



Universiteit  
Leiden  
The Netherlands

## Exploring therapist characteristics as potential moderators of the effects of client feedback on treatment outcome

Janse, P.D.; Veerkamp, C.; Jong, K. de; Dijk, M.K. van; Hutschemaekers, G.J.M.; Verbraak, M.J.P.M.

### Citation

Janse, P. D., Veerkamp, C., Jong, K. de, Dijk, M. K. van, Hutschemaekers, G. J. M., & Verbraak, M. J. P. M. (2023). Exploring therapist characteristics as potential moderators of the effects of client feedback on treatment outcome. *Clinical Psychology & Psychotherapy*, 30(3), 1-12. doi:10.1002/cpp.2828

Version: Publisher's Version

License: [Licensed under Article 25fa Copyright Act/Law \(Amendment Taverne\)](#)



Downloaded from: <https://hdl.handle.net/1887/3631053>

**Note:** To cite this publication please use the final published version (if applicable).

## RESEARCH ARTICLE

WILEY

# Exploring therapist characteristics as potential moderators of the effects of client feedback on treatment outcome

Pauline D. Janse<sup>1</sup>  | Carola Veerkamp<sup>1</sup> | Kim de Jong<sup>2</sup>  |  
Maarten K. van Dijk<sup>3</sup> | Giel J. M. Hutschemaekers<sup>1,4</sup> | Marc J. P. M. Verbraak<sup>1</sup>

<sup>1</sup>Pro Persona Research, Wolfheze, The Netherlands

<sup>2</sup>Institute of Psychology, Leiden University, Leiden, The Netherlands

<sup>3</sup>Dimence, Deventer, The Netherlands

<sup>4</sup>Behavioural Science Institute, Radboud University, Nijmegen, The Netherlands

## Correspondence

Pauline D. Janse, Pro Persona Research, Wolfheze, The Netherlands.  
Email: [p.janse@propersona.nl](mailto:p.janse@propersona.nl)

## Funding information

The authors received no financial support for the research, authorship and/or publication of this article.

## Abstract

Although studies have shown that client feedback can improve treatment outcome, little is known about which factors might possibly moderate the effects of such feedback. The present study investigated potential therapist variables that might influence whether frequent client feedback is effective, including the Big Five personality traits, internal/external feedback propensity and self-efficacy. Data from two previous studies, a quasi-experimental study and a randomized controlled trial, were combined. The sample consisted of 38 therapists and 843 clients (55.4% females, mean age = 42.05 years,  $SD = 11.75$ ) from an outpatient mental health institution. The control condition consisted of cognitive-behavioural therapies combined with low frequency monitoring of clients' symptoms. In the experimental condition, high-intensity (i.e., frequent) client feedback as an add-on to treatment as usual was provided. Outcomes were measured as adjusted post-treatment symptom severity on the Symptom Checklist-90 and drop out from treatment. The final model of the multilevel analyses showed that therapists with higher levels of self-efficacy had poorer treatment outcomes, but when high-intensity client feedback was provided, their effectiveness improved. Furthermore, higher self-efficacy was associated with a higher estimation of therapists' own effectiveness, but therapists' self-assessment of effectiveness was not correlated with their actual effectiveness. The results of this study might indicate that therapists with high levels of self-efficacy benefit from client feedback because it can correct their biases. However, for therapists with low self-efficacy, client feedback might be less beneficial, possibly because it can make them more insecure. These hypotheses need to be investigated in future research.

## KEYWORDS

client feedback, feedback-informed treatment, routine outcome monitoring (ROM), therapist characteristics

## 1 | INTRODUCTION

Client feedback is a transtheoretical method of evaluating whether a specific treatment is working for the client and, if it is not, to discuss what is needed in order to make it more effective. Standardized measures are used to monitor treatment outcomes (e.g., symptom

reduction or well-being), sometimes combined with monitoring of the therapeutic relationship.

Several meta-analyses show that client feedback can improve the effectiveness of psychotherapy, especially for clients who are at risk of treatment failure, and can decrease the number of dropouts from therapy (De Jong et al., 2021; Lambert et al., 2018).

Furthermore, studies indicate that treatment efficiency (in terms of the number of sessions clients need) can be improved by using feedback (Delgadillo et al., 2017; Janse et al., 2017, 2020; Koementas-de Vos et al., 2018). However, because several other studies have shown little or no effects of feedback (Østergård et al., 2020), this might indicate that certain factors influence, that is, moderate, the effects that client feedback can have. For instance, there is evidence that client factors, such as the severity of the client's problems or having a cluster B personality disorder, can have a negative impact on the effectiveness of client feedback (De Jong et al., 2018; Errázuriz & Zilcha-Mano, 2018). Furthermore, therapist characteristics might also influence the effects of client feedback. However, few studies on feedback have investigated how therapist characteristics might influence the effects of client feedback on treatment outcomes.

### 1.1 | Therapists' traits and the impact of feedback

One of the few studies that have investigated possible moderators of the effect of feedback was a randomized controlled trial conducted by De Jong et al. (2012), which included 413 clients and 57 therapists. In this study, characteristics of therapists, including therapists' external or internal feedback propensity (i.e., relying on feedback from external sources or relying on your own opinion), self-efficacy in their role as a therapist and perceived validity of client feedback and commitment to use the client feedback, were investigated. The results showed that the clients of therapists who were more likely to trust their own opinion than to rely on feedback from external sources (i.e. with a high propensity for internal feedback) had a slower rate of change than therapists with a low propensity for internal feedback. Also, the clients of therapists who were more committed to using the feedback at the beginning of the study progressed faster in their treatment. In this study, there was also an interaction between therapist self-efficacy and client feedback, such that therapists with a higher level of self-efficacy achieved better results when they were provided feedback. De Jong et al. (2012) hypothesize that therapists with high self-efficacy are better able to process negative feedback. Alternatively, because research has shown that therapists tend to overestimate their effectiveness (Walfish et al., 2012) and have difficulty predicting which clients will not benefit from treatment (Constantino et al., 2019; Hatfield et al., 2010), the results of de Jong et al.'s (2012) study might indicate that overly confident therapists benefit from feedback because it enables them to reduce their self-serving bias. As Macdonald and Mellor-Clark (2015) have argued, providing feedback on clients' progress and on clients' rating of the therapeutic alliance might make therapists more aware of clients who are at risk of not benefitting from treatment, thereby correcting their blindsidedness.

A study by Chow (2014) further supports the idea that therapists differ in how they respond to feedback from their clients. Of particular interest in this study was that clients' feedback had a positive effect on their treatment outcome only when the therapists were

#### Key Practitioner Message

- Client feedback as an add-on to cognitive behavioural therapy with low monitoring of symptoms might not be effective for symptom reduction under all circumstances due to moderating factors.
- Therapist characteristics might influence whether client feedback is effective.
- Client feedback might be effective when therapists have more self-efficacy, possibly because feedback corrects their self-assessment bias. However, for therapists with low self-efficacy, client feedback might be less beneficial.

surprised by the content of the feedback. According to Chow (2014), therapists are more successful when they encounter their clients in an open, involved and self-critical way, and this causes them to be more willing to receive feedback from their clients. Accordingly, we would expect therapists with certain traits, such as being open to new experiences and having self-doubts, would tend to seek feedback and to adjust their treatments when they receive negative feedback. Thus, personality traits might explain differences between therapists in the use of feedback. Delgadillo et al.'s (2020) study is the only one to have investigated the relationship between therapists' personality traits and their clients' cognitive behavioural therapy (CBT) treatment outcomes. They found, however, that therapists' openness predicted poorer treatment outcomes and suggest that therapists with a high level of openness might exhibit more *therapist drift* (i.e., a lack of conformity to the CBT treatment protocol). This study, however, did not evaluate whether therapists' openness had a positive effect when they received feedback about their clients' progress in treatment, as Chow (2014) proposed, or whether it helped therapists who tended to drift from the treatment goals to get back on track and become more focussed. To our knowledge, there have been no studies that have investigated whether therapists' personality traits influence whether client feedback can be effective as an intervention.

