Psychotherapy

Dynamic-Relational Group Treatment for Perfectionism: Informant Ratings of Patient Change

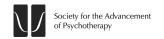
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Online First Publication, May 20, 2019. http://dx.doi.org/10.1037/pst0000229

CITATION

Hewitt, P. L., Qiu, T., Flynn, C. A., Flett, G. L., Wiebe, S. A., Tasca, G. A., & Mikail, S. F. (2019, May 20). Dynamic-Relational Group Treatment for Perfectionism: Informant Ratings of Patient Change. *Psychotherapy*. Advance online publication. http://dx.doi.org/10.1037/pst0000229





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http://dx.doi.org/10.1037/pst0000229

Dynamic-Relational Group Treatment for Perfectionism: Informant Ratings of Patient Change

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Although now there is accumulating research on the effectiveness of psychotherapy for perfectionism, this research has been based almost exclusively on self-report data. In this article, we describe analyses from the University of British Columbia Perfectionism Treatment Study assessing close other informant ratings of change in perfectionism traits and perfectionistic self-presentation. A total of 61 close other informants of patients who participated in a 10-week dynamic-relational treatment for perfectionism completed measures of patient trait and self-presentational facets of perfectionism at pretreatment, at posttreatment, and at a 4-month follow-up. In support of the effectiveness of the treatment, we found that close other measures of patients' self-oriented perfectionism, other-oriented perfectionism, and all three facets of perfectionistic self-presentation were significantly reduced at posttreatment and follow-up. Close other measures of patients' socially prescribed perfectionism did not show change over the course of treatment and follow-up. The findings are discussed in terms of the effectiveness of the dynamic-relational treatment of perfectionism and the utility of extending research by including close other measures of change in treatment-outcome research.

Clinical Impact Statement

Perfectionism is a pernicious personality vulnerability factor associated with myriad forms of distress and psychological disorders. Question: This article attempts to determine whether close other informants (e.g., spouses) can perceive and rate improvements in perfectionism components in patients undergoing a dynamic-relational group treatment for perfectionism, to provide further evidence of the effectiveness of this treatment for perfectionism. Findings: Consistent with findings of change in perfectionism based on self-report measures (Hewitt et al., 2015), there was good support for the effectiveness of the treatment based on close other measures of changes in perfectionism. Meanings: This underscores the utility of this treatment and indicates the importance of focusing treatment on relational underpinning of perfectionism. Moreover, the article also supports the use of close others in evaluating treatment effectiveness because they may be perceiving elements of perfectionistic behavior that the patients themselves do not perceive. The main conclusions of this study are that the treatment appears to have support as being an appropriate and effective treatment for perfectionism and that close others may be a valuable resource in assessing changes in patients' functioning from treatment. Next Steps: Future work should continue to evaluate the efficacy of this treatment modality and also evaluate the utility of using close others in both psychotherapy research and in the treatment of perfectionistic individuals.

Keywords: perfectionism, dynamic-relational, group psychotherapy, informant ratings, outcome

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This research was supported by grants from the Social Sciences and Humanities Research Council of Canada (SSHRC; 435-2015-0412) and from the Society for Psychotherapy Research awarded to Paul L. Hawitt

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Perfectionism has long been recognized as a core personality vulnerability factor that not only impacts various forms of distress, disorder, and dysfunction (Bieling, Summerfeldt, Israeli, & Antony, 2004; Egan, Wade, & Shafran, 2011; Hewitt, Flett, & Mikail, 2017; Sirois & Molnar, 2016) but also negatively influences psychotherapy process and outcome (Blatt, Quinlan, Pilkonis, & Shea, 1995; Hewitt, Mikail, Kealy, & Zhang, 2018; Miller, Hilsenroth, & Hewitt, 2017). Given the breadth of psychopathology and distress associated with perfectionism, it is not surprising that there have been numerous attempts to develop psychotherapeutic treatments for perfectionistic behavior and to demonstrate the effectiveness and efficacy of some of those treatments (Enns, Cox, & Pidlubny, 2002; Hewitt et al., 2015; Riley, Lee, Cooper, Fairburn, & Shafran, 2007).

