcissistic grandiosity, whereas non-display and non-disclosure of imperfection are more closely associated with traits characterizing narcissistic vulnerability (see Smith *et al.*, 2016). Taken together, the extant research indicates strong associations between perfectionism (e.g., other-oriented perfectionism) and interpersonal hostility, and these associations appear more robust in men than in women.

Perfectionism social disconnection model

To better understand factors that shape early alliance development with people high in perfectionism, we adopted the recently expanded Perfectionism Social Disconnection Model (PSDM; Hewitt *et al.*, 2017; Hewitt, Flett, Mikail, Kealy, & Zhang, 2018). The PSDM posits perfectionistic behaviour is driven by the desire to fulfil an inordinate or thwarted need for belongingness and the need to 'repair' a defective self and the associated feelings of shame and humiliation (Hewitt *et al.*, 2017, 2018). One of the core motivations for people high in perfectionism is to defend against shame and humiliation, and to secure social connection and acceptance by attempting to be, or appear, perfect or flawless. Paradoxically, these perfectionistic behaviours may be hostile and off-putting to others, thereby culminating in the very consequences people high in perfectionism are most fearful of – alienation and rejection (Hewitt *et al.*, 2017). The PSDM has recently been extended to the therapeutic context (Hewitt *et al.*, 2018) and suggests that hostile and distancing behaviour associated with perfectionism can negatively impact therapeutic alliance and outcome. The PSDM has garnered empirical support in clinical and non-clinical samples, albeit mostly outside the therapeutic context (see Hewitt *et al.*, 2017; Sherry *et al.*, 2016).

In the therapeutic context, patient hostility can present significant challenges by interfering with alliance building in short-term therapy (Muran, Segal, Samstag, & Crawford, 1994), reducing emotional resonance with the clinician (Gurtman, 1996), and creating opportunities for alliance ruptures and dropouts (Piper *et al.*, 1999). For instance, Whelton, Paulson, and Marusiak (2007) explored the associations between patients' pre-treatment perfectionistic attitudes and their ratings of therapeutic alliance over the course of treatment. These authors reported that higher patients' pre-treatment perfectionism was associated with lower ratings of the therapeutic alliance at each session assessed (sessions 3, 6, 9, and 12). Furthermore, the relationship between patients' pre-treatment perfectionism and the therapeutic alliance was partially explained by higher hostility and lower positive affect endorsed by patients. Together, these results provide initial support for the PSDM in the therapeutic context (Hewitt *et al.*, 2018) by demonstrating the hostility exhibited by patients with high perfectionism can negatively impact the treatment process.

The present study

To date, most research on perfectionism in treatment focused on patient-rated alliance and outcome over the course of treatment (e.g., Blatt *et al.*, 1998; Shahar *et al.*, 2004;

Whelton *et al.*, 2007). Few studies have explored clinician's perceptions of perfectionistic men and women during initial clinical encounters and how this may influence the development of the therapeutic alliance from the clinicians' perspective. Clinicians' initial impressions are important as they can influence the development of alliance and impact treatment outcome (Colli & Ferri, 2015). Specifically, clinicians who expected treatment to be more effective and those who were more motivated to work with their patients generally had better therapy outcomes (Joyce & Piper, 1998; Meyer *et al.*, 2002). Additionally, given the strong associations between trait perfectionism and hostile-dominant behaviours in men (Hill *et al.*, 1997), and the importance of the first session in alliance building and patient engagement (Hilsenroth & Cromer, 2007), more research on patient perfectionism in the earliest stages of therapeutic contact (e.g., initial intake, assessment, and the first therapy session) is warranted.

Against this background, we aimed to build upon and extend the literature (e.g., Hewitt *et al.*, 2008; Hewitt *et al.*, Advance online publication; Shahar *et al.*, 2004; Whelton *et al.*, 2007; Zuroff *et al.*, 2016) on perfectionism in the therapeutic context by assessing clinicians' perceptions of patients with elevated perfectionism following an initial clinical interview. We utilized the dataset reported in Hewitt *et al.* (2008). Drawing on the PSDM (Hewitt *et al.*, 2017, 2018), and prior studies on perfectionism and interpersonal problems (e.g., Hill *et al.*, 1997; Sherry *et al.*, 2016), we hypothesized that trait and self-presentational dimensions of perfectionism would correlate positively with clinician-rated hostility (i.e., clinicians' rating of defensiveness, irritability, and hostility in patients). Likewise, we hypothesized that trait and self-presentational dimensions of perfectionism would correlate negatively with clinician impressions (i.e., clinician ratings of the patient's likeability, desirability, and likelihood of benefiting from treatment). Further-more, building on findings regarding gender differences (Hill *et al.*, 1997) and gender role stereotypes (Wood & Eagly, 2012), we hypothesized gender differences would be observed in relationships between trait perfectionism dimensions, perfectionistic self-presentation dimensions, clinician-rated hostility, and clinician impressions.