In the area of organizational psychology, Krasman (2010) assessed the influence of personality traits on the willingness to receive feedback with employees from a variety of industries. The personality traits were classified according to the Big Five personality traits, consisting of five factors: neuroticism (self-doubt/emotional instability), extraversion (outgoingness), openness to experience (openness to new ideas), agreeableness (friendliness) and conscientiousness (being responsible and well-organized) (Costa & McCrae, 1992). Higher scores on neuroticism, extraversion and conscientiousness were associated with more feedback-seeking behaviour. Openness to experience was associated with reflective appraisal of feedback, but agreeableness had no influence. Krasman (2010) concluded that feedback-seeking behaviour is partially attributable to an employee's personality traits.

## 1.2 | The current study

Knowing which therapist characteristics moderate the relationship between feedback and outcome might help us to learn more about circumstances under which feedback is effective, and it can also be important in the training of therapists. Some therapists might score lower on the characteristics that are associated with positive treatment outcomes, and they might need incentives to use client feedback or additional training in utilizing feedback in their provision of therapy. Alternatively, it might help in identifying those therapists who are more likely to benefit from using feedback with their clients.

The aim of the present study was to investigate whether therapists' characteristics moderate the effect of high-intensive client feedback as an add-on intervention in CBT with low-intensity monitoring of symptoms. Our focus was thus on exploring potential interaction effects of therapist characteristics and high-intensity client feedback on treatment outcome (symptom reduction and dropout from therapy). Because of the lack of prior research on the interactions between therapist personality traits and the provision of client feedback, specific hypotheses were not formulated; instead, the study was exploratory. We also explored how therapists' self-assessment of their effectiveness was related to their characteristics.

## 2 | METHOD

### 2.1 | Data

This study involved secondary analyses of data from two earlier studies: a quasi-experimental study (Janse et al., 2017) and a randomized controlled trial (Janse et al., 2020). The control condition in both studies was treatment as usual (CBT with infrequent monitoring of symptoms), and the experimental condition was high-intensity feedback in which the Outcome Rating Scale and Session Rating Scale (ORS and SRS; Miller & Duncan, 2004) were frequently used to provide feedback to therapists and clients on clients' progress in treatment and the quality of the therapeutic relationship. Treatment outcome measures were case-mix corrected symptom severity at the end of treatment and the number of dropouts from treatment. The ethical review board of Radboud University approved the randomized controlled study (reference number ECSW2017-1303-499). Further details about the two studies can be found in the aforementioned articles.

### 2.2 | Participants

#### 2.2.1 | Therapists

Only therapists who had a minimum of 10 cases in the database were included in the analyses so that the reliability of each therapist's outcomes could be calculated. Accordingly, 38 therapists were included (16 of the 54 therapists from the full sample were excluded). There was a mean of 22 clients per therapist (range = 11–49). The

therapists who were included had treated clients in both the control and the experimental conditions. The therapists' demographic characteristics are shown in Table 1. Their scores on internal feedback propensity, external feedback propensity and self-efficacy are comparable to those that de Jong et al. (2012) found. Compared to the Dutch general population, the therapists were below average on neuroticism, above average on extraversion, high on both openness and agreeableness and average on conscientiousness (Hoekstra et al., 2007). All of the therapists had a master's degree in psychology, had received basic or advanced training in CBT and in the use of specific CBT treatment protocols (Keijsers et al., 2017).

#### 2.2.2 | Clients

A total of 843 clients were included in the analyses. Clients had a variety of mental disorders and severe symptoms (Global Severity Index [GSI] of the Symptom Checklist-90) at pre-treatment compared to the norms for the Dutch population (see Table 1). However, clients with very severe psychiatric problems that required intensive care (such as clients with psychotic symptoms, severe borderline personality disorder, severe developmental problems or severe substance abuse problems) were not included and were referred elsewhere. On average, clients received 15.18 treatment sessions ( $SD = 8.77$ ).

### 2.3 | Instruments

#### 2.3.1 | Client measures

##### *The Symptom Checklist Revised (SCL-90-R)*

The SCL-90-R (Derogatis, 1994), a self-report questionnaire, was used to measure symptoms of psychopathology. The Dutch version of the SCL-90-R contains 90 items and eight subscales: agoraphobia, anxiety, depression, somatisation, incompetence, hostility, insomnia, paranoia and psychoticism. A sample item is, 'In the previous week how much were you bothered by: Feeling afraid in open spaces or on the streets'. Each item is scored on a 5-point Likert scale, ranging from *not at all* to *extremely*. The GSI, which reflects general psychological and psychosomatic well-being, is the mean of the scores on the subscales and some additional items. The Dutch SCL-90-R has good psychometric properties (Arrindell & Ettema, 2003). In the present study, the internal consistency of the subscales on the SCL-90-R ranged from .64 to .91, and the internal consistency of the total scale was  $\alpha = .95$ .

##### *Dropouts*

Dropouts were defined as clients who indicated they did not want to continue treatment, even though according to the therapist the treatment had not been completed, or as clients who had stopped attending their treatment sessions and could not be contacted. Therapists were required to record the manner in which treatment had been terminated in each client's electronic health file.

**TABLE 1** Sample characteristics

Characteristics	M (SD)/%	Range
Therapists (N = 38)		
Age M (SD; range)	33.10 (6.48)	25.42–57.74
Gender % female	84.2%	
Years of experience M (SD)	6.32 (2.48)	1.5–13.5
Neuroticism M (SD)	28.82 (6.53)	13–41
Extraversion M (SD)	43.29 (4.82)	33–54
Openness M (SD)	41.79 (6.36)	28–55
Agreeableness M (SD)	51.37 (4.26)	43–59
Conscientiousness M (SD)	44.19 (10.09)	6–58
Internal Feedback Propensity M (SD)	18.84 (3.41)	12–28
External Feedback Propensity M (SD)	20.18 (2.94)	15–28
Self-efficacy M (SD)	26.45 (2.77)	22–33
Attitude towards feedback M (SD)	47.29 (6.52)	31–59
Self-assessment effectiveness compared to peers %	56.44 (9.37)	50–85
Self-assessment recovered clients %	70.58 (13.03)	20–90
Self-assessment alliance with clients compared to peers%	64.21 (12.50)	45–90
Clients (N = 843)		
Age M (SD)	42.05 (11.75)	18–73
Gender % female	55.4%	
Mood disorders % (N = 208)	24.7%	
Anxiety disorders % (N = 146)	17.3%	
Somatoform disorders % (N = 258)	30.6%	
Adjustment disorder % (N = 152)	18.0%	
Other % (N = 79)	9.4%	
Comorbid disorders % (N = 177)	30.4%	
Cluster C personality traits/disorder (N = 110)	13.1%	
Cluster B personality traits/disorder (N = 18)	2.1%	
Personality traits/disorder not otherwise specified (N = 54)	6.4%	
SCL-90 GSI pre-treatment M (SD)	1.03 (.53)	.01–3.02
SCL-90 GSI post-treatment M (SD)	.38 (.39)	0–2.52
Dropout % (N = 101)	12%	