For example, over the past 25 years, we (Hewitt et al., 2017) developed a dynamic-relational individual and group psychotherapy for perfectionism, the effectiveness of which has been evaluated by determining whether patient-rated psychological symptoms and perfectionism components at pretreatment decreased at posttreatment and follow-up (Hewitt et al., 2015). Our previous investigation focused on several domains of symptoms including depression, anxiety, social anxiety, and interpersonal problems and the various components of perfectionism based on the comprehensive model of perfectionistic behavior as described by Hewitt et al. (2017). The comprehensive model of perfectionistic behavior delineates three perfectionism components including, first, trait perfectionism reflecting the concern and drive to be perfect and includes self-oriented perfectionism (i.e., demanding the self to be perfect), other-oriented perfectionism (i.e., demanding others to be perfect), and socially prescribed perfectionism (i.e., believing others demand perfection of oneself). The second component, perfectionistic self-presentation, reflects the drive not to be perfect, but to appear perfect to others and includes perfectionistic selfpromotion (i.e., actively proclaiming and promoting oneself as perfect), nondisplay of imperfection (i.e., avoidance of exhibiting anything less than perfection), and nondisclosure of imperfection (i.e., avoidance of disclosing any imperfection). Finally, the third component involves perfectionistic and self-recriminatory automatic thoughts or self-directed statements reflecting an internal dialogue regarding one's own imperfection. Hewitt et al. (2015) demonstrated that the dynamic-relational group psychotherapy produced clinically significant decreases in all symptoms and all perfectionism components posttreatment. Furthermore, consistent with other psychodynamically oriented treatments (Shedler, 2010), symptoms and perfectionism components were further reduced at follow-up. Finally, the treatment produced significant changes in both symptoms, with the exception of anxiety, and perfectionism components in comparison with a wait-list control.

Although the self-report evidence from Hewitt et al. (2015) provides promising support for the psychodynamic treatment of perfectionism, it is important to continue to evaluate its effectiveness using methods other than patient self-report measures. Unfortunately, despite the interest in assessing the effectiveness of various perfectionism treatments (Enns et al., 2002; Riley et al., 2007), virtually all studies evaluating perfectionism treatments thus far have focused on self-report in measuring perfectionism and other treatment outcomes. This one-sided reliance on self-report can be restrictive because the self provides only one vantage point or perspective for assessing change, and this may be especially problematic among individuals

with various forms of personality dysfunction (Klonsky, Oltmanns, & Turkheimer, 2002). As suggested by several researchers, informant ratings of outcomes can provide additional information beyond self-reports and thus may importantly contribute to the evaluation of the effectiveness of treatment (Lambert, 2010).

The use of informant ratings may be particularly relevant when evaluating perfectionism levels over the course of treatment. Research has established that there is modest correspondence between self-reports and informant ratings of perfectionism (Mushquash, Sherry, Sherry, & Allen, 2013; Vieth & Trull, 1999), and some evidence points to the relevance of informant ratings in terms of associations with measures of maladjustment. For example, Sherry et al. (2013) showed that informant ratings of perfectionism provide unique variance beyond self-reports of perfectionism in predicting depression, and, most notably, Flett, Besser, and Hewitt (2005) showed in their research with 210 pairs of community participants and their same-sex best friends who served as informants that the associations between perfectionism and distress varied substantially depending on whether the focus was on selfreports or on informant ratings. In particular, certain findings were only evident based on analyses of informant ratings and not the self-ratings, suggesting that informants and participants are focusing on somewhat different features of perfectionism. Moreover, as noted earlier, individuals with personality pathology may be particularly limited in how they view themselves, evaluate their functioning, and realistically understand their effect on others (Klonsky et al., 2002). Thus, it is not surprising that discrepancies between self-reports and informant ratings have been documented and that both are seen as providing important information (Klonsky et al., 2002).

One purpose of the current work was to provide further evidence of the effectiveness of our dynamic-relational treatment of perfectionism by utilizing others' ratings of perfectionism in patients undergoing the treatment. This would not only replicate findings regarding the effectiveness of our treatment but also broaden the assessment of psychotherapeutic change to encompass others in the patient's life. Although, generally, we expected that change in others' ratings of perfectionism would be consistent with the self-report results documented in the study by Hewitt et al. (2015), based on the findings from Flett et al. (2005), it was anticipated that the others' ratings would parallel, but not necessarily perfectly mirror (Sherry et al., 2013), the self-report findings as reported in the study by Hewitt et al. (2015). That is, we expected that patients' perfectionism traits and perfectionistic self-presentational facets, as rated by others, would decrease significantly at posttreatment and follow-up.

Close Other Informant Ratings

A second purpose of the current study was to explore and demonstrate the utility of informant ratings in treatment-outcome research. We chose to measure with informant ratings change in perfectionism by focusing on patients' close others (e.g., spouses and close relatives). Numerous researchers over the years have promoted the utility of close others as raters in psychotherapy research (Lambert, 2010), although few studies use close others as sources of information of patient treatment gains (Ogles, 2010). Moreover, when such ratings are included in treatment studies, they tend to focus on changes in patient

symptoms and functioning as opposed to changes in transdiagnostic or personality vulnerability factors that can cause or maintain symptoms or disorders (Blatt, Auerbach, Zuroff, & Shahar, 2006; Hewitt, Habke, Lee-Baggley, Sherry, & Flett, 2008, Hewitt et al., 2015, 2017).