In keeping with the PSDM in the therapeutic context (Hewitt *et al.*, 2018) and with studies linking other-oriented perfectionism with interpersonal hostility across genders (Hill *et al.*, 1997; Nealis *et al.*, 2015; Stoeber, 2015), we assessed the extent to which clinician-rated hostility mediates the relationship between patients' other-oriented perfectionism and clinician impressions, after controlling for variance attributable to self-oriented and socially prescribed perfectionism, as well as depression and interaction anxiety. Similarly, we assessed the mediating role of clinician-rated hostility in the relationship between perfectionistic self-presentation dimensions and clinician impressions, again controlling for depression and interaction anxiety in patients.

Method

Participants

As described in Hewitt *et al.* (2008), participants were 90 adult patients (40 men) recruited from several outpatient mental health clinics from a large university and affiliated university teaching hospitals. Recruitment was conducted over a period of 9 months at various locations, and we found no significant differences in participant demographics (e.g., gender, ethnicity, and years of education) at various locations. Prior to giving consent, participants completed the usual intake procedure at their referral location and had been waitlisted for outpatient treatment. Participants' age ranged from

19 to 64 years (M_{age} = 36.2, *SD* = 11.1), with an average of 15.2 years (*SD* = 3.0) of education. Participants with a psychotic disorder were excluded. Of the 90 participants, 100% were of European descent, 64% were currently employed, 20% were married, 62% were single, 13.2% were divorced/separated, and 84% had previous experience with a mental health professional. Though diagnostic status was not determined by structured interviews, participants endorsed a range of primary concerns that were reflective of individuals typically seen in outpatient mental health settings: depression (61%), anxiety (11%), adjustment or situational stress (10%), relationship issues (10%), and eating disorders (8%).

Procedure

During recruitment, participants were told the purpose of the study was to investigate how people cope with challenging or stressful situations. Following a description of the study, participants who provided written consent were invited to participate in a study involving a 50-min, one-on-one interview with a trained clinician. Prior to the interview, participants completed self-report measures assessing trait and self-presentational perfectionism as well as mood and anxiety symptoms. A semi-structured interview, consisting of three questions, was used as a standardized stimulus. First, participants were asked about the reason for seeking treatment at this time. This question was included to provide an opportunity for participants to acclimatize to the setting and the clinician, and to establish the interview as akin to other initial contacts with mental health professionals. Next, participants were asked to think about and briefly describe the two most challenging situations in their lives in which they felt they had not coped well. For each situation, participants were also asked to reflect on their contribution to the development of these problems.

Following the interview, the clinician completed ratings assessing their impressions of the participant (see below). The clinician also reassured participants that withholding challenging situations is common and understandable during the interview. Participants were asked to indicate whether the situations they described were indeed the most difficult ones they could remember. Twelve participants indicated that they had held back; however, these participants did not differ in any way from those who did not withhold any challenging situation. Participants were also asked if they felt the interview resembled the typical initial contact with a mental health professional. While participants varied considerably in their responses, no one felt the study interview deviated significantly from their initial interviews (e.g., intake interviews) conducted at the outpatient mental health clinics. Participation was voluntary and confidential. Participants were fully debriefed and received $10 for their participation. Our study received ethical approval from the university research ethics board.

Measures

Trait perfectionism

The Multidimensional Perfectionism Scale (MPS) – Short Form is an abbreviated (i.e., 15 items) version of the original 45-item questionnaire (Hewitt & Flett, 1991), which assesses three trait perfectionism dimensions: *self-oriented perfectionism* (e.g., 'when I am working on something, I cannot relax until it is perfect'), *other-oriented perfectionism* (e.g., 'everything that others do must be of top-notch quality'), and *socially prescribed perfectionism* (e.g., 'anything I do that is less than excellent will be seen as poor work by those around me'). Items are rated on a 7-point Likert scale (1 = *strongly disagree*,

7 = *strongly agree*). The short form has demonstrated good psychometric properties (Cox, Enns, & Clara, 2002) and is highly correlated with the original scale (rs = .81 to .91).

