

# Evaluating the Efficacy of Client Feedback in Group Psychotherapy

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Monitoring progress in psychotherapy routinely (i.e., client feedback) has yielded positive results for improving both outcome and retention in individual and couple therapy; however, evidence of client feedback efficacy in a group format is limited. Using a randomized cluster design, group therapy participants ( $N = 84$ ) were assigned to a client feedback or treatment-as-usual (TAU) condition in a university counseling center. Clients in the feedback condition used the Partners for Change Outcomes Management System (PCOMS; Duncan, 2011). Feedback participants had significantly larger pre-post group therapy gains ( $d = 0.41$ ) and higher rates of reliable and clinically significant change when compared to TAU participants on the Outcome Rating Scale (Miller & Duncan, 2000). Clients in the feedback condition also attended more group sessions compared to TAU participants. Study implications and future recommendations are provided.

*Keywords:* group psychotherapy, client feedback, process and outcome, continuous assessment, treatment monitoring

Group therapy has consistently been found to be an effective form of therapy, and generally found to have comparable treatment outcomes to individual therapy for a variety of presenting issues (Burlingame, Strauss, & Joyce, 2013; McRoberts, Burlingame, & Hoag, 1998). In addition to being similarly effective with regard to client outcome, individual and group treatment formats have two less encouraging factors in common. First, a sizable number of clients do not benefit from treatment. The percentages of clients who terminate prematurely (i.e., dropping out therapy before goals are achieved) or

deteriorate in treatment seem to be comparable across formats (Swift, & Greenberg, 2012; Wierzbicki & Pekarik, 1993). Although the group therapy literature lags behind in formally estimating dropout across studies, estimates from individual therapy have historically reflected that approximately 33–50% of clients drop out of therapy and deteriorate at rates between 5 and 10% (Lambert & Ogles, 2004). More recent estimates suggest that dropout in individual therapy is approximately 18.7%, whereas dropout in group treatment is approximately 19.7% (Swift & Greenberg, 2012).

Second, clinicians in both treatment formats have difficulty identifying which clients are not benefiting from treatment (Chapman et al., 2012; Hannan et al., 2005). Chapman and colleagues replicated results of a study evaluating clinical prediction in individual therapy with group members (see Hannan et al., 2005, for details). They found that therapists blinded to outcome scores on the Outcome Questionnaire-45 (OQ-45; Lambert et al., 1996) had difficulty accurately predicting clinical outcomes for their group clients ( $N = 64$ ; only 49

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completed prepost data) from either a university counseling center ( $n = 33$ ) or inpatient psychiatric hospital ( $n = 31$ ). Specifically, therapists predicted that 31 of 49 clients would demonstrate reliable improvement on the OQ-45. However, only 13% (or four out of 31 clients) of their predictions were accurate. No therapist accurately predicted clients who reliably deteriorated ( $n = 10$ ).

Client feedback, or monitoring client outcome throughout treatment, was developed specifically to address these two concerns that affect client outcome across treatment formats. Monitoring progress in treatment assists clinicians with identifying clients who are at-risk for dropping out due to a lack of improvement or worsening in therapy and offers the opportunity to alter or amend treatment in a manner that may better suit the client. Results have generally indicated that client feedback decreases premature termination rates and improves general psychotherapy outcomes for both individuals (Lambert et al., 2001, 2002; Reese, Norsworthy, & Rowlands, 2009; Reese, Duncan, Bohanske, Owen, & Minami, 2014) and couples (Anker, Duncan, & Sparks, 2009; Reese, Toland, Slone, & Norsworthy, 2010). Less research exists with groups. Research that does exist offers mixed results (Davies, Burlingame, Johnson, Gleave, & Barlow, 2008; Schuman, Slone, Reese, & Duncan, 2014), providing an unclear picture as to whether benefits of client feedback extend to group psychotherapy.