In the current study, to measure perfectionism components in patients as rated by close others, close others completed the same measures of perfectionism at pretreatment, posttreatment, and follow-up that patients had completed, but with altered instructions. That is, whereas the patients completed self-report measures of trait and self-presentational facets of perfectionism, as reported in the study by Hewitt et al. (2015), patient-nominated close others completed the same measures but rated each of the items as they believed the target patient would complete them. This approach allows a more fine-grained measurement of trait and self-presentational facets of perfectionism than global ratings of perfectionism and allows us to provide information on the use of close others in assessing change in perfectionistic behavior.

Overall, extending previous analyses of the Hewitt et al. (2015) data set, the current study aims to address whether significant changes in perfectionism traits and perfectionistic self- presentation facets, as rated by patients' close others, decrease over the course of dynamic-relational treatment and follow-up. This would provide not only additional compelling evidence of the broad effectiveness of our dynamic-relational group treatment program but also a useful examination of others' ratings of change in perfectionism as a function of treatment. As noted earlier, a second purpose of this project was to present a novel way of assessing change in a transdiagnostic personality variable as a function of psychotherapy and providing some initial evidence as to its utility. Although we acknowledge that certain personality constructs may be less observable and not suited for this purpose, many constructs should be suited to this purpose, especially when the focus is on individual differences in personality that are observable and highly relevant to the distress and dysfunction that particular patients experience.

Method

Participants

The participants were 61 patient-chosen close other informants from the University of British Columbia Treatment of Perfectionism Study (Hewitt et al., 2015). At the start of treatment, each patient was asked to choose a close relative or close friend who knew that patient well, who interacted regularly with that patient, and who would complete measures on the patient's behavior. A total of 61 informants (mean age = 45.80 years [13.27]; 30 female, 28 male, three did not indicate gender) completed measures at pretreatment, 49 at posttreatment, and 35 at the 4-month follow-up.² Of the initial 61 informants, 30 were spouses, 18 friends, six siblings, four parents, and one adult child of patients. For the 49 informants at posttreatment, 35 indicated daily interactions over the course of treatment, eight weekly, one monthly, and five did not indicate frequency. For the 35 informants at follow-up, 27 indicated daily interac-

tions with patient target since the end of treatment, four, weekly, two, monthly, and two did not indicate frequency.

Measures

Multidimensional Perfectionism Scale-Other Ratings. This version of our self-report Multidimensional Perfectionism Scale (MPS-O; Hewitt & Flett, 1991) uses the 45 items of the MPS assessing the three trait dimensions of perfectionism, namely, Self-Oriented, Other-Oriented, and Socially Prescribed Perfectionism using a 7-point Likert scale. Close other informants were asked to complete those 45 items as they believed the target patient would rate agreement with statements such as "When I am working on something, I cannot relax until it is perfect" and "I strive to be as perfect as I can" (self-oriented), "I have high expectations for people who are important to me" and "Everything that others do must be of top-notch quality" (other-oriented), and "I feel that people are too demanding of me" and "My family expects me to be perfect" (socially prescribed). In this study, the α coefficients for informant-rated trait subscales were .87, .90, and .91 for the Self-Oriented, Other-Oriented, and Socially Prescribed subscales, respectively.3

Perfectionistic Self-Presentation Scale-Other Rating. This 27-item measure assesses three facets of perfectionistic selfpresentation: perfectionistic self-promotion, nondisplay of imperfection, and nondisclosure of imperfection using the same items from the Perfectionistic Self-Presentation Scale (Hewitt et al., 2003). Close other informants were asked to complete the items of the Perfectionistic Self-Presentation Scale-Other Rating Scale (PSPS-O) as they believed the target patient would rate agreement with statements such as "It is very important that I always appear to be 'on top of things'" and "I strive to look perfect to others" (perfectionistic self-promotion), "It would be awful if I made a fool of myself in front of others" and "I would like to appear more competent than I am" (nondisplay of imperfection), and "I should solve my own problems rather than admit them to others" and "I should always keep my problems to myself" (nondisclosure of imperfection). In this study, the α coefficients for the PSPS-O facets were .91, .90, and .84 for the perfectionistic self-promotion, nondisplay, and nondisclosed facet scores, respectively.

¹ As stated, we have shown in previous research that both trait dimensions and perfectionistic self-presentational facets can be perceived and rated by others (Hewitt & Flett, 1991; Hewitt et al., 2003); however, other perfectionistic behavior such as perfectionistic automatic thoughts are not directly observable by others. For this reason patients' close others completed only measures of patients' perfectionism traits and self-presentational facets.