Perfectionistic self-presentation

Perfectionistic Self-Presentation Scale (PSPS; Hewitt *et al.*, 2003) is a 27-item measure of the interpersonal expression of perfection, consisting of three subscales: *Perfectionistic self-promotion* (e.g., 'I try always to present a picture of perfection'), *non-display of imperfection* (e.g., 'It would be awful if I made a fool of myself in front of others'), and *non-disclosure of imperfection* (e.g., 'I try to keep my faults to myself'). Items are rated on a 7-point Likert scale (1 = *strongly disagree,* 7 = *strongly agree*). Several studies involving clinical and university samples have supported the reliabilities and validities of the PSPS (Hewitt *et al.*, 2003).

Depressive symptoms

A 13-item abbreviated form of the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) was used to assess the severity of depressive symptoms. Each BDI item consists of a depression symptom (e.g., sadness) ranging from 0 (*no depression symptoms*) to 3 (*severe depression symptoms*). Coefficients alpha for the BDI usually range from .80 to .95 (e.g., Beck, Steer, & Gardin, 1988). The short form has validity and reliability comparable to the full scale in clinical samples (Beck & Beck, 1972).

Interaction anxiety

The Interaction Anxiousness Scale (IAS, Leary, 1983) is a 15-item measure of a person's tendency to experience anxiety in social situations (e.g., 'In general, I am a shy person'). We included the IAS because it assesses inhibited social behaviours that may overlap with certain PSP dimensions (e.g., non-disclosure of imperfection). The IAS demonstrates high test-retest and internal reliability, and it correlates well with measures of anxiety and interpersonal concerns in actual social interactions (Leary & Kowalski, 1993).

Clinicians

One of three trained Caucasian female clinicians at the university psychology clinic conducted the interview. Clinicians who interacted with participants remained 'blind' to study purposes/hypotheses as well as participants' scores on all questionnaires. Participants were randomly assigned to clinicians, with each clinician conducting 30 interviews. All three clinicians were post-internship, doctoral-level clinical psychology graduate students, with 5–7 years of graduate training in clinical interviews, assessment, and psychotherapy. Clinicians were trained to employ an open but neutral interviewing style, meant to facilitate self-disclosure and to stimulate a stance typical of mental health professionals. Consistency in interviewing style (e.g., warmth) between clinicians was established and monitored using taped interviews. All clinicians were provided ongoing supervision by a senior, licensed clinical psychologist, and their interviews were reviewed periodically to ensure consistency in style and general demeanours. To ensure consistency across clinicians, trained coders rated clinicians' warmth and general demeanours using taped interviews on 7-point Likert scales (e.g., 1 = *not at all warm*, 7 = *extremely warm*). Despite training, clinicians still differed significantly on warmth,

$F(2, 86) = 8.7, p < .001$. Specifically, these differences focused on one clinician who was significantly warmer, on average, than the other two clinicians. Although this difference was statistically significant, this clinician differed by less than half a rating point ($M = 5.5$ vs. $M = 5.0$ and 5.1) from the other clinicians. Nonetheless, our results remained unchanged when analyses were repeated while controlling for clinicians' warmth.

Clinician ratings

Following each interview, using 7-point Likert scales (1 = *not at all*, 7 = *extremely*), clinicians rated (1) how much they liked the participant (patient likeability), (2) how much they would like to have the participant as a potential patient (patient desirability), and (3) the extent to which they believe the participant would benefit from treatment (potential benefit). Factor analysis of clinicians' ratings revealed all three items loaded substantially (>.79) on a single factor with an eigenvalue of 2.26, accounting for 75.3% of the variance. No other eigenvalue approached 1.0, indicating that this factor was a consistent composite measure of clinicians' impressions. Thus, a single composite of positive clinician impressions was created by totalling the individual ratings (see Table SA1 for loadings).

In addition to the above ratings, clinicians also assessed participants' affect and general demeanours using nine adjectives: *Jittery*, *nervous*, *upset*, *distressed*, *anxious*, *guilty*, *irritable*, *defensive,* and *hostile.* Items were rated using a 5-point Likert scale (1 = *not at all*, 5 = *very much*). Next, we consolidated these ratings into composite scores through exploratory principal components analysis, using varimax rotation in SPSS (see Table SA2 for loadings). Parallel analysis indicated that two factors should be retained: (1) *Distress and anxiety*, which includes jittery, nervous, upset, distressed, anxious, and guilty ratings (eigenvalue = 4.22, 46.9%) and (2) *hostility*, which consists of hostile, irritable, and defensive ratings (eigenvalue = 2.01, 22.2%). The 'distress and anxiety' and 'hostility' composites were created by averaging individual ratings in each factor, respectively.