### 2.3.2 | Therapist measures and questionnaires

#### NEO Five-Factor Inventory (NEO-FFI)

The NEO-FFI (Hoekstra et al., 2007) is a short version of the NEO-Personality Inventory Revised (NEO-PI-R, Costa & McCrae, 1992). It assesses the Big Five personality traits: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness and consists of 60 items and five scales, each with 12 items. Items are presented as statements. An example of an item on the Neuroticism scale is, 'I am not a worrier'. An example of an item on Agreeableness is, 'I try to be courteous to everyone I meet'. All items are scored on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Total scores on the individual scales can range between 12 and 60. The NEO-FFI has been demonstrated to have good reliability and validity (Caruso, 2000). Cronbach's alpha estimates of internal

consistency in this sample were .84 on Neuroticism, .73 on Extraversion, .80 on Openness to Experience, .69 on agreeableness and .78 on conscientiousness.

#### Internal and External Feedback Propensity Scales (IEFPS)

The IEFPS (Herold et al., 1996) measures feedback orientation and includes two subscales: Internal Feedback Propensity and External Feedback Propensity. Internal feedback propensity is being orientated towards self-generated feedback, and external feedback propensity is being orientated towards feedback from sources outside oneself. In other words, the scales assess the preference for receiving feedback from within oneself or from others. The IEFPS comprises 12 items, each of which is scored on a 5-point Likert scale, ranging from *strongly disagree* to *strongly agree*. An example of an item on internal feedback propensity is, 'How others view my work isn't as important to me as

how I view my work'. A sample item on external feedback propensity is, 'I like getting regular feedback from others on my performance'. A previous study has reported an internal consistency of  $\alpha = .71$  for the External Feedback Propensity scale and  $\alpha = .73$  for the Internal Feedback Propensity Scale (Herold et al., 1997). In the present study, the internal consistency of the Internal Feedback Propensity Scale was  $\alpha = .72$ , and for the External Feedback Propensity Scale, it was  $\alpha = .62$ .

#### *Self-efficacy and attitude towards feedback*

The adapted version of the CFIT User Survey (De Jong et al., 2012), designed by the Centre for Evaluation and Program Improvement at Vanderbilt University, was used to measure therapist self-efficacy, commitment to use feedback and the perceived validity of feedback. The 20 items are answered on a 5-point Likert scale. The Self-Efficacy subscale contains seven items and measures the level of experienced self-efficacy in several aspects of working as a therapist, an example of which is 'To what extent do you feel confident about your ability to form a good working relationship with clients?' The perceived validity of feedback subscale aims to measure whether therapist experience client feedback as a useful addition to therapy or not. A sample item on perceived validity of the feedback is, 'I think the ORS and SRS give valuable information about a client's progress'. Commitment to use the feedback was measured with a scale based on the Goal Commitment scale (Hollenbeck & Klein, 1987), which aims to give an indication of how motivated therapists are to use feedback. It contains seven items, an example of which is, 'Using the ORS and SRS is a good way to improve the quality of treatment'. The internal consistency in the current sample was  $\alpha = .89$  for the Commitment scale;  $\alpha = .61$  for the Perceived Validity scale; and  $\alpha = .80$  for the Self-Efficacy scale.

#### *Additional questions and outcome measures*

In addition to the aforementioned therapist questionnaires, midway through the study, the therapists were asked to also self-assess how effective they thought they were in terms of their clients' symptom reduction and how good their relationship with their clients was compared to peers (e.g., 25% was below average, 50% was average and 75% was above average) and to indicate the percentage of their clients they thought had reliably improved, deteriorated or dropped out of therapy. The therapists were also asked to provide some demographic information about themselves, such as their age, gender and amount of work experience.

Furthermore, on the therapist level, the proportion of dropouts from all cases treated by the therapist was investigated.

## 2.4 | Treatment conditions

### 2.4.1 | Low-intensity feedback

The control (i.e., treatment as usual) condition included CBT and the use of specific treatment protocols based on CBT techniques (Keijsers

et al., 2017). All of the therapists had been trained in basic CBT skills when they began their employment at the organization; consequently, they received advanced training in CBT that included ongoing weekly supervision in CBT. In the control condition, symptoms were measured at intake and monitored using the SCL-90-R at every fifth session. The SCL-90 was primarily filled in outside the sessions; a link was automatically sent to the client's email address every fifth session, and the scores were then saved in the electronic health record. Therapists did not receive a reminder that the SCL-90 had been completed.

### 2.4.2 | High-intensity feedback

In the experimental, high-intensity feedback condition, therapists were required to administer the ORS and the SRS (Miller & Duncan, 2004) and to discuss the results with their clients as an add-on to treatment as usual. Clients were instructed to fill in the ORS and SRS during the session. The ORS and SRS use visual analogue scales and include four items each. The ORS assesses clients' functioning and well-being personally (i.e., their personal well-being), interpersonally (i.e., in terms of family and other close relationships) and socially (i.e., at work, in school, with friends) and their overall daily functioning. The SRS assesses the quality of the therapeutic alliance. Clients are asked for their opinion on the quality of the relationship with their therapist, whether they experience a consensus with the therapist about treatment goals and how they experience the approach or method the therapist uses. Clients are also asked to give an overall assessment of the quality of the treatment session. Total scores on the ORS and SRS are calculated by summing of the four items (measured in millimetres). The psychometric properties of the two measures are adequate, although the validity of the Dutch version is moderately strong (Janse et al., 2014). The therapists used the web-based program FIT-Outcomes to evaluate the scores on the ORS and SRS, which are displayed graphically. The ORS scores are compared with the expected recovery curves (i.e., trajectories of change) based on the clients' initial scores. The algorithm is based on a sample of 427,744 administrations of the ORS, which were provided by 2354 different clinicians. Furthermore, the ORS cut-off score that differentiates the clinical population to those who are not was 24 points (Janse et al., 2014). On the SRS, a cut-off score of 34 points was used (Janse et al., 2014); scores below this point indicate an inadequate quality of the therapeutic relationship and need to be discussed with the client. Therapists were trained in the use of FIT-Outcomes by an independent trainer and the principal researcher, and they received several follow-up group supervision sessions. In the feedback condition, therapists were instructed to evaluate with their clients whether enough progress was being made in the treatment and whether the quality of the therapeutic relationship was sufficient (based on the expected recovery curve and cut-off scores) and, if not, to discuss what needed to be changed in order to be on track. This could entail, for example, adjusting the treatment goals and/or plan or the therapist adapting their behaviour towards the client.