Although there are several formal feedback systems (see Castonguay, Barkham, Lutz, & McAleavey, 2013), only two have been evaluated using a randomized clinical trial (RCT) design in the United States: the Outcome Questionnaire System (OQ System; Lambert, Hanson, & Harmon, 2010) and the PCOMS (Duncan, 2011, 2012, 2014). Both feedback systems are included in the Substance Abuse and Mental Health Administration's (SAMHSA) National Registry of Evidence-based Programs and Practices. The OQ System uses the OQ-45, a 45-item measure of global distress, to monitor treatment progress and identify clients who are not-on-track (NOT; client at-risk for negative outcome or premature termination). If identified, clinical support tools that measure the therapeutic alliance, readiness for client change, and level of social support are used to further evaluate the lack of treatment progress. Evidence

for the efficacy of the OQ System is based on nine RCT studies that all show significant treatment gains for NOT clients who were in a feedback condition compared to treatment as usual (TAU; Crits-Christoph et al., 2012; Harmon et al., 2007; Hawkins, Lambert, Vermeersch, Slade, & Tuttle, 2004; Lambert et al., 2001; Lambert et al., 2002; Probst et al., 2013; Slade, Lambert, Harmon, Smart, & Bailey, 2008; Simon et al., 2013; Whipple et al., 2003). Shimokawa, Lambert, and Smart (2010) conducted a meta-analysis with six of the earliest RCT studies ( $N = 6,151$ ) and found clients in the feedback conditions had approximately 2.6 times higher odds of attaining reliable improvement compared to clients in the TAU conditions.

The other client feedback system, PCOMS, has also demonstrated significant treatment gains for feedback over TAU in three RCTs (Anker, Duncan, & Sparks, 2009; Reese, Norsworthy, & Rowlands, 2009; Reese, Toland, Slone, & Norsworthy, 2010). PCOMS uses much shorter measures, consisting of three brief four-item instruments, the Outcome Rating Scale (ORS; Miller & Duncan, 2000), the Session Rating Scale (SRS; Miller, Duncan, & Johnson, 2000) for individual and couple therapy, and the Group Session Rating Scale (GSRS; Duncan & Miller, 2007) for group therapy. The ORS is administered at the beginning of every session to monitor treatment progress and the SRS or GSRS are administered at the end every session to monitor the therapeutic alliance. In individual therapy, Reese et al. (2009) found significant treatment gains for feedback when compared to TAU in both a university counseling center ( $N = 74$ ) and a graduate training clinic ( $N = 74$ ). Moreover, those in the PCOMS conditions achieved reliable change in significantly fewer sessions than TAU. Two studies on couples therapy have comparable results. In Anker et al. (2009), 205 couples randomized to PCOMS or TAU showed statistically and clinically significant improvements for couples who provided feedback. Couples in the feedback condition achieved clinically significant change approximately four times more than those in the TAU condition. Moreover, these changes were maintained at 6-month follow-up with significantly more couples in the feedback condition remaining together. The findings from the Anker et al.

study were replicated by Reese et al. (2010), but with fewer couples ( $N = 46$  couples).

In addition to demonstrating improvements in outcome, client feedback has been shown to improve deterioration and attendance rates. For example, Lambert and Shimokawa's (2011) meta-analytic results suggested that clients in a feedback condition using either PCOMS or the OQ System experienced less than half odds of deteriorating in treatment; however, results with the OQ System only applied to clients not on track for positive outcomes, or NOT. Feedback also improves attendance rates, though results are mixed as to whether all clients benefit or just those NOT. Specifically, Lambert et al. (2001) found that clients who were NOT in a feedback condition attended significantly more sessions (9.68 vs. 5.03) than NOT clients in a TAU condition. Conversely, Slade et al. (2008) found that all clients, not just those NOT, in a feedback condition with clinical support tools attended 1.5 more sessions compared to TAU.