Results

Descriptive statistics

Participants were excluded from data analyses if they were missing over 50% of observations on any given scale (Tabachnick & Fidell, 2007) and no one was excluded. A negligible percentage of observations were missing in the trait perfectionism measure ($n = 6$; 0.44% of 1,350 expected observations). Within-subject mean imputation was utilized to address these missing observations. Means, standard deviations, coefficients alpha, and observed ranges for all study variables were presented separately for male ($n = 40$) and female ($n = 50$) participants (see Table 1). Our sample closely resembled other volunteer treatment-seeking, clinical samples in levels of depression (Steer, Beck, & Brown, 1989), interaction anxiety (Leary & Kowalski, 1993), and trait and self-presentational perfectionism (Cox *et al.*, 2002; Hewitt *et al.*, 2003). Cronbach's alpha was satisfactory (i.e., .82 to .93) across all study measures. Independent *t*-test analyses revealed no significant mean-level gender differences in any patient variable or clinician rating (see Table 1). A one-way ANOVA was conducted to investigate whether patient variables (e.g., perfectionism, BDI, and IAS) and clinician ratings varied significantly across clinicians, which yielded no significant differences between clinicians.

Partial correlations

Partial correlations for trait perfectionism dimensions, perfectionistic self-presentation dimensions, and clinician ratings, controlling for patients' depression and interaction anxiety, are presented in Table 2 (see Tables SB1 and SB2 for bivariate correlations). As hypothesized, other-oriented perfectionism and non-display of imperfection had small positive relationships with clinician-rated hostility (r = .21 to .26), and self-oriented perfectionism, socially prescribed perfectionism, and non-disclosure of imperfection had small-to-moderate negative relationships with clinician impressions (r = −.21 to −.34). As such, results suggest patients with elevated other-oriented perfectionism and patients with elevated non-display of imperfection tended to be rated as more hostile by clinicians. Furthermore, findings also suggest patients with high self-oriented perfectionism, patients with high socially prescribed perfectionism, and patients with high non-disclosure of imperfection tended to be associated with less favourable clinician impressions. However, unexpectedly, self-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-promotion, and non-disclosure of imperfectionist were not significantly associated with clinician-rated hostility; and other-oriented perfectionism, perfectionistic self-promotion, and non-display of imperfection were not significantly associated with clinician impressions.

Next, we tested for gender differences in partial correlations following Zou's (2007) recommendations. As hypothesized, gender differences were observed. Specifically, the relationship between self-oriented perfectionism and clinician ratings of distress and anxiety was significantly stronger in female patients relative to male patients (see Table 2). In contrast, the relationship between socially prescribed perfectionism and clinician ratings of hostility was significantly stronger for male patients relative to female patients (see Table 2).

Table 1. Means, standard deviations, Cronbach's alpha, and gender differences of study variables for men (n = 40) and women (n = 50)

Variable	Men			Women			Range	Gender difference Hedges's g
	M	SD	α	M	SD	α		
Patient perfectionism								
1. Self-oriented perfectionism	21.4	6.8	.86	22.5	7.5	.87	5–35	.15
2. Other-oriented perfectionism	21.1	6.3	.82	19.9	6.1	.83	6–32	.19
3. Socially prescribed perfectionism	19.2	6.5	.84	21.4	6.9	.85	5–35	.34
4. Perfectionistic self-promotion	41.9	11.2	.84	43.9	13.0	.85	16–70	.16
5. Non-display of imperfection	46.3	12.6	.90	42.4	13.3	.91	15–69	.30
6. Non-disclosure of imperfection	24.5	8.6	.84	22.6	8.5	.83	7–45	.22
Symptom distress								
7. Depression	12.9	8.3	.90	12.0	7.1	.90	0–32	.12
8. Interaction anxiety	48.4	12.2	.91	50.0	12.2	.93	19–71	.13
Clinician ratings								
9. Distress and anxiety	2.2	1.0	.88	2.4	1.1	.90	1–5	.17
10. Patient hostility	2.1	1.3	.67	2.1	1.3	.65	1–5	.02
11. Positive clinician impressions	14.7	4.4	.82	15.5	4.0	.84	6–21	.19

Table 2. Partial correlations between patient perfectionism and clinician ratings after controlling for patients' anxiety and depression