## 2.5 | Procedure

The procedure for the studies is described in the two previous articles (Janse et al., 2017, 2020). At intake, therapists used the Mini-International Neuropsychiatric Interview (MINI; Sheehan et al., 1998) and the scores on the Assessment for DSM-IV Personality Disorders (ADP-IV; Schotte & de Doncker, 1994) to set their diagnoses. In both studies, clients were asked to complete the Symptom Checklist-90 Revised (SCL-90-R; Derogatis, 1994) at intake, at the end of the treatment and at every fifth session during treatment. In the feedback condition, clients were asked to complete the ORS at the beginning of each session and the SRS at the end of each session, using the digital system FIT-Outcomes. Both assessments were immediately scored by the therapists and discussed with the client. Therapists taking part in this study were invited via email to complete the NEO-FFI (Hoekstra et al., 2007), the IEFPS and the self-efficacy and attitude towards feedback questionnaires. If clients had received treatment from multiple therapists, the therapist who had conducted the most sessions was used in the analysis.

## 2.6 | Statistical analyses

For the preliminary analyses, *t* tests were performed to compare several client variables between studies 1 and 2 and to determine whether merging the data from the two samples was justified. Next, we investigated the effect of client feedback on outcome within the combined dataset. Furthermore, to determine the therapists' adherence to the feedback system in the high-intensity feedback condition, an implementation index was calculated by dividing the number of ORS and SRS scores completed by the total number of sessions each client had received. Correlations between implementation index and treatment outcome were explored.

The primary outcome was clients' post treatment GSI scores. Therapists who on average had clients with more severe symptoms showed more pre-test to post-test improvement ( $r = .70$  between pre-treatment scores and pre-to-post changes); therefore on the client level, outcome was not calculated as pre-to-post differences but by residual post-GSI scores. The residuals were calculated by predicting post-test GSI scores with a two-level analysis with pre-treatment GSI scores and whether the client had a comorbid disorder (which would be an indication of the severity or complexity of the client's problems) as the covariates and subtracting the predicted scores from the actual post-test GSI scores. Negative residuals (hereafter referred to as *case mix corrected post-treatment symptom severity scores*) indicated better than expected post-treatment GSI scores. Also, a mean within-participant effect size for each client was calculated using Morris and DeShon's (2002, p. 111) procedure and taking the correlation between the pre-test and the post-test into account. To be able investigate whether clients had achieved clinically significant change, the Reliable Change Index (RCI) of the GSI was calculated by multiplying *sdiff* (standard error of the  $t_1 - t_2$  difference) by the *z* value of the requisite significance level (1.96,  $p < .05$ ). This resulted in a RCI of .33.

The cut-off score of the GSI was set at .65 (based on Janse et al., 2020).

Before performing the main analyses, we made a selection of variables to test in the multilevel moderation analyses. Both the means of the case mix corrected post-treatment symptom severity scores and the mean effect size (ES) per therapist were calculated. Also, the percentage of clients in each therapist's caseload who had dropped out of therapy was calculated. Correlations between therapist characteristics and therapists' mean outcomes were investigated. The variables that had at least a moderately strong relationship ( $r > .30$ ) and were significantly correlated with therapists' outcomes were then further tested in the main analyses. The moderation analyses consisted of two-level multilevel analyses, with clients' case mix corrected post-treatment symptom severity scores and dropouts at Level 1 and the therapists' characteristics at Level 2. The therapist variables were grand-mean centred in order to facilitate interpretation of the results.

In the multilevel analyses, several steps were taken. First, an unconditional model was used to determine the amount of variance in outcome that was due to differences among the therapists. Second, the models were tested for random intercepts and slopes by inspecting the AIC and BIC (with smaller numbers indicating a better model). Third, a two-level moderation analysis was performed, with treatment condition, therapist variables and their interactions included in the models. In all of the two-level analyses, the Restricted Maximum Likelihood method was used with an unstructured variance-covariance matrix in order to estimate random effects. The proportion of variance in outcome (i.e., therapist effects) that could be explained by either clients or therapists was determined by calculating the initial interclass correlation (ICC). For the analysis with dropout as outcome (a binary outcome), 3.29 was used as our Level-1 error variance in calculating the ICC (O'Connell et al., 2008).

To determine the therapists' adherence to the feedback system in the high-intensity feedback condition, an implementation index was calculated by dividing the number of ORS and SRS scores completed by the total number of sessions each client had received.

Analyses were performed using SPSS 26 and SAS 9.4. In SAS, the *proc mixed* was used for the continuous outcome measures, and *proc glimmix* was used for the categorical outcome measure (number of dropouts).

## 3 | RESULTS

### 3.1 | Preliminary analyses

Both the quasi-experimental (Janse et al., 2017) and randomized controlled trial (Janse et al., 2020) found that, overall, high-intensity feedback did not reduce clients' symptoms, but it did reduce the number of sessions needed. Also, the results of the trial showed that dropout was significantly lower in the high intensive feedback condition.

To investigate whether the groups of clients in Studies 1 and 2 were comparable and whether combining the data was justifiable,

we compared the groups on certain client characteristics. The severity of pre-treatment symptoms did not differ significantly,  $t = 1.06$  (807),  $p = .292$ , 95% CI (-.04, .12), and neither did the post-treatment scores,  $t = -1.30$  (715),  $p = .195$ , 95% CI (-.11, .02). The mean effect size for clients in the first and second studies was  $d = 1.32$  and  $d = 1.18$ , respectively, but the difference was not significant,  $t = 1.58$  (690),  $p = .114$ , 95% CI (-.03, .29). In the first study, 62.8% of clients achieved clinically significant change, versus 65.6% in the second study, and a chi square test showed that this was not significantly different ( $\chi^2$  (1, 693) = .47,  $p = .274$ ). Clients' mean age also did not differ between the studies,  $t = -.011$  (841),  $p = .991$ , 95% CI (1.69, 1.67). Finally, no significant differences in treatment length (number of sessions) were found,  $t = -1.34$  (837),  $p = .181$ , 95% CI (-2.16, .41), nor were there significant differences in the percentage of treatment dropouts,  $\chi^2$  (1, 841) = .37,  $p = .543$ , between the two studies.

Furthermore, in the combined dataset of the two studies, high-intensity feedback had no effect on case-mix-corrected post-treatment symptom severity ( $b = .01$ ,  $t = .30$ ,  $p = .765$ , 95% CI [-.05, .06]) or on drop out ( $b = -.38$ ,  $t = 1.78$ ,  $p = .075$ , 95% CI [-.79, .04]).

The mean implementation index (the mean number of completed ORS and SRSs scores within each client's treatment) was 61.18% ( $SD = 38.65$ ), meaning that within a treatment on average, the ORS and SRS were used in 61.18% of the sessions. There were no significant correlations between the implementation index and the case-mix-corrected client outcomes ( $r = -.09$ ) within the high intensity feedback condition. Among the clients who had dropped out, the implementation was somewhat lower (51.51%) than among clients who had not dropped out (62.40%), but this difference was not significant ( $t$  (421) = 1.88,  $p = .061$ ,  $d = .28$ ).