² We tested whether close other dropouts differed from close others completers on close other pretreatment perfectionism ratings of patients and close others' age and gender. The two groups did not differ on pretreatment close other ratings of patients' perfectionism (all ts (59) ranged between 0.23 and 1.54 (all ts ns), on gender, χ^2 (4) = 3.04, ns, or on age, t(56) = .00 (ns).

³ We wished to ensure that the correlations between patient-completed measures and close other measures were not simply redundant with one another. We found that the correlations between corresponding perfectionism traits and perfectionistic self-presentational styles ranged between .16 and .55.

Procedure

As described in detail in the study by Hewitt et al. (2015), the study received ethical approval from the University of British Columbia Behavioral Research Ethics Board. Patient participants were recruited in metropolitan Vancouver, Canada by media advertisements and posters at community and clinical centers that advertised a group treatment program for adults who had problems with perfectionism. Potential participants completed an initial phone screen and, for those selected, a clinical assessment (i.e., clinical interview and psychometric testing) to determine eligibility. Inclusion criteria included scores of a minimum of a 0.5 SD above the mean on at least one component of trait or selfpresentational perfectionism. A total of 87 participants met inclusion criteria. Fifteen participants were excluded due to severe suicidal ideation, psychotic symptoms, inability to disclose in the initial interview, or never having had a close relationship. This resulted in a total of 72 participants. One participant dropped out before group assignment due to time constraints, and the remaining 71 participants were assigned to one of eight treatment groups. Ten participants dropped out before completing posttreatment and follow-up measures.

As part of the clinical assessment, all patients were asked to nominate a close other informant to complete measures that included the MPS-O and the PSPS-O forms at pretreatment, post-treatment, and follow-up. Following completion of the pretreatment, posttreatment, and follow-up assessments conducted on patients, packages containing questionnaires to be completed by close others were provided to patients, who delivered the package to the close other and then returned the packages to research staff.

Therapy Format

The treatment format is described in detail in the article by Hewitt et al. (2015). Briefly, our treatment approach combined components of interpersonal and psychodynamic group psychotherapy (Hewitt et al., 2017; Tasca, Mikail, & Hewitt, 2005). The therapy focuses on the interpersonal precursors, interpersonal impact, and underlying relational dynamics of perfectionism. Interventions are aimed at addressing perfectionism-related relational patterns that manifest in interactions among group members as well as those described by members within the context of other relationships, including one's relationship with self. This approach focuses on the "here and now," and group leaders emphasize expression of affect, interpersonal feedback among members, and interpretations of group processes and transference responses within the group as a means of exploring and challenging selflimiting interpersonal dynamics. Prominent themes included members' reactions to empathic failures; tolerance of therapists' limitations; interpersonal feedback among group members; addressing the use of perfectionism as a means of creating safety or defending against abandonment, rejection, criticism, intimacy, interpersonal conflict and tension, or a lack of control over one's relational world; and, finally, the theme of termination.

Participants completed two pregroup preparation sessions aimed at enhancing their participation and underscoring benefits they would derive from treatment (MacKenzie, 1990). This was followed by 10 consecutive group sessions, with each session extending for 1.5 hr. Each group was composed of seven to 10 members and was led by two clinical psychology graduate student coleaders

who were supervised by the first and seventh authors. The groups were closed; no new members were assigned once the group had commenced.

Results

Data Analysis Plan

We used a single-group longitudinal correlational design in which change in perfectionism traits and self-presentational facets were measured across pretherapy, posttherapy and follow-up as rated by participants' close others. The repeated measurements (Level 1) were nested within individuals (Level 2), who were, in turn, nested within treatment group (Level 3). For analyses in this study, we used the Hierarchical Linear Modeling (HLM; Raudenbush & Bryk, 2002) program Version 7. HLM is well-suited to examine longitudinal data involving multiple data points that are nested within individual participants across time (Singer & Willett, 2003). Given that the data in this study were nested within treatment groups, we evaluated data dependence by calculating the intraclass correlation coefficient (ICC) for each dependent variable (Tasca, Illing, Joyce, & Ogrodniczuk, 2009) in a three-level model in which individuals were nested within the treatment group (Level 3). An ICC < .05 indicates that the effect of dependency in the data is small and can be ignored (Kenny, Kashy, & Bolger, 1998). We ran two-level HLM models in such cases. When the ICC was > .05, we adjusted the Type I error rate to be more conservative following the recommendation by Kenny et al. (1998). As noted in the following text, all of the analyses in the current study were conducted as two-level models (repeated measurements nested within individuals). We used the Holm-Bonferroni adjustment to the α levels to account for inflation of Type I error due to running multiple models, one for each measure.