Client feedback with individual and couple therapy has been found to be efficacious, but the results have not been replicated in the group format. The use of client feedback in group therapy is worthy of investigation given the same concerns exist as in individual therapy, namely with regards to premature termination and the inability of the therapist to identify clients at-risk for not benefitting in therapy. Formally monitoring treatment progress in a group format may prove critical given that it can be difficult to assess individual client progress within a group using only clinical judgment. Given that we already know clinicians have difficulty identifying clients not progressing in groups on average (Chapman et al., 2012), formally monitoring client progress routinely may help avoid such clients getting "lost" in the mix.

We could only identify two studies evaluating the efficacy of client feedback in group psychotherapy (Davies, Burlingame, Johnson, Gleave, & Barlow, 2008; Schuman, Slone, Reese, & Duncan, 2014). Davies et al. (2008) studied the effects of a feedback intervention across a mean number of six group sessions using the OQ-45 as an outcome measure at pre-post and the Group Climate Questionnaire-Short version (GCQ-S; MacKenzie, 1983) at every session to monitor group member's relationships. Feedback on the group climate was given in narrative and graphical (i.e., visual

graph of GCQ-S subscale scores) forms to clients ( $N = 94$ ), coleaders, and the group-as-a-whole at a university counseling center. Researchers found that monitoring group climate did not enhance client outcome or level of engagement in the group compared to a TAU condition. In fact, client feedback using the GCQ-S only significantly predicted worse outcomes for clients who rated their group as experiencing higher levels of conflict overall.

Second, Schuman et al. (2014) evaluated client feedback using a limited PCOMS intervention (i.e., excluded the GSRS) in a group therapy format with active military personnel in the Army accessing services for substance abuse treatment. Clients in a feedback condition demonstrated significantly more pre-post treatment gains ( $d = 0.28$ ) and attended more sessions compared to a TAU group therapy condition. In addition, more clients who were NOT in the feedback condition were retained. Lastly, clients in the feedback condition achieved significantly higher satisfaction ratings from their therapist *and* commanding officers in comparison to the TAU condition. Although results were positive for this study, two primary limitations exist: only five group sessions were measured and group cohesion was not monitored as the GSRS was not developed at the time this study was implemented.

The purpose of this study was to further evaluate the efficacy of client feedback in group psychotherapy, addressing both the lack of studies and the limitations noted in the previous client feedback group psychotherapy studies. Specifically, we evaluated whether using a client feedback system enhanced treatment outcome and retention when compared to TAU group therapy. We had three hypotheses. First, we hypothesized that clients in a feedback condition would have significantly larger pre-post psychotherapy outcome gains. Second, we hypothesized that clients in a feedback condition would achieve significantly higher rates of reliable and clinically significant change. Third, we hypothesized that clients in a feedback condition would attend more sessions and have lower rates of premature termination. Although both the OQ System and PCOMS have been evaluated in the group studies above, PCOMS was chosen for the current study given its brevity and the availability of a group alliance measure

and protocol were available (Duncan, 2011; Duncan & Sparks, 2010).

(58%). The use of psychotropic medication was also not monitored in this study.

## Methods

### Participants

A total of 90 participants attended group therapy at a large university counseling center in the Southeast from January 2012 to December 2012. However, five participants declined to participate in the research study and one participant was dropped from the analysis because she did not complete the measures as instructed (e.g., made erratic marks later determined to be unrepresentative of the client's current experience). Participants ( $N = 84$ ) were clients who took part in interpersonal process group therapy for social anxiety and interpersonal concerns. A total of 43 clients participated in a feedback condition and 41 were in the TAU condition. All but two participants were new group therapy clients who attended a group for one academic semester. The two clients attended group for two academic semesters, first participating in a TAU condition then a feedback condition.