Variable	Trait perfectionism			Perfectionistic self-presentation		
	SOP	OOP	SPP	PSP	NDP	NDC
Overall (n = 90)						
Distress and anxiety	.09 [−.12; .30]	−.02 [−.22; .18]	.01 [−.20; .20]	.03 [−.17; .23]	.02 [−.17; .23]	.06 [−.12; .25]
Patient hostility	.11 [.11; −.13]	**.21 [.02; .36]**	.17 [.12; −.05]	.16 [−.04; .35]	**.26 [.07; .43]**	.10 [−.17; .37]
Positive clinical impressions	**−.21 [−.38; −.02]**	−.12 [−.31; .08]	**−.34 [−.49; −.16]**	−.17 [−.38; .06]	−.13 [−.31; .06]	**−.26 [−.44; −.04]**
Men (n = 40)						
Distress and anxiety	−.23 [−.54; .11]	−.21 [−.50; .08]	−.17 [−.45; .15]	−.15 [−.42; .16]	.07 [−.30; .42]	−.09 [−.35; .23]
Patient hostility	**.34 [.09; .59]**	**.32 [.10; .51]**	**.45 [.04; .67]**	.33 [−.01; .58]	**.43 [.08; .64]**	.20 [−.40; .67]
Positive clinical impressions	**−.41 [−.61; −.13]**	−.21 [−.49; .14]	**−.36 [−.59; −.07]**	−.16 [−.49; .25]	−.07 [−.39; .25]	−.32 [−.56; .08]
Women (n = 50)						
Distress and anxiety	**.30 [.04; .52]**	.09 [.13; −.17]	.07 [−.19; .31]	.08 [−.19; .35]	−.04 [−.30; .22]	.19 [−.05; .44]
Patient hostility	−.06 [−.35; .18]	.09 [−.16; .28]	−.04 [−.24; .17]	.05 [−.17; .24]	**.15 [.01; .30]**	.06 [−.11; .23]
Positive clinical impressions	−.08 [−.34; .21]	−.04 [−.32; .22]	**−.38 [−.57; −.15]**	−.21 [−.45; .08]	−.17 [−.39; .06]	−.20 [−.44; .07]
Difference in partial correlations across men and women						
Distress and anxiety	**−.53 [−.89; −.11]**	−.30 [−.69; .13]	−.24 [−.64; .19]	−.23 [−.63; .20]	.11 [−.31; .52]	−.28 [−.67; .15]
Patient hostility	.40 [−.01; .77]	.23 [−.18; .61]	**.49 [.09; .84]**	.28 [−.13; .66]	.28 [−.11; .64]	.14 [−.28; .54]
Positive clinical impressions	−.33 [−.70; .08]	−.17 [−.57; .25]	.02 [−.34; .39]	.05 [−.35; .46]	.10 [−.32; .51]	−.12 [−.50; .28]

Note. NDC = non-disclosure of imperfection; NDP = non-display of imperfection; OOP = other-oriented perfectionism; PSP = perfectionistic self-promotion; SOP = self-oriented perfectionism; SPP = socially prescribed perfectionism.
95% confidence intervals reported in brackets. Significant partial correlations and significant differences are bolded.

Mediation by bootstrapping

We conducted path analysis in Mplus (version 7) with maximum likelihood estimation to test two mediational models. In model 1, we tested the extent to which other-oriented perfectionism indirectly predicted less favourable clinician impressions, after controlling for self-oriented and socially prescribed perfectionism. In model 2, we tested the mediating role of clinician-rated hostility in perfectionistic self-promotion's, non-display of imperfection's, and non-disclosure of imperfection's relationships with clinician impressions. In both models, depression, interaction anxiety, and gender were included as covariates and our models were just-identified (df = 0) and thus had perfect fit.

Indirect effects were computed and 95% bias-corrected bootstrapped confidence interval (CI) with 20,000 resamples was used to evaluate significance of indirect effects. If the 95% confidence interval for an indirect effect does not contain 0 within its lower and upper bounds, it suggests mediation (Shrout & Bolger, 2002). Other-oriented perfectionism, but not self-oriented or socially prescribed perfectionism, indirectly predicted less favourable clinician impressions through clinician-rated hostility (see Figure 1):
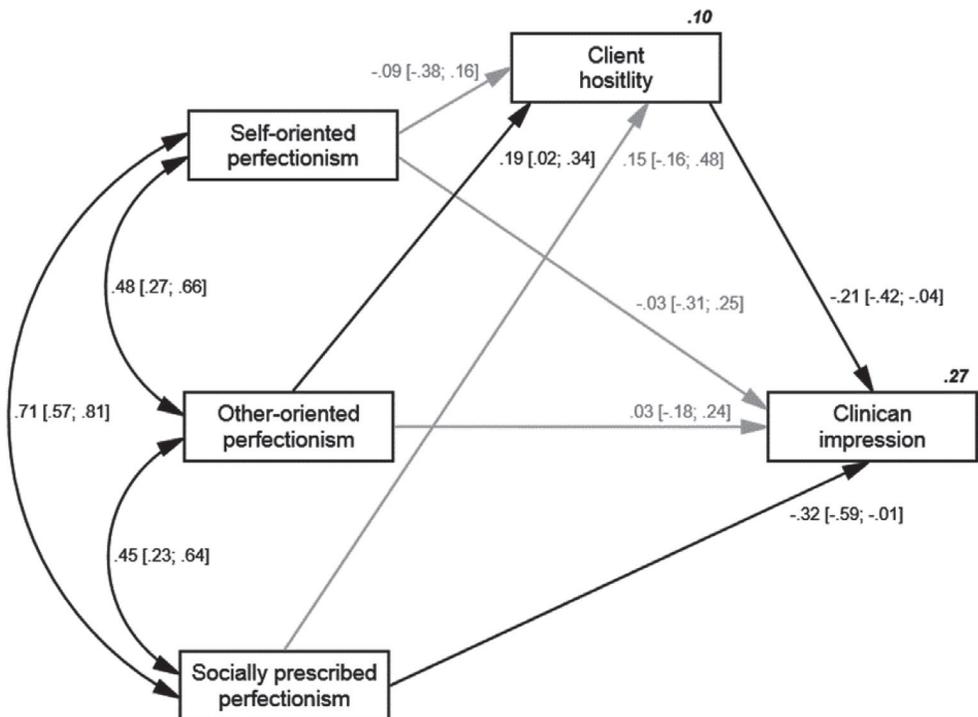