HLM also manages missing data well under the assumption that the data are missing at random. We examined whether the data were missing at random using a pattern-mixture model (Hedeker & Gibbons, 1997). Reliable slope parameters can be estimated for participants who have at least two data points, even when data are missing at other time points. We controlled for pretherapy scores in the analyses. As recommended by Raudenbush and Bryk (2002), we built higher level models from lower level models, adding parameters and comparing deviance statistics to assess if the addition of each new parameter resulted in a better fit to the data. The more complex model is a better fit to the data if the difference in deviance statistics was significant when tested by a χ^2 distribution (Raudenbush & Bryk, 2002). We also calculated pseudo R^2 statistics to indicate the percent of the total withinperson variance accounted for by adding the linear parameter to the model. For model equations, see Appendix.

Change in Perfectionism

The means and standard deviations for the trait dimensions and self-presentational facets of perfectionism as completed by patients' close others are shown in Table 1, and the intercorrelations

Table 1
Means and Standard Deviations of the Pretreatment, Posttreatment, and Follow-Up
Perfectionism Measures for Close Other Informant–Rated Perfectionism Trait and Perfectionistic
Self Presentation Measures

	Pretreatment $(n = 61)$		Posttreatment $(n = 49)$		Follow-up $(n = 35)$	
Variable	M	SD	M	SD	M	SD
Perfectionism traits						
Self-oriented	89.20	10.13	82.12	13.18	70.31	10.38
Other-oriented	69.57	15.97	66.95	12.63	61.00	7.71
Socially prescribed	67.47	17.40	66.56	14.72	68.07	10.11
Perfectionistic self-presentation						
Self-promotion	52.59	11.13	49.44	12.72	50.36	11.76
Nondisplay	50.70	11.70	47.47	11.02	48.65	10.04
Nondisclosure	32.58	8.89	30.18	8.06	30.14	7.18

among these variables are presented in Table $2.^{4,5}$ The correlations among the perfectionism components ranged between .20 and .77, indicating that, like self-report versions of these measures, the subscales are related significantly to one another but are not redundant with one another. The correlations among the perfectionistic self-presentation facets appeared somewhat higher than self-report correlations in other work (Hewitt et al., 2003); however, there were no significant differences between the corresponding correlations (all Zs < 1.53, ns).

The perfectionism measures were all normally distributed with no univariate or multivariate outliers. We computed ICC statistics for all subscales and found that none of the ICCs were greater than .05, with the exception of the subscale Other-Oriented Perfectionism, indicating little dependence in the data among individuals within groups. Hence, we conducted two-level models for all analyses. The Type I error rate was adjusted to .023 for the subscale Other-Oriented Perfectionism. We then applied the Holm-Bonferroni correction to Type I error rates across all of the separate subscale models. The results of pattern-mixture models supported the notion that all the missing data were missing at random, and hence we considered the parameters to be reliable and unbiased. We calculated between-person and within-person variances, which are displayed in the last two columns of Table 2. These refer to the percent of total variance that is within individuals across time and the percent that is between individuals as estimated from the base models. The results suggest sufficient variance within each participant that could be predicted by the addition of the linear parameter for each scale.

We conducted separate two-level HLM models examining linear growth curves for all perfectionism subscales to test our hypothesis that close other informants would report reduced levels of perfectionism for participants from pretherapy to follow-up. The two-level HLM results of each of the subscales are displayed in Table 3. We found that the linear parameters were significantly different from zero in the hypothesized direction except for Socially Prescribed Perfectionism, which was not statistically significant. This suggested a significant linear decline across time in close other informant ratings of all of the perfectionism scales, with the exception of Socially Prescribed Perfectionism. Adding the linear parameters accounted for moderate—to-large amounts of within-person variance (Table 3). Further, we compared deviance statistics between nested models for each scale and found that the

addition of the linear time variable resulted in a significantly better fit to the data as compared with the base model for each dependent variable at p < .05. This indicates that with the exception of Socially Prescribed Perfectionism, close other informant ratings of perfectionism variables decreased linearly across time from pretreatment to follow-up.

We calculated the Reliable Change Index (RCI; Jacobson & Truax, 1991) for each perfectionism subscale measure to determine whether changes in the close other informant–rated perfectionism components were clinically significant. According to Jacobson and Truax, the RCI provides an indication of degree of change in an outcome measure that is larger than that expected due to measurement error alone. If the change is larger, it is then meaningful to consider it as practically or clinically significant. Of the 61 participants, 41 individuals showed clinically significant improvement (i.e., RCI > 1.96) on at least one perfectionism subscale measure. Also, 11 individuals showed deterioration effects (i.e., RCI < -1.96) on at least one perfectionism subscale measure.