Client participants had a mean age of 21.5 ( $SD = 2.7$ ; range 18–28), which was similar across treatment conditions (feedback  $M = 21.5$ , TAU  $M = 21.5$ ), identified as mostly women (64.3%), and Caucasian (84.5%; 10.7% identified as African American/Black, 1.1% as multiracial, and 1.1% asked to self-identify). Most reported their sexual identity as heterosexual (85.7%), though some identified as gay (4.8%), lesbian (3.6%), bisexual (3.6%), or questioning (2.4%). Clients reported being mostly single (66.7%), though some were in a serious or dating or committed relationship (27.4%), married (3.6%), or divorced (2.4%). Clients were classified as freshmen (23.8%), sophomores (14.3%), juniors (21.4%), seniors (17.9%), and graduate or professional degree students (22.6%). Approximately 58.3% of the sample endorsed attending individual therapy prior to their group experience, though the recency of their treatment is not known. Although clients' specific presenting concerns or diagnoses were not monitored in this study, clients at this center endorsed the following top three presenting concerns in order of highest percentage endorsed (more than one could be checked): anxiety (68%), stress (64%), and depression

### Group Leaders

Graduate students, predoctoral interns, and doctoral-level staff psychologists ( $N = 20$ ) served as group leaders. Two leaders were assigned to each group, one who had more group experience (e.g., senior staff member or experienced predoctoral intern), with a graduate student trainee in a clinical or counseling psychology doctoral program, predoctoral intern, or less experienced (<3 years of experience with interpersonal process groups) senior staff member. The Group Psychotherapy Coordinator, a licensed doctoral-level staff psychologist at the counseling center, determined pairs of coleaders at the outset of each semester prior to groups being randomized for the study. The Coordinator also provided weekly group supervision for 1.5 hr with all group leaders in both conditions. All group leaders received the same amount of supervision from the same supervisor throughout the duration of this study. Group leaders in both conditions were part of the same group supervision session; separating coleaders was not modifiable by research personnel at the site. However, the only discussion of the study that took place in the combined supervision session was related to treatment fidelity. No other conversation about the process of using the study measures in group therapy sessions was discussed during group supervision. Coleaders in the feedback condition were prompted to consult about specific concerns related to the feedback protocol (i.e., how to respond to signal alarm system with group members in session) with study personnel outside of group supervision.

Group leaders were a mean age of 32.1 years ( $SD = 8.2$ ; range of 23–52), most identified as women (80%) and Caucasian (85.0%; Asian/Pacific Islander, 10.0%; and multiracial, 5.0%). Eight group leaders had doctoral degrees, and 12 were doctoral student trainees. Group leaders reported an average of 4.8 years of group psychotherapy experience ( $SD = 7.1$ ; range 0–22 years) and had led an average of 4.5 groups ( $SD = 4.4$ ; range: 0–15) prior to this study. They identified their general theoretical orientations as mostly integrative (65.0%), though some identified primarily with interpersonal

process therapy (20.0%) and cognitive behavioral therapy (15.0%) orientations. No significant differences were noted on demographic variables, including experience level, across treatment conditions ( $p > .05$ ).

## Measures

**ORS.** The ORS is a brief four-item measure of global psychological functioning that was designed for use every session to monitor client outcome (Duncan, 2011; measures may be downloaded for free at <https://heartandsoulofchange.com>). Four domain scores derived from subscales of the OQ-45, including Individually (personal wellbeing), Interpersonally (family and close relationships), Socially (school, work, and other friendships), and Overall (general measure of psychological wellbeing), measure global psychological functioning using a visual analog scale 10 cm in length for each area assessed. Although an electronic version exists, the paper-based version of the measure was used. To administer this instrument, therapists ask clients to place a hash mark on the line that best represents how they were feeling over the past week with scores on the right side of the scale indicating higher functioning. A ruler is used to score each domain to the nearest millimeter, with 10 being the highest score obtainable for each domain. Total scores range from 0 to 40. The total score is plotted on a graph each session to track their progress throughout treatment. The ORS can be administered, scored, plotted, and interpreted in approximately one minute.