Figure 1. Clinician-rated patient hostility as a mediator of the relationships between patients' trait perfectionism dimensions and clinician impressions, controlling for gender, depression, and anxiety (*n* = 90). Rectangles represent manifest variables. Estimates are standardized. 95% confidence intervals are in brackets. Bolded italicized number indicates the proportion of variance explained. Gender, anxiety, and depression are excluded for clarity. The effect of gender on patient hostility was .03 (−.22; .24); the effect of gender on clinician impressions was .22 (−.01; .44); the effect of depression on patient hostility was −.17 (−.35; .07); the effect of depression on clinician impressions was 01 (−.25; .27); the effect of anxiety on patient hostility was −.02 (−.35; .32); and the effect of anxiety on clinician impressions was .34 (.13; .53).
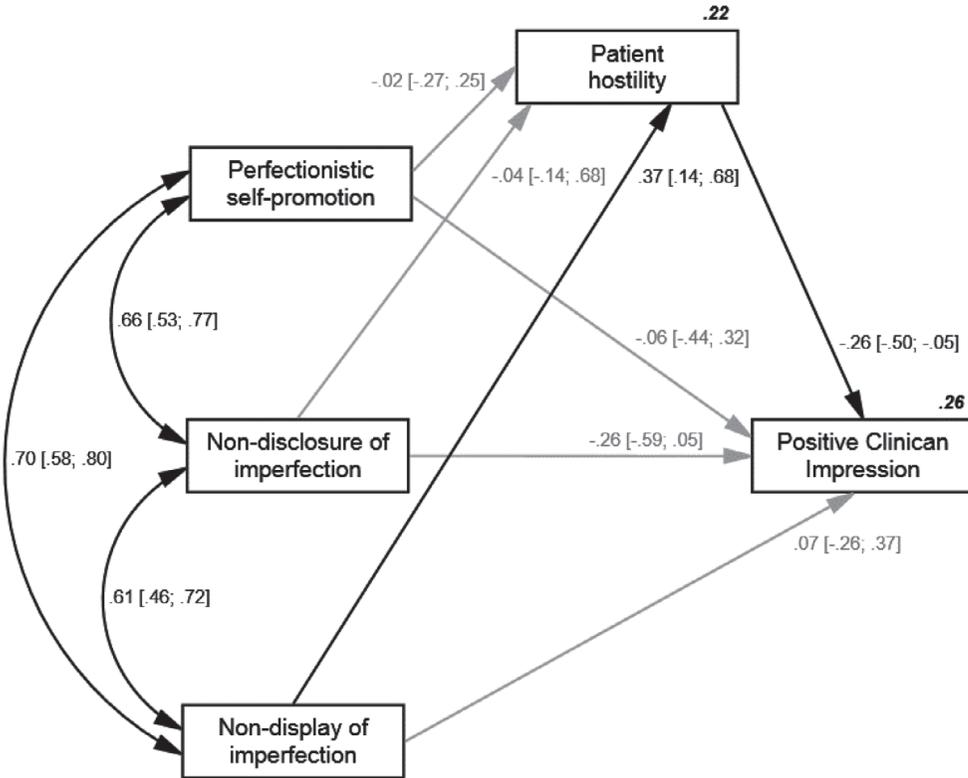
Figure 2. Clinician-rated patient hostility as a mediator of patients' perfectionistic self-presentation and clinician impressions, controlling for patients' gender, depression, and anxiety (*n* = 90). Rectangles represent manifest variables. Estimates are standardized. 95% confidence intervals are in brackets. Bolded italicized number indicates the proportion of variance explained. Gender, anxiety, and depression are excluded for clarity. The effect of gender on patient hostility was .10 (−.12; .27); the effect of gender on clinician impressions was .14 (−.08; .37); the effect of depression on patient hostility was −.22 (−.43; .04); the effect of depression on clinician impressions was −.05 (−.27; .20); the effect of anxiety on patient hostility was −.13 (−.50; .22); and the effect of anxiety on clinician impressions was .30 (.08; .54).