Discussion

The current study assessed whether close other informant ratings of patients' perfectionism traits and perfectionistic self-presentational facets changed over the course of our dynamic-relational group psychotherapy treatment and follow-up. Our analyses revealed that close other ratings of patients' self-oriented, other-oriented, and all three facets of perfectionistic self-presentation were significantly reduced at posttreatment and follow-up. This supports the effectiveness of the treatment and corroborates earlier results (Hewitt et al., 2015). The most sub-

⁴ The means and standard deviations in Table 1 are for those participants who provided data at each time point without missing data, and so these means across time points are not directly comparable when considering the HLM results. Slope parameter estimates in Table 3 are affected by two factors. First, the HLM program estimates reliable slope parameters for participants who provided at least two data points using maximum likelihood estimation under the assumption that data are missing at random. Second, in the models, we controlled for pretherapy scores to minimize the possible effects of starting values on the slope parameter.

⁵ Because this is the first time these informant versions of the MPS and PSPS have been used, there are no norms for comparison.

Table 2
Intercorrelations Between Close Other Informant–Rated Perfectionism Trait Dimensions and Perfectionistic Self-Presentation Facets at Pretreatment (n = 61)

		Close other-rate trait perfectionism (M		Close other-rated perfectionistic self-presentation (PSP-O)			
Variable	Self-oriented	Other-oriented	Socially prescribed	Self-promotion	Nondisplay	Nondisclose	
Self-oriented	_						
Other-oriented	.45**	_					
Socially prescribed	.34*	.46**	_				
Self-promotion	.62**	.44**	.56**	_			
Nondisplay	.41**	.37*	.66**	.77**	_		
Nondisclosure	.38*	.20	.57**	.63**	.60**	_	

Note. MPS-O = Multidimensional Perfectionism Scale–Other Ratings; PSP-O = Perfectionistic Self-Presentation Scale–Other Rating Scale. $^*p < .01$. $^{**}p < .001$.

stantial reductions were found with self-oriented and otheroriented perfectionism. Indeed, close other ratings of patients' socially prescribed perfectionism did not change significantly over the course of treatment and follow-up.

The findings, in most ways, parallel the patient self-report findings described in the article by Hewitt et al. (2015). Specifically, the authors found that at posttreatment and follow-up, patients reported significant decreases in all perfectionism dimensions. This provides converging evidence, from both self-report and informant-report, for the effectiveness of the group treatment in reducing perfectionism trait and perfectionistic selfpresentational tendencies. However, interestingly, when it comes to a specific perfectionism trait—socially prescribed perfectionism—evidence is less convergent. Whereas Hewitt et al. (2015) found a significant reduction using self-report, the current study, using informant-report, did not find such a reduction. There are several plausible explanations for this difference. It may be that socially prescribed perfectionism may be harder for informants to comment on, compared with other perfectionism traits. That is, when rating their own behavior, patients can be responding to their perception of internal changes, whereas close others are responding to observable behaviors in the patient that may not have caught up to the shifting perceptions and beliefs of patients. Consequently, informant-report may be less sensitive in measuring socially prescribed perfectionism compared with self-report, or it may be that the features of socially prescribed perfectionism that are observed only by close others do not seem to change significantly. Finally, it may be that socially prescribed perfectionism is less malleable to group treatment; however, Hewitt et al. (2015) demonstrated marked changes in socially prescribed perfectionism when patient self-report was used.

Finding differences between informant- and self-report in perfectionism is consistent with previous research. For example, Flett et al. (2005) found that self-reported levels of other-oriented perfectionism were not associated with depression, whereas informant ratings of target other-oriented perfectionism were associated with depression. Similarly, Sherry et al. (2013) found that self- and informant-reports each added incrementally to the prediction of depression, suggesting that the various reports shared some aspects of perfectionism and also captured unique elements of perfectionism. Although it is not entirely clear why differences between informant- and self-report exist, there appears to be agreement among researchers that differences could arise from targets and informants focusing on different elements of the target's perfectionistic behavior. For example, the target might focus on more internal states (e.g., self-deprecation and negative internal dialogue) that informants do not have direct access to (Klonsky et al., 2002). Alternatively, targets' self-reports might be influenced by self-enhancement or self-deprecation biases, whereas informant ratings would not be influenced by such biases (Sherry et al.,

Table 3
Parameter Estimates From Multilevel Models of Perfectionism Scores Across Pre-to-Post to Follow-Up From Two-Level Models