The protocol procedures for clients responding to the ORS in a group format were nuanced for logistical purposes. When clients entered the group session each week, they were instructed to complete, score, and plot the total scores on their individual graph. When timed for research purposes, this process took no more than 2.5 minutes. Coleaders prompted clients to share their results through check in, which was interwoven into the process of group therapy. Given this, it is difficult to state exactly the length of time members spent sharing their ORS results as it was included into their routine check in and group process.

Several studies provide empirical evidence for the reliability and validity of scores generated by the ORS (e.g., Bringhurst, Watson, Miller, & Duncan, 2006; Campbell & Hemsley,

2009; Duncan, Sparks, Miller, Bohanske, & Claud, 2006; Gillaspay & Murphy, 2011; Miller, Duncan, Brown, Sparks, & Claud, 2003). An average Cronbach's coefficient alpha for all studies was .85. Test-retest coefficients have been found to range from  $r = .66$  (Miller et al., 2003) after 1–3 weeks to  $r = .80$  (Bringhurst et al., 2006) after the same time period when ORS total scores have been used. Internal consistency estimates using ORS total scores for the current sample was .92 across 327 total administrations.

Concurrent validity was also estimated comparing the ORS and OQ-45. Miller et al. (2003) paired 335 administrations of the ORS and the OQ-45 across four sessions using a nonclinical sample ( $N = 86$ ) and found a correlation of  $r = .59$ . Bringhurst et al. (2006) reported a stronger relationship ( $r = .69$ ) at the third administration (range of  $r = .56$ – $.57$  across first two administrations). Both studies suggest moderate evidence supporting the concurrent validity of the ORS as a measure of global psychological functioning.

To facilitate clinical use of the ORS, Jacobson and Truax's (1991) formulas were used to determine the ORS clinical cutoff and the reliable change index (RCI) for evaluating clinically significant change. Miller et al. (2003) used a nonclinical, community sample ( $n = 86$ ) and a clinical sample ( $n = 435$ ) to establish a cut score of 25. The RCI for the ORS was computed using 34,790 participants and was determined to be 5 points (Duncan, 2011). To achieve clinically significant change, a client must begin treatment with an ORS score  $<25$ , improve by at least 5 points, and finish treatment with an ORS score  $>25$ .

The GSRS, a group cohesion measure (i.e., member's relationship to the group, including leaders, rather than just the relationship between client and therapist), was utilized with the feedback group only, but it is not fully reviewed here given it is used as part of the client feedback system intervention itself and not included in the data analysis separately. The GSRS is a four-item measure that uses a visual analog scale, that assesses four domain areas related to Bordin's (1979) theory of the working alliance: relationship (i.e., I felt understood and respected by the leader and the group), goals and topics (i.e., We worked and talked about what i wanted to and talk about), approach or method (i.e., The

leader and the group's approach is a good fit for me), and overall (i.e., Today's group was right for me). It was administered, scored, and interpreted in the same manner as the ORS at the end of group session.

## Procedures

We used a cluster RCT design. Randomization occurred at the group level, in which groups-as-a-whole were randomly assigned to a feedback or TAU condition. Randomizing clients and coleaders individually to groups was not feasible due to client, staff, and group leaders' schedules, as they were only available at certain times.

Groups ( $N = 10$ ; feedback = 5 and TAU = 5) were closed (i.e., more members were not added once formed) interpersonal process psychotherapy groups (Yalom, 1995). Groups at the center are designed to last one academic semester. For the current study, the groups conducted an average of 10 weekly sessions (10.4 in the feedback condition and 9.6 in the TAU condition) for 1.5 hours each week. Groups started over each semester with new members and coleaders. Each group was comprised of 8.5 clients on average (8.8 in feedback condition [ $SD = 1.10$ ]; 8.2 in TAU condition [ $SD = 1.30$ ]). The group coordinator, a doctoral-level staff psychologist at the center, made group times and coleadership assignments at the beginning of each semester. These aspects were not modifiable by research personnel.