B = −0.03, β = −.04 [95% CI: −0.120; −0.002], *SE* = .03. Similarly, our analyses indicated that non-display of imperfection, but not perfectionistic self-promotion or non-disclosure of imperfection, indirectly predicted less favourable clinician impressions through clinician-rated hostility (see Figure 2): B = −0.03, β = −.10 [95% CI: −0.242; −0.022], *SE* = .05.[1]

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[1] *We tested an exploratory test of the moderating role of gender on the indirect effect of other-oriented perfectionism on clinician impressions through clinician-rated hostility (after controlling for self-oriented perfectionism, other-oriented perfectionism, depression, and anxiety). The indirect effect of other-oriented perfectionism was significant for males (B = −0.010 [−0.040; −0.001]), but not for females (B = −.004 [−0.030; 0.006]. Even so, the index of moderated mediation was non-significant: B = .010 [−0.005; 0.046]. Similarly, we tested an exploratory test of the moderating role of gender on the indirect effect of non-display of imperfection on clinician impressions through clinician-rated hostility (after controlling for perfectionistic self-promotion, non-disclosure of imperfection, depression, and anxiety). The indirect effect of non-display of imperfection on clinician impressions through patient hostility was significant for males (B = −0.012, [−0.034; −0.002]) and females (B = −0.008, [−0.034; −0.002]). However, the index of moderated mediation was non-significant: B = .003 [−0.004; 0.002].*

Discussion

These analyses were the first to explore extensively how trait and self-presentational components of perfectionism in patients were related to clinician impressions (i.e., clinician ratings of the patient's likeability, desirability, and likelihood of benefiting from treatment) during an initial interview. First, consistent with the PSDM (Hewitt *et al.*, 2017) and prior studies (e.g., Habke & Flynn, 2002; Hill *et al.*, 1997; Whelton *et al.*, 2007), patients high in other-oriented perfectionism and those high in non-display of imperfection were perceived to be more hostile by clinicians. Second, patients high in self-oriented perfectionism, socially prescribed perfectionism, and non-disclosure of imperfection were viewed less favourably by clinicians. Third, other-oriented perfectionism and non-display of imperfection were indirectly associated with less favourable clinician impressions through clinician-rated hostility. Thus, the present findings add to the growing body of evidence that perfectionism is a clinically relevant variable that adversely influences the therapeutic process (Blatt *et al.*, 1998; Hewitt *et al.*, 2008; Shahar *et al.*, 2004; Whelton *et al.*, 2007; Zuroff *et al.*, 2016).

Results from our study also aligned with the PSDM (Hewitt *et al.*, 2018). Indeed, the PSDM asserts that anger and hostility are often exhibited by patients who constantly demand perfection from others. According to the PSDM, the anger and hostility displayed by patients high in other-oriented perfectionism take several forms, ranging from hostile reprimand when they perceive others as failing to meet their expectations to pervasive irritability with implicit messages that nothing is ever good enough (Hewitt *et al.*, 2017). Furthermore, clinical accounts suggest that other-oriented perfectionism reflects an attempt to regain a sense of power and dominance in response to adverse life situations that in turn fuel feelings of hostility and resentment. Our findings are also consistent with Sherry *et al.* (2016) who noted that demanding perfection from others strain relationships and research indicating that higher other-oriented perfectionism predicts premature treatment terminations (McCown & Carlson, 2004) and poorer treatment outcomes (Hewitt *et al.*, 2015). Furthermore, consistent with the PSDM (Hewitt *et al.*, 2018), we found that patients high in non-display of imperfection were also viewed as being more hostile by clinicians, which indirectly predicted less favourable clinician impressions. These results are in line with studies linking non-display of imperfection with self-concealment, lower social self-esteem (Hewitt *et al.*, 2003), and narcissistic vulnerability (Smith *et al.*, 2016). Non-display of imperfection reflects a core sense of inadequacy over one's ability to project and maintain a perfect public image (Hewitt *et al.*, 2003). In order to minimize exposure to criticism and rejection, patients high in non-display of imperfection may come across as hostile/defensive during the interview.