### 3.2 | Differences among therapists in their clients' treatment outcome

First, a two-level model was built to calculate residual case mix corrected post-treatment symptom severity scores and to determine whether there were therapist effects. An empty two-level model (unconditional, i.e., with no predictor variables) with post-treatment GSI scores as the dependent variable was used to calculate the ICC and the variances due to therapist effects. The model showed that 1.4% of the variance in treatment outcome was due to differences among the therapists ( $b = -.00$ ,  $t = -1.96$ ,  $p = .050$ , 95% CI [-.01, -.00]). GSI pre-treatment scores and whether clients had comorbid psychological disorders were added to the model because these variables significantly predicted outcome and the best-fitting model included both covariates (smaller AIC and BIC). The residual scores for this model (predicted scores subtracted from actual post-treatment scores) were used as the outcome measure in the subsequent moderation analyses.

The effect size ( $d$ ) per therapist ranged between 1.00 and 2.12.

### 3.3 | Association between therapist characteristics and outcome

Correlations between therapist characteristics and treatment outcomes were calculated (see Appendix A). General characteristics of therapists, such as age and experience, were not significantly correlated with post-treatment symptom severity (case mix corrected). Years of experience had a moderate strong correlation with less drop-out. There were no differences between male and female therapists in treatment outcome or therapist characteristics. Of the specific therapist characteristics, openness was associated with better outcomes (lower post-treatment symptom severity and percentage of clients within their caseload who had dropped out of treatment), while self-efficacy was associated with worse outcomes (higher post-treatment symptom severity and percentage of clients within their caseload who had dropped out of treatment).

Interestingly, the therapists' assessment of their own effectiveness was not significantly correlated with actual average outcome ( $r = .10$ ). On average, therapists thought they were just as effective as their peers ( $M = 56.5\%$ ,  $SD = 9.4$ , range 50–85%), and none of the therapists thought their performance was below average.

### 3.4 | Therapists' characteristics as a moderator of the effect of client feedback

#### 3.4.1 | Symptom severity

The multilevel analysis showed a significant interaction between self-efficacy and feedback intensity ( $b = -.03$ ,  $t = -2.81$ ,  $p = .005$ , 95% CI [-.05, -.01]), which meant that therapists with low self-efficacy seem to have done better when only low-intensity feedback was provided, whereas those with higher self-efficacy had better results when high-intensity feedback was provided. A quadratic or cubic model (with self-efficacy as a quadratic or cubic term added to the model) was not a better fit. Even though therapist openness was moderately strongly related to treatment outcome, in the moderation analysis, openness was removed as a predictor of treatment outcome because it became non-significant. The final model is shown in Table 2.

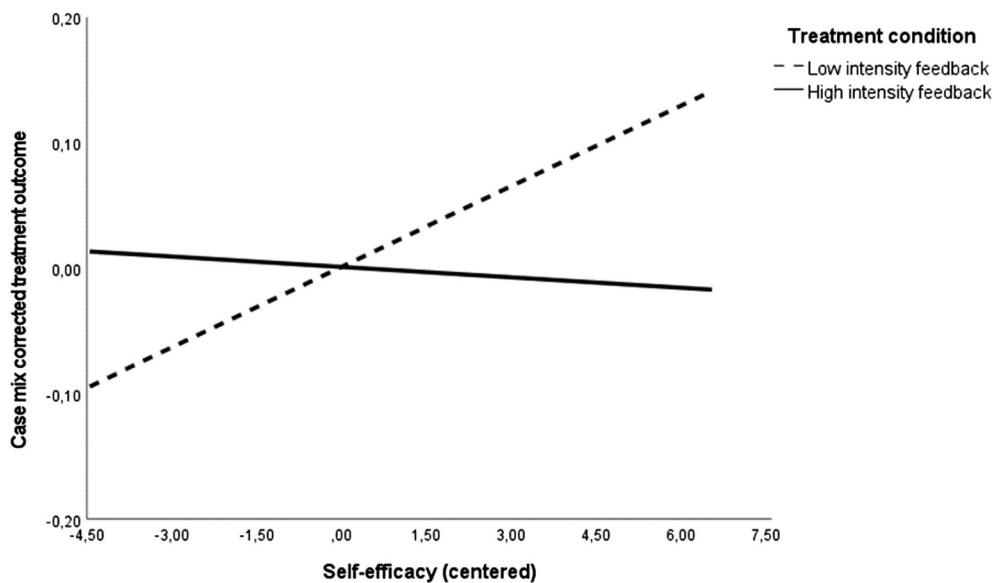
Figure 1 shows the interaction between self-efficacy and case-mix-corrected treatment outcome. As can be seen in Figure 1, therapists with low self-efficacy seem to have done better when only low intensity feedback was provided, whereas those with more self-efficacy had better results when high intensity feedback was provided. To further illustrate the interaction between self-efficacy and feedback, we explored post hoc the differences between therapists with low (1  $SD$  lower than average) and high self-efficacy (1  $SD$  higher than average). Therapists with low self-efficacy estimated that 66.7% of their clients had recovered after treatment, whereas therapists with high self-efficacy estimated this was 83.8%. In reality, 51.9% of clients of therapists with high self-efficacy achieved a clinically significant change versus 55.0% of clients of therapist with low self-efficacy.



	<i>b</i>	<i>SE</i>	<i>T</i>	95% CI	<i>CI</i>
Fixed effects					
Intercept	.00	.01	.21	−.02	.03
Feedback condition	.02	.03	.60	−.03	.06
Self-efficacy	.02**	.01	4.07	.01	.03
Feedback condition * Self-efficacy	−.03*	.01	−2.81	−.05	−.01
Covariance					
			<i>z</i>		
Level 2 variance	.00**	.00	14.72	.00	.00
Residual	.13**	.01	18.40	.12	.14

\* $p < .01$ . \*\* $p < .0001$ .

**TABLE 2** Two-level model of the interaction between client feedback and therapists' self-efficacy



**FIGURE 1** Interaction between high intensity feedback and case-mix-corrected treatment outcome (residuals). Note: Lower residual scores meant better treatment outcomes (range of therapists mean residual scores =  $-.14$ – $.18$ ). Self-efficacy scores were centred with a mean of 0.

Also, therapists' estimation of how good their therapeutic alliance was in comparison to their peers with low self-efficacy was at the 58th percentile versus the 79th percentile for therapists with high self-efficacy. However, there were no other noteworthy differences between therapists with low and high self-efficacy.

### 3.4.2 | Dropout rate

Therapists' self-efficacy was significantly positively correlated with the percentage of their clients who had dropped out of treatment ( $r = .41$ ), and further investigation showed that therapists with high self-efficacy (1 SD higher than average) had almost twice as high a dropout rate as therapists with low self-efficacy (14.0% vs. 7.8%). However, the two-level analysis showed that there was no interaction between providing feedback and therapists' self-efficacy in the probability that clients would drop out, controlling for therapist's experience ( $b = -.06$ ,  $t = -.76$ ,  $p = .447$ , 95% CI  $[-.21, .09]$ ). Furthermore, even though there was a significant negative correlation between therapists' goal commitment ( $r = -.32$ ) and the percentage of their clients who had dropped out of treatment, no significant interaction was

found between goal commitment and the provision of feedback ( $b = -.07$ ,  $t = -.20$ ,  $p = .844$ , 95% CI  $[-.08, .07]$ ).