Group psychotherapy clients at this center were recruited through referral procedures and participated according to inclusion/exclusion criteria outlined by center policies. Clients who presented with concerns related to social anxiety or other interpersonal issues were referred to group therapy by their intake or individual therapist, although some clients presented with other comorbid concerns (e.g., depression, eating disorders) that were not controlled for in the analyses of this study.

Group leaders were provided a 1-hr training session on the use of PCOMS and how to inform clients about the research study by condition. All clients referred to group therapy were educated about the group process by their leaders during a screening session, allowing them to discuss group norms and expectations and establish goals for treatment. Those interested and

found to be appropriate for the group therapy program were provided with instructions about group attendance and information regarding the research study.

**Feedback condition group screening and session protocol.** Coleaders in the feedback condition instructed group clients on how to complete the ORS and GSRS and to plot their total scores for these measures on a progress graph during screenings. PCOMS graphs were used throughout the duration of group therapy in a given semester for clients in the feedback condition to plot and monitor their outcome scores each session. Although these intake scores were not included in the data analysis, this process gave coleaders and clients an opportunity to gain exposure to the measures, score, and interpret the assessments in preparation for the first session.

At the beginning of each session, clients scored and plotted their own ORS total score on the graph to display their treatment progress. Coleaders prompted for reactions to their scores (e.g., noticed changes in their psychological functioning relative to the previous week [after first session]), meaning that they had an overt conversation about their progress relative to the previous week, particularly if below the clinical cutoff of 25. Leaders asked group members to share an update on their progress based on ORS Total scores during a check in procedure as well as to share any needs they had from the group to help them improve. Approximately 5 min before the end of each group therapy session, clients responded to, scored, and plotted their GSRS total scores on their graph. Again, coleaders asked clients to share their reactions on their progress according to group cohesion scores relative to their previous session score (after first session) during the check-out procedure at the end of group.

After the third and each subsequent session (starting at Session 3 and every session thereafter was evaluated relative to client Session 1 ORS scores), research personnel provided a "signal system" to all group coleaders in the feedback condition that categorized their group member's progress according to manualized procedures (Duncan, 2011). The system is designed to alert coleaders to clients who were NOT in their groups. Research personnel affixed color-coded index cards (described below) to client graphs with messages denoting mem-

bers' progress. Member progress was determined by evaluating the change from the current group session relative to the first group session. Coleaders were instructed to review signals before each group session and discuss with one another how to incorporate the feedback into the next session. Clinical decisions coleaders made to assist with enhancing clients' scores were then implemented in the group session. For example, therapists with a group member who had scores indicating deterioration may specifically be attuned to their reported needs for the group or overtly note concern that the member had not seen improvements during the process of the group session. Given that the nature of feedback is designed to be individualized to the group member, it is not possible to capture the exact intervention implemented for each client that took part in the study; rather, coleaders were trained to focus specifically on intervening with clients who were deteriorating with the help of the following manualized recommendations (Duncan, 2011). Each card provided a summary of how the client changed from the previous week with recommendations for how to intervene:

**No change (yellow card).** Clients who have not made at least a 5-point increase in the first three sessions are considered NOT and at increased risk of treatment failure, or premature termination from therapy. Leaders are to address progress and inquire about clients' perspectives of therapy and the alliance. If client remains unchanged after three additional sessions (Session 6), leaders are encouraged to discuss the client's perception of the group alliance, whether the treatment format is beneficial, or determine whether another type of treatment (e.g., medication consultation) may be needed.

**Reliably deteriorated (red card).** Clients who have deteriorated by at least 5-points from their baseline measure are reliably deteriorated and considered to be NOT and at risk for dropping out of treatment prematurely. Leaders are to address the deterioration and inquire about clients' perspectives of therapy and the alliance. If clients continued to deteriorate, leaders are encouraged to speak with clients about alternative treatment options.

**Reliably changed (blue card).** Clients who have made at least a 5-point improvement on the ORS have experienced reliable change.

Leaders with clients in this range are to reinforce progress and specific changes clients made and assisted clients with further refining their "change strategies."

**Clinically significant change (green card).** Clients who have experienced a 5-point gain that crossed the clinical cutoff of 25 on the ORS have made clinically significant and reliable change, meaning clients are moving in the direction of "recovery." Leaders are to assist clients by refining their "change strategies" and focus on preparing them for potential relapses or setbacks.

Research personnel attended weekly group therapy supervision to promote treatment adherence (Hogue, Liddle, & Rowe, 1996). Specifically, coleaders verbally confirmed that they discussed their clients' feedback scores and progress with one another, checked in with clients about their scores on the ORS and GSRS each session, as well as adhered to recommendations made via the signal system.

**TAU screening and group session protocol.** Group coleaders assigned to the TAU condition provided instructions to their clients on how to complete the ORS during screening appointments; however, clients or coleaders never scored the completed measures. Coleaders returned the completed ORS measures to research personnel for scoring; they did not have access to their clients' progress throughout the duration of the research study. Leaders not to prompt any discussions on client progress via these measures during the study.

### Statistical Analysis

Multilevel modeling methods (Heck, Thomas, & Tabitha, 2014; Hox, 2010; Raudenbush & Bryk, 2002) were used to evaluate hypotheses given the nested nature of the data (i.e., clients nested within groups) and potential effects on outcome related to data interdependence (i.e., mutually dependent response pattern within each group). Ignoring the clustered nature of the research design may contribute to inaccuracies in estimates of variance parameters on outcome and contribute to Type I error (Baldwin, Murray, & Shadish, 2005; Baldwin, Stice, & Rohde, 2008). A two-level model was constructed (clients nested within groups) to determine if client feedback improves treatment outcomes in group therapy.

Three multilevel models were constructed and compared as recommended by Tasca, Illing, Joyce, and Ogrodniczuk (2009). First, we constructed a baseline statistical model, or a null model (without any predictors), to estimate variance in post ORS scores attributed to each level. Next, we constructed a covariate only model to determine whether variance attributed to post ORS scores was affected by the inclusion of a random covariate, pre ORS, or pre Distress Index score. A third model was constructed building from the covariate only model, in which the feedback variable was added as a dichotomous predictor (feedback coded = 1; TAU coded = 0) at Level 2 (group level), to determine if client feedback contributed to statistically significant improved outcomes when compared to clients in TAU.

Additional analyses were used to calculate effect sizes, percentages of clients who met criteria for reliable and clinically significant change criteria on the ORS, and differences in mean attendance scores. The calculation for effect size within groups was:  $M_{\text{post}} - M_{\text{pre}}/SD_{\text{pre}}$ . The calculation used to determine the effect size of feedback, or a between group effect size, at posttest was:  $B_{(\text{Feedback})}/\sqrt{([n_{\text{TAU}} - 1]s^2_{\text{TAU post ORS}} + [n_{\text{Feedback}} - 1]s^2_{\text{Feedback post ORS}})/N - 2}$ , the same formula used in previous PCOMS studies evaluating client feedback efficacy with couples (Reese et al., 2010). A chi-square analysis was used to evaluate differences in reliable change categories by condition. Also, *t* tests were used to compare rates of attendance and premature termination across feedback and TAU conditions. Missing data were handled using a last observation carried forward method (Streiner, 2010), a technique common in client feedback studies, in which the score for the last session attended is considered the client's posttreatment score (e.g., Lambert et al., 2001; Slade et al., 2008).

## Results

To evaluate if randomization across groups was successful, pre ORS scores were compared across conditions. No statistically significant differences were noted between the two treatment conditions for the ORS,  $t(82) = 0.88, p > .05$ , suggesting initial levels of distress were equivalent and randomization was successful. In addition, no significant differences were noted on client or therapist demographic vari-

ables or years of experiences in coleadership pairs across treatment conditions ( $p > .05$ ).