Likewise, our finding that patients with higher self-oriented perfectionism and patients with higher socially prescribed perfectionism were perceived less favourably by clinicians is also congruent with the PSDM. According to the PSDM (Hewitt *et al.*, 2017), one of the core motivations for people high in perfectionism is to defend against shame and humiliation, and to secure social connection and acceptance by attempting to be, or appear, perfect or flawless. However, these perfectionistic behaviours may be viewed as being hostile, domineering, or off-putting to others, thereby culminating in the very consequences that people high in perfectionism are most fearful of – alienation and rejection. Indeed, self-oriented perfectionism was associated with more hostile-dominant interpersonal tendencies, whereas socially prescribed perfectionism was linked with more hostile, domineering, and socially avoidant behaviours (see Hill *et al.*, 1997). During the initial interview, people high in self-oriented or socially prescribed perfectionism may

minimize, deny, or deflect attention away from sources of distress or perceived imperfections. Ironically, these behaviours can severely limit opportunities for patients to develop an emotional rapport or connection with the clinician (Hewitt *et al.*, 2018).

Additionally, our finding that patients with high non-disclosure of imperfection tended to be rated by clinicians as more hostile aligns with research suggesting that non-disclosure of imperfection overlaps closely with narcissistic vulnerability (Smith *et al.*, 2016), and evidence that people with high narcissistic vulnerability are prone to a hostile attributional bias which leaves them mistrustful and suspicious of others' motives (Hansen-Brown & Freis, Advance online publication). Indeed, we speculate that people with high non-disclosure of imperfection may downplay or eschew disclosure of distressing personal information during the initial interview, likely due to a long-standing pattern of distrust and suspiciousness of others (Hewitt *et al.*, 2018).

Limitations and future directions

The strengths of the current study should be weighed against its methodological limitations. First, our study has the general strengths and weaknesses associated with naturalistic settings, including limited information about patients' formal diagnoses and the small number of clinicians who conducted the interviews. As well, all participants and clinicians were Caucasians and all clinicians were women, hence limiting the generalizability of our findings to other demographic groups. Patients with high perfectionism may experience and act differently with a male versus female clinician. Second, although the initial interview is important in the development of therapeutic alliance (Hilsenroth & Cromer, 2007), patients' interactions with a clinician during a one-off interview for a research study may be considerably different from interactions with a clinician who will continue treating the patient. Our participants might be less concerned about maintaining a perfect façade with a clinician whom they were not likely to meet again. Hence, future analyses of the first sessions in ongoing treatment may lead to a more valid understanding of the experiences of patients high in perfectionism and the subtleties in their interactions with clinicians. Furthermore, our study is cross-sectional, and no causal relationships can be inferred about patient perfectionism and clinician ratings. Future longitudinal studies are necessary to better understand the effects of pre-treatment patient perfectionism on therapeutic interactions over time. Finally, we relied on single-item measures to assess clinician impressions, which were not directly related to therapeutic alliance or outcome. Future studies should employ validated measures of therapeutic alliance and processes from multiple sources (i.e., patient, clinicians, and independent coders) and examine specific verbal and non-verbal behaviours displayed by patients with elevated perfectionism during the session.

Clinical implications

In conjunction with the extant literature on perfectionism in the therapeutic process, our study highlights the need to assess patient perfectionism during the earliest stages of therapeutic contact. A recent analysis of the TDCRP data (Zuroff *et al.*, 2016) suggests patients with elevated perfectionism may project their harsh self-criticism and fear of rejection onto clinicians and act in ways that undermine clinicians' ability to be genuinely warm and empathic. If these reactions are left unresolved, clinicians may react in ways (e.g., being judgemental, disengaging) that can further undermine therapeutic effectiveness (Strupp, 1980). From this perspective, therapy outcome may hinge on clinicians'

ability to cope with difficult reactions evoked by maladaptive behaviours (e.g., hostility) associated with perfectionism. Once a therapeutic alliance is established, open-ended and non-defensive explorations of in-session process and affect may be key to getting the core relational issues facing patients high in perfectionism.

Acknowledgements

Data availability statement

Data connected to this research has been deposited at data.mendeley.com/datasets/rm3sszf 2r3/1.

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Supporting Information

The following supporting information may be found in the online edition of the article:

Table SA1. Loadings obtained through exploratory principal components analysis with varimax rotation of clinician's impression.
Table SA2. Loadings obtained through exploratory principal components analysis with varimax rotation of clinician ratings of patients affect and general demeanour.
Table SB1. Bivariate correlations between patient characteristics and clinician ratings for all patients (n = 90).
Table SB2. Bivariate correlations between patient characteristics and clinician ratings across men and women.