Variable	β_{10}	t	Base model δ^2	Linear model δ^2	Pseudo R ²	Percentage of within-person variance	Percentage of between-person variance
Self-Oriented	-9.56	-13.22**	142.69	52.77	.63	.79	.21
Other-Oriented	-4.36	-7.11**	116.43	59.86	.49	.63	.38
Socially Prescribed	0.04	0.05	142.11	76.16	.46	.63	.37
Nondisplay	-2.12	-2.78*	51.60	30.56	.41	.41	.60
Nondisclosure	-1.79	-3.90**	27.63	24.35	.12	.40	.61
Self-Promotion	-2.89	-3.77**	44.27	33.64	.25	.31	.69

Note. B_{10} refers to the linear growth parameter. δ^2 refers to the within-person variance component from the base and the linear models. Type I error rates were adjusted using the Holm–Bonferroni method with p < .05 and p < .001. Degrees of freedom for reported t values were 59 for each linear parameter. Pseudo R^2 refers to the percent of total within-person variance accounted for by adding the linear parameter to each model and represents the effect size. The last two columns refer to the percent of total variance that is within individuals across time and the percent that is between individuals estimated from the base model.

^{*} p < .05. ** p < .001.

2013). Or, as we indicated earlier, others may be observing some aspects of perfectionistic behavior that the target patient is not consciously aware of (e.g., being inadvertently critical). Finally, because we measured changes in perfectionism, which the other studies did not measure, another possibility for the different findings with respect to change in socially prescribed perfectionism is that there may be a time lag between patients' perceptions of their own internal change and others' perceptions of observable evidence of that change.

A unique element of this investigation is that we went beyond trait perfectionism to also include a focus on close other ratings of perfectionistic self-presentation. Our analyses showed that, in general, informants are attuned to individual differences in not only trait perfectionism but also perfectionistic self-presentation. Moreover, improvements as a result of treatment were also evident in terms of significant decreases in levels of perfectionistic self-presentation. Our results are in keeping with evidence suggesting that the reports of patients' interpersonal styles can be highly useful in establishing the degree of clinical improvement (Altenstein-Yamanaka, Zimmermann, Krieger, Dörig, & Grosse Holtforth, 2017). These authors have highlighted the importance of significant improvements in interpersonal functioning becoming generalized and evident to people in daily contexts.

Close others can observe not only levels of trait perfectionism and perfectionistic self-presentation (Hewitt & Flett, 1991; Hewitt et al., 2003) but also, as illustrated herein, changes in these perfectionism components. This can have important implications for perfectionistic individuals in treatment. For example, it has been established that perfectionistic behavior has a negative impact on intimate and other close relationships (Habke & Flynn, 2002; Hewitt et al., 2017; Hill, Zrull, & Turlington, 1997; Mackinnon et al., 2012). In the current work, close others appear to be able to perceive changes in perfectionism and may also be able to perceive changes in resultant problematic interactions arising from perfectionism. This can, potentially, aid in therapeutic gains of perfectionistic individuals in treatment, whereby close others may be able to be supportive of and responsive to the changes in the perfectionism, especially the ones that may be experienced as aversive. That is, close others may be able to provide important confirmation and reinforcing support of positive changes in the patient, and therapists may want to access close others in their work with patients. Whether this confirmation and support is actually occurring among close others of patients undergoing our treatment is an empirical question, but there is research suggesting the lack of connection and the support of others outside of the therapeutic context can negatively impact treatment of cognitive elements of the perfectionism construct (Shahar, Blatt, Zuroff, Krupnick, & Sotsky, 2004). Finally, given that our group treatment has a primarily relational focus, the fact that patients' close others can observe and rate changes in patients underscores the impact of the treatment.

Taken together, findings in this study showed that the dynamicrelational treatment appears to produce therapeutic changes in perfectionism that can indeed be noted by the close others. This is important, as it provides indirect support for the hypothesis put forward by several researchers that sustained therapeutic changes should be evident when treating personality vulnerabilities, and a key mechanism for this is through fundamental changes in the relationship between the patient and others and the patient and him/herself (Blatt, Zuroff, Hawley, & Auerbach, 2010; Hewitt et al., 2017). Viewed in this light, our findings point to the importance of a relational conceptualization of perfectionism and focusing treatment on the underlying relational processes that produce or maintain perfectionism and psychopathology in general.

More broadly, our findings illustrated the utility of reports from close other informants in evaluating psychotherapy treatment and how the scope of these informant reports can be extended to include personality factors associated with distress and dysfunction. Currently, most studies evaluating psychotherapy treatment for adults do not include informant reports in their outcome measures. Historically, informant reports for outcome measures have not been extensively incorporated in research, with the exception of investigations focused on young children; investigators studying developmental psychopathology recognize the need to include parental ratings of key outcome variables (for a discussion, see De Los Reyes, Thomas, Goodman, & Kundey, 2013). However, the converging and contrasting findings between our study and Hewitt et al.'s (2015) suggest that close other informants can provide unique and useful information on transdiagnostic personality vulnerabilities such as personality traits and tendencies among adults. Moreover, other research on the perfectionism construct (Mushquash et al., 2013) and its role in depression (Flett et al., 2005; Sherry et al., 2013) found that informant ratings provide a valid method for assessing unique elements of perfectionism that are not found with self-reports. Thus, close other ratings may provide not only a multimethod approach to evaluating outcomes but also a broader evaluation of outcomes from a particular treatment. Future studies should thus consider including close other ratings in addition to self-ratings in evaluating treatment outcomes.