Because the preliminary analyses showed that the implementation index seemed to have a small effect on the dropout rate, we explored post hoc the possible associations with therapist characteristics when only clients with a high implementation index were included (>90%). In the two-level logistic model, controlling for GSI pre-treatment scores and the client's age, the therapist effect was 2.66%. When client feedback was added as a predictor, the results showed that client feedback decreased the dropout rate ( $b = -.833$ ,  $t = -2.219$ ,  $p = .025$ ). However, no interactions were found with therapist characteristics.

## 4 | DISCUSSION

This study investigated various therapist characteristics as possible moderators of the relationship between providing client feedback and treatment outcome. The study included secondary analyses of the combined data from two previous studies (Janse et al., 2017, 2020). The results showed that therapists'

self-efficacy was related to poorer treatment outcomes. Furthermore, an interaction effect was found between therapists' self-efficacy and their performance. Therapists who were lower in self-efficacy achieved better results when only low-intensity feedback was provided, and therapists with more self-efficacy had better outcomes in the high-intensity feedback group than in the control group. The latter result is in line with Reese et al.'s (2009) results, which showed that counselling trainees who were higher in self-efficacy and who had not received high-intensity feedback from their clients had worse outcomes at the end of their training, whereas among trainees who had received feedback and had discussed the feedback during their supervision, their self-efficacy was positively related to their effectiveness with their clients.

There are two hypotheses to account for the interaction between self-efficacy and the provision of feedback. De Jong et al. (2012) suggest that therapists with high self-efficacy might be better able to deal with negative feedback, so that therapists' self-efficacy is a moderator of the effect that client feedback has on their treatment outcome. Therapists with low self-efficacy did indeed have poorer outcomes in the present study when high-intensity feedback was used, which might indicate that they have more difficulty handling frequent feedback. Studies from organizational psychology suggest that negative feedback might have a negative impact on people with lower self-efficacy (Sherf & Morrison, 2020). On the other hand, we would also expect a significant association between self-efficacy and outcomes in the feedback condition, which was not the case in the present study. The other possibility is that providing feedback moderates the relationship between therapist self-efficacy and clients' treatment outcome so that the feedback can help correct the biases that therapists with high self-efficacy might have towards their own performance. Further examination of the present results showed that therapists with high self-efficacy estimated that 83.8% of their clients recovered, whereas in reality, only 51.9% of the clients of therapists with high self-efficacy achieved a clinically significant change. With therapists with low self-efficacy, there was less of a difference (estimated recovery of 66.7% vs. 55.0% in reality). This lends some support to the interpretation that feedback works through correcting the self-serving bias, which makes highly self-efficient therapists overestimate their abilities. Although these hypotheses need to be further investigated, this might have clinical implications as to which therapists should use high intensity feedback and which therapists might benefit more from less frequent feedback.

Notwithstanding the aforementioned results, even though therapists with higher levels of self-efficacy seemed to have more clients who had dropped out of therapy, no interactions were found between therapist self-efficacy and high-intensity client feedback on the probability that clients would drop out.

Furthermore, few therapists' characteristics in the present study were associated with treatment outcome. The relationship that de Jong et al. (2012) discussed between internal feedback propensity and clients' treatment outcomes was not found in the present study. Also, in contrast to Delgado et al.'s (2020) finding that CBT therapists' openness (as measured by the NEO-PI-R personality inventory)

predicted poorer client outcomes, in the present study, therapists' openness was associated with better client outcomes. Delgado et al. (2020) suggest that very high levels of openness might be related to nonconformity, which might not be a desirable quality when a therapist is delivering structured CBT protocols. Yet, a recent review of studies on therapists personality traits and treatment processes and outcomes did not find conclusive evidence of a relationship between therapists' openness and model fidelity (Fletcher & Delgado, 2022). In the present study, the average therapist scores on openness were lower than in Delgado et al.'s (2020) study. This suggests the possibility of a curvilinear relationship between therapists' openness and clients' treatment outcomes.

#### 4.1 | Limitations and future directions

The major limitation of this study is that, due to its exploratory nature, definitive conclusions cannot be made about how the impact of client feedback on treatment outcomes varies according to therapist characteristics. However, the aim of an exploratory study is to generate hypotheses that could be investigated in future studies.

Another limitation of this study is the limited sample size of both clients and therapists. Ideally, to adequately estimate therapist effects in a multilevel model, a minimum of 50 therapists (Johns et al., 2019; Maas & Hox, 2005) and 1200 clients (Schiefele et al., 2017) would be required. Future research on therapist characteristics as moderators should thus include more therapists and clients per therapist.

Considering that the therapist effect was small (1.4%), and very few therapist variables were associated with clients' outcomes or moderated the effects of high-intensity feedback, the question arises as to how influential therapist effects are in the context of a structured CBT treatment. Possibly because of both the CBT training these therapists received and the quality control that had been implemented through supervision, they focused mainly on specific techniques in their treatment, leaving less room for their own characteristics to influence the treatment. The therapist effects found in the present study were relatively small but not atypical; therapist effects can vary from as low as 0.2%, up to 29% (Johns et al., 2019). A limitation of the present study, however, is that the relatively small therapist effect made it inherently more difficult to detect therapist characteristics that contribute to therapist variance.

Another possible limitation of this study is the seemingly minor differences between the two treatment conditions. Yet in the high-intensity client feedback condition, therapists were asked to frequently use and discuss not only progress on the ORS but also the therapeutic alliance based on the scores from the SRS. Also, clients and therapists were instructed to fill in the ORS and SRS during the session, whereas the SCL-90 was primarily filled in outside the sessions, and therapists were not reminded that a client had filled in the SCL-90. Therefore, it seems likely that when the ORS and SRS were filled in, they were also discussed in the session, whereas there might have been a greater risk that the SCL-90 would be forgotten by the

therapist. Unfortunately, no adherence measures were used, and future research should incorporate this in the methodology.

Based on the results of the present study and those of de Jong et al. (2012), therapists' self-efficacy seems to be a relevant characteristic in the provision of feedback. Whether self-efficacy is indeed associated with a self-serving bias or other biases of therapists (e.g., a confirmation bias) and whether biases can be corrected by client feedback should be investigated in future research, for example, in experimental or vignette studies. Also, which elements of client feedback might be effective in correcting biases (feedback on progress or feedback on therapist functioning/session satisfaction) warrants further investigation. The results of the present study also raise the question of the extent to which therapist factors moderate the effects of feedback on clients' outcomes versus the extent to which client feedback affects the impact of therapist characteristics on clients' treatment outcomes. Future research might (a) use alternative questionnaires to measure therapists' self-efficacy and investigate through qualitative or mixed methods whether and how feedback changes the way therapists see themselves (if feedback does, in fact, correct therapists' biases) and (b) investigate how clients perceive therapists with a high level of self-efficacy and whether their perceptions affect the therapeutic relationship.

## 5 | CONCLUSION

The results of this study indicate that some therapists might benefit more from client feedback than others. For therapist with high self-efficacy, it might improve their performance, possibly because their biases are corrected, but for therapists with low self-efficacy, who seem to perform better when only low-frequent feedback is provided, high frequent feedback might make them more insecure. These hypotheses should be tested in future studies. This could be done by assessing in greater depth (e.g., through mixed methods and experimental research) what therapists' self-efficacy entails, how it effects treatment outcomes and how therapists with high versus low self-efficacy respond differently to feedback. In summary, this study provides another potential piece of the puzzle for understanding how and when client feedback is effective.