## Evaluating Efficacy

The feedback condition showed pre–post improvement of 7.45 ORS points compared to 5.24 for the TAU condition. Within condition estimates yielded moderate to large effect sizes (Cohen, 1988) as seen in Table 1, suggesting group treatment was effective in both conditions. The between treatment condition effect size was  $d = 0.41$ , a small-medium effect for feedback.

Prior to evaluating the multilevel models, an intraclass correlation coefficient (ICC) was calculated using component estimates from the null model to evaluate variance attributable to the group level using the following equation:  $ICC = \sigma^2_{\text{group}}/\sigma^2_{\text{client}} + \sigma^2_{\text{group}}$ . Results indicated that 2% of the variance in client outcome was attributable to differences between groups. Parameter estimates from the null model found individual post ORS scores were significantly different,  $\beta = 29.1, p < .001$ .

Second, a covariate only model was developed to evaluate if significant treatment gains were observed on post ORS scores for the total sample with pre ORS scores used as a covariate (grand mean centered) to control for pretreatment differences (see Table 2). Results suggest that there were significant differences in post ORS scores at the end of treatment ( $\beta = 29.1, p < .001$ ), the average post ORS score was 29.0 when initial functioning was controlled. A statistically significant positive slope between initial and final ORS scores ( $\beta = .5, p < .001$ ) indicated that clients' scores increased posi-

Table 1  
Means, Standard Deviations, and Effect Sizes  
for ORS

|                          | Feedback condition<br>( <i>n</i> = 43) |           | TAU condition<br>( <i>n</i> = 41) |           | Total<br>( <i>N</i> = 84) |           |
|--------------------------|--|-----------|-----------------------------------|-----------|---------------------------|-----------|
|                          | <i>M</i>                               | <i>SD</i> | <i>M</i>                          | <i>SD</i> | <i>M</i>                  | <i>SD</i> |
| Pre ORS                  | 23.47                                  | 7.86      | 22.02                             | 7.06      | 22.76                     | 7.47      |
| Post ORS                 | 30.87                                  | 6.49      | 27.26                             | 6.85      | 29.11                     | 6.87      |
| Effect size ( <i>d</i> ) | 0.94                                   |           | 0.74                              |           | 0.85                      |           |

Notes. TAU = treatment as usual; ORS = Outcome Rating Scale; *d* = Cohen's (1988) measure of sample effect size.



Table 2  
*Fixed and Random Effects for Two-Level Multilevel Model Predicting Postgroup Treatment ORS Scores (N = 84)*

| Parameter   | Covariate only model |     | Full model  |      |
|---|----------------------|-----|-------------|------|
|   | Coefficient          | SE  | Coefficient | SE   |
| <b>Fixed</b>  |                      |     |             |      |
| Intercept ( $\beta_{00}$ )                            | 29.1***              | 0.8 | 30.6***     | 0.9  |
| Pre-ORS slope ( $\beta_{10}$ )                        | 0.5***               | 0.1 | 0.4***      | 0.03 |
| Feedback ( $\beta_{01}$ )                             |                      |     | -2.9*       | 1.29 |
| <b>Random</b>   |                      |     |             |      |
| Level 1 error variance ( $\sigma_{\text{client}}^2$ ) | 34.8                 | 5.9 | 34.3        | 5.4  |
| Level 2 error variance ( $\tau_{\text{group}}$ )      | 1.4                  | 3.1 | 0.0         | 0.0  |

Note. ORS = Outcome Rating Scale.

\*  $p < .05$ . \*\*\*  $p < .001$ .

tively and significantly across treatment when initial level of functioning was controlled.

Third, a conditional model was constructed by adding feedback as a dichotomous predictor (feedback vs. TAU) to the covariate only model at Level 2. The difference in post ORS scores between treatment conditions was statistically significant,  $\beta = -2.9$ ,  $p = .023$ . The results indicated that clients in the feedback condition scored approximately 2.9 ORS points