The specific measurement method used in this study has not previously been used in research. The measures chosen in this study, that is, informant versions of the MPS (Hewitt & Flett, 1991) and the PSPS (Hewitt et al., 2003) appear to be reliable as demonstrated by appropriate levels of internal consistency in this work. Moreover, the findings that changes in specific components of perfectionism are mostly consistent between self-report (Hewitt et al., 2015) and informant-report provide support for the validity of the measures and this approach to using close other informants. Clearly, more work is needed to further evaluate the validity of the close-other versions of the MPS and PSPS. For example, although the sample in this work is too small to conduct factor analytic work, determining whether both self-report and close other-report versions have the same factor structure would provide further evidence of validity. Likewise, studies assessing convergent and discriminant validity of the informant measures are also important to conduct.

Clearly, the current study has some limitations. First, the current work was a study of the effectiveness of our treatment on perfectionism over time as rated by close other informants. Assessment of informant-observed changes in other patient behaviors, such as patients' symptoms, emotional adjustment, distress, and interpersonal functioning, would be very useful in evaluating the broader impact of our treatment as observed by close others. Second, the follow-up period in this study is 4 months. Future studies are needed to investigate if therapeutic gains are maintained over longer follow-up periods and if the changes observed by informants are maintained or, as is often found in psychodynamic treatments (Shedler, 2010), continue to improve. Third, there was

attrition in the number of informants from pretreatment to posttreatment and follow-up, and this may have affected some of the results. Although the statistical approach chosen (i.e., HLM) does deal quite effectively with missing data, future work should attempt to mitigate such attrition. One possibility is to offer incentives to close others to attempt to increase participation throughout the study. Finally, although there is utility in measuring changes in perfectionism by close other informants, this is a relatively new approach within the perfectionism literature and requires further evaluation and refinement. For example, utilizing multiple informants (see Sherry et al., 2013), such as best friends and spouses/ partners, could enhance the assessment of change in perfectionism. Although it is not clear what differences might exist between ratings of best friends and spouses/partners, it is likely that there would be some but not necessarily perfect consistency in their ratings. Also, more specific information about the nature and quality of the relationship between patients and close others (e.g., how much time is spent together interacting, how often do they discuss personal issues, etc.) would aid in ensuring that the informants were truly close to and knowledgeable of the patient (Mushquash et al., 2013).

In conclusion, the current findings are generally in accordance with an earlier report (Hewitt et al., 2015) of the effectiveness of a dynamic-relational treatment for perfectionism. The results suggest that changes in self-oriented and other-oriented perfectionism traits and self-presentational facets are evident to informants and provide additional evidence for the effectiveness of this treatment. Moreover, the results support the utility of close other ratings in assessing treatment effectiveness, and this may be especially important because these ratings may reflect the social context of patients and provide important ecological validity of the treatment.

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Appendix

Hierarchical Linear Models

Two-Level Linear Model for Perfectionism Variables

Level 1 (repeated measures):

$$Y_{ti} = \pi_{0i} + \pi_{1i} \text{ (time)} + e_{ti}$$

Level 2 (between individuals)

$$\pi_{0i} = \beta_{00} + \beta_{01} \text{ (prescore)} + r_{0i}$$

$$\pi_{1ii} = \beta_{10} + \beta_{11} \text{ (prescore)} + r_{1i}$$

Three-Level Model to Estimate Variances to Calculate Intraclass Correlation Coefficients

Level 1 (repeated measures):

$$Y_{\rm tij} = \pi_{0\rm ij} + \pi_{1\rm ij} \, (\rm time) + e_{\rm tij}$$

Level 2 (between individuals):

 $\pi_{0ij} = \beta_{00j} + r_{0ij}$

$$\pi_{lij} = \beta_{10j} + r_{1ij}$$

Level 3 (between groups):

$$\beta_{00i} = \gamma_{000} + u_{00i}$$

$$\beta_{10j} = \gamma_{100} + u_{10j}$$

"Time" refers to repeated assessments at pretreatment, posttreatment, and follow-up. Prescores were grand mean-centered.

Received September 12, 2018
Revision received January 14, 2019
Accepted March 14, 2019