### ACKNOWLEDGEMENT

We thank the HSK Group, Lena Trigona and the therapists and clients who participated in this study.

### ETHICS STATEMENT

The ethical review board of Radboud University approved the randomized controlled study (reference number ECSW2017-1303-499). Clients received written information on the study and were asked to give consent for the use of their data for research purposes.

### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author, P.D. Janse, upon reasonable request.

### ORCID

Pauline D. Janse  <https://orcid.org/0000-0002-9756-5862>

Kim de Jong  <https://orcid.org/0000-0002-7621-9290>

### REFERENCES

- Arrindell, W. A., & Ettema, J. H. M. (2003). SCL-90, Handleiding bij een multidimensionele psychopathologie indicator. [SCL-90, Manual for a multidimensional indicator of psychopathology]. Lisse: Swets & Zeitlinger.
- Caruso, J. C. (2000). Reliability generalization of the neo personality scales. *Educational and Psychological Measurement*, 60(2), 236–254. <https://doi.org/10.1177/00131640021970484>
- Chow, D. (2014). The study of supershrinks: Development and deliberate practices of highly effective psychotherapists. Unpublished doctoral dissertation, Curtin University. <https://doi.org/10.1037/pst0000015>
- Constantino, M. J., Boswell, J., Coyne, A. E., Romani, F., Trudeau, K., & Kraus, D. (2019). Therapists' accuracy in predicting their own objective effectiveness in treating specific mental health concerns. In *Paper presented at the 50th International meeting of the Society for Psychotherapy Research*.
- Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and the Five-Factor Inventory (NEO-FFI): Professional Manual*. Psychological Assessment Resources Inc.
- de Jong, K., Conijn, J. M., Gallagher, R., Reshetnikova, A. S., Heij, M., & Lutz, M. C. (2021). Using progress feedback to improve outcomes and reduce drop-out, treatment duration, and deterioration: A multilevel meta-analysis. *Clinical Psychology Review*, 85, 102002. <https://doi.org/10.1016/j.cpr.2021.102002>
- de Jong, K., Segaar, J., Ingenhoven, T., van Busschbach, J., & Timman, R. (2018). Adverse effects of outcome monitoring feedback in patients with personality disorders: A randomized controlled trial in day treatment and inpatient settings. *Journal of Personality Disorders*, 32, 393–413. <https://doi.org/10.1521/pedi.2017.31.297>
- de Jong, K., van Sluis, P., Nugter, M. A., Heiser, W. J., & Spinhoven, P. (2012). Understanding the differential impact of outcome monitoring: Therapist variables that moderate feedback effects in a randomized clinical trial. *Psychotherapy Research*, 22, 464–474. <https://doi.org/10.1080/10503307.2012.673023>
- Delgado, J., Branson, A., Kellett, S., Myles-Hooton, P., Hardy, G. E., & Shafran, R. (2020). Therapist personality traits as predictors of psychological treatment outcomes. *Psychotherapy Research*, 30(7), 857–870. <https://doi.org/10.1080/10503307.2020.1731927>
- Delgado, J., Overend, K., Lucock, M., Groom, M., Kirby, N., McMillan, D., Gilbody, S., Lutz, W., Rubel, J. A., & de Jong, K. (2017). Improving the efficiency of psychological treatment using outcome feedback technology. *Behavior Research and Therapy*, 99(Supplement C), 89–97. <https://doi.org/10.1016/j.brat.2017.09.011>
- Derogatis, L. R. (1994). *Symptom Checklist 90-R: Administration, Scoring, and Procedures Manual* (3rd ed.). National Computer Systems.
- Errázuriz, P., & Zilcha-Mano, S. (2018). In psychotherapy with severe patients discouraging news may be worse than no news: The impact of providing feedback to therapists on psychotherapy outcome, session attendance, and the alliance. *Journal of Consulting and Clinical Psychology*, 86(2), 125–139. <https://doi.org/10.1037/ccp0000277>
- Fletcher, A. C., & Delgado, J. (2022). Psychotherapists' personality traits and their influence on treatment processes and outcomes: A scoping review. *Journal of Clinical Psychology*, 78, 1267–1287. <https://doi.org/10.1002/jclp.23310>
- Hatfield, D., McCullough, L., Frantz, S. H., & Krieger, K. (2010). Do we know when our clients get worse? An investigation of therapists' ability to detect negative client change. *Clinical Psychology & Psychotherapy*, 17(1), 25–32. <https://doi.org/10.1002/cpp.656>
- Herold, D. M., Parsons, C. K., & Fedor, D. B. (1997). *Individual Feedback Propensities and Their Effects on Motivation, Training Success and*

- Performance*. United States Army Research Institute for the Behavioral and Social Sciences.
- Herold, D. M., Parsons, C. K., & Rensvold, R. B. (1996). Individual differences in the generation and processing of performance feedback. *Educational and Psychological Measurement*, 56(1), 5–25. <https://doi.org/10.1177/0013164496056001001>
- Hoekstra, H. A., Ormel, J., & de Fruyt, F. (2007). Handleiding NEO persoonlijkheidsvragenlijsten NEO-PI-R en NEO-FFI. In *Manual for the Dutch NEO Personality Inventory (NEO-PI-R) and the Five-Factor Inventory (NEO-FFI)*. Swets Test Services.
- Hollenbeck, J. R., & Klein, H. J. (1987). Goal commitment and the goal-setting process: Problems, prospects, and proposals for future research. *Journal of Applied Psychology*, 72(2), 212–220. <https://doi.org/10.1037/0021-9010.72.2.212>
- Janse, P. D., Boezen-Hilberdink, L., van Dijk, M. K., Verbraak, M. J. P. M., & Hutschemaekers, G. J. M. (2014). Measuring feedback from clients: The psychometric properties of the Dutch outcome rating scale and session rating scale. *European Journal of Psychological Assessment*, 30, 86–92. <https://doi.org/10.1027/1015-5759/a000172>
- Janse, P. D., de Jong, K., van Dijk, M. K., Hutschemaekers, G. J. M., & Verbraak, M. J. P. M. (2017). Improving the efficiency of cognitive-behavioural therapy by using formal client feedback. *Psychotherapy Research*, 27(5), 525–538. <https://doi.org/10.1080/10503307.2016.1152408>
- Janse, P. D., de Jong, K., Veerkamp, C., van Dijk, M. K., Hutschemaekers, G. J. M., & Verbraak, M. J. P. M. (2020). The effect of feedback-informed cognitive behavioral therapy on treatment outcome: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 88(9), 818–828. <https://doi.org/10.1037/ccp0000549>
- Johns, R. G., Barkham, M., Kellett, S., & Saxon, D. (2019). A systematic review of therapist effects: A critical narrative update and refinement to review. *Clinical Psychology Review*, 67, 78–93. <https://doi.org/10.1016/j.cpr.2018.08.004>
- Keijsers, G., van Minnen, A., Verbraak, M., Hoogduin, K., & Emmelkamp, P. (2017). *Protocolaire behandelingen voor volwassenen met psychische klachten, deel 1–3*. [Protocolized treatments for adults with psychological problems, part 1–3]. Boom.
- Koementas-de Vos, M. M. W., Nugter, M. A., Engelsbel, F., & De Jong, K. (2018). Does progress feedback enhance the outcome of group psychotherapy? *Psychotherapy*, 55, 151–163. <https://doi.org/10.1037/pst0000164>
- Krasman, J. (2010). The feedback-seeking personality: Big five and feedback-seeking behavior. *Journal of Leadership & Organizational Studies*, 17(1), 18–32. <https://doi.org/10.1177/1548051809350895>
- Lambert, M. J., Whipple, J. L., & Kleinstäuber, M. (2018). Collecting and delivering progress feedback: A meta-analysis of routine outcome monitoring. *Psychotherapy*, 55(4), 520–537. <https://doi.org/10.1037/pst0000167>
- Maas, C. J. M., & Hox, J. J. (2005). Sufficient sample sizes for multilevel modeling. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences*, 1(3), 86–92. <https://doi.org/10.1027/1614-2241.1.3.86>
- Macdonald, J., & Mellor-Clark, J. (2015). Correcting psychotherapists' blindsidedness: Formal feedback as a means of overcoming the natural limitations of therapists. *Clinical Psychology & Psychotherapy*, 22(3), 249–257. <https://doi.org/10.1002/cpp.1887>
- Miller, S. D., & Duncan, B. L. (2004). *The Outcome and Session Rating Scale. Administration and Scoring Manual*. Institute for the Study of Therapeutic Change.
- Morris, S. B., & DeShon, R. P. (2002). Combining effect size estimates in meta-analysis with repeated measures and independent-groups designs. *Psychological Methods*, 7(1), 105–125. <https://doi.org/10.1037/1082-989x.7.1.105>
- O'Connell, A. A., Goldstein, J., Rogers, H. J., & Peng, C. Y. J. (2008). Multilevel logistic models for dichotomous and ordinal data. In A. A. O'Connell & D. B. McCoach (Eds.), *Multilevel modeling of educational data* (pp. 199–242). Information Age Publishing, Inc.
- Østergård, O. K., Randa, H., & Hougaard, E. (2020). The effect of using the Partners for Change Outcome Management System as feedback tool in psychotherapy—A systematic review and meta-analysis. *Psychotherapy Research*, 30, 195–212. <https://doi.org/10.1080/10503307.2018.1517949>
- Reese, R. J., Usher, E. L., Bowman, D. C., Norsworthy, L. A., Halstead, J. L., Rowlands, S. R., & Chisholm, R. R. (2009). Using client feedback in psychotherapy training: An analysis of its influence on supervision and counselor self-efficacy. *Training and Education in Professional Psychology*, 3(3), 157–168. <https://doi.org/10.1037/a0015673>
- Schiefele, A.-K., Lutz, W., Barkham, M., Rubel, J., Böhnke, J., Delgadillo, J., Kopta, M., Schulte, D., Saxon, D., Nielsen, S. L., & Lambert, M. J. (2017). Reliability of therapist effects in practice-based psychotherapy research: A guide for the planning of future studies. *Administration and Policy in Mental Health and Mental Health Services Research*, 44(5), 598–613. <https://doi.org/10.1007/s10488-016-0736-3>
- Schotte, C., & de Doncker, D. (1994). *ADP IV Questionnaire*. University Hospital Antwerp: Antwerp.
- Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., Hergueta, T., Baker, R., & Dunbar, G. C. (1998). The MINI-international neuropsychiatric interview (MINI): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry*, 59, 22–33.
- Sherf, E. N., & Morrison, E. W. (2020). I do not need feedback! Or do I? Self-efficacy, perspective taking, and feedback seeking. *Journal of Applied Psychology*, 105(2), 146–165. <https://doi.org/10.1037/apl0000432>
- Walfish, S., McAlister, B., O'Donnell, P., & Lambert, M. J. (2012). An investigation of self-assessment bias in mental health providers. *Psychological Reports*, 110(2), 639–644. <https://doi.org/10.2466/02.07.17.PR0.110.2.639-644>
- Wampold, B., & Imel, Z. (2015). *The Great Psychotherapy Debate*. Routledge. <https://doi.org/10.4324/9780203582015>

**How to cite this article:** Janse, P. D., Veerkamp, C., de Jong, K., van Dijk, M. K., Hutschemaekers, G. J. M., & Verbraak, M. J. P. M. (2023). Exploring therapist characteristics as potential moderators of the effects of client feedback on treatment outcome. *Clinical Psychology & Psychotherapy*, 1–12. <https://doi.org/10.1002/cpp.2828>

APPENDIX A: CORRELATIONS ( $r$ ) TREATMENT OUTCOME AND THERAPIST CHARACTERISTICS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1. Residual scores	-																		
2. N	-.16	-																	
3. E	-.01	-.47**	-																
4. O	-.40*	.07	.40*	-															
5. A	.10	.16	.21	-.08	-														
6. C	.13	-.31	.16	-.06	-.00	-													
7. Internal FbP	-.03	-.40*	.31	.07	.09	.16	-												
8. External FbP	-.08	.28	.02	.21	.17	.18	-.20	-											
9. Self-efficacy	.39*	-.15	.16	-.16	.21	.09	.05	-.05	-										
10. Perceived validity	.03	-.05	.09	.18	.10	-.02	.14	.23	-.03	-									
11. Goal commitment	.01	-.09	.19	.33*	-.01	.06	.12	.24	-.18	.67**	-								
12. SA Effect	.10	-.29	.32	.05	.10	.04	.07	-.34*	.30	-.39*	-.24	-							
13. SA Recovery	.16	-.19	-.02	-.07	-.09	.07	.14	.02	.28	.18	.02	.06	-						
14. SA Alliance	.26	.01	.01	-.23	.18	.27	-.02	.07	.36*	-.24	.02	.51**	.12	-					
15. SA drop out	-.15	.37*	-.12	.07	.17	-.03	-.24	-.06	.17	-.15	-.20	-.16	-.21	-.08	-				
16. Experience	.00	.10	-.04	.25	.05	-.05	-.04	-.01	-.04	.17	.23	.31	-.13	.24	-.42*	-			
17. Age	.04	.10	-.17	.20	-.26	.12	-.08	.05	-.12	.02	.22	-.13	-.17	-.13	-.03	.23	-		
18. Caseload	.11	.23	-.15	-.02	-.05	-.16	-.08	.17	-.06	.31	.20	-.28	-.05	-.21	.05	.12	.37*	-	
19. Drop out	.35*	.07	-.10	-.25	-.05	.12	-.12	.15	.41*	-.17	-.32*	.01	.07	.03	.20	-.32	-.04	-.05	

Note: Residual scores = case mix corrected post-treatment symptom severity scores. Negative residual scores indicate better treatment outcome. N = neuroticism, E = Extraversion, O = Openness,

A = Agreeableness, C = Conscientiousness Internal, FbP = Internal feedback propensity, External FbP = External feedback propensity, Perceived validity = perceived validity towards feedback, SA

Effect = Self-assessment of effectiveness, SA Recovery = Self-assessment of percentage recovered clients, SA alliance = Self = assessment of alliances with clients, Experience = years of experience as a

therapist, Caseload = number of clients in study, Sessions = average number of sessions, Drop out = percentage of clients within caseload that were drop out.

\*  $p < .05$ . \*\*  $p < .01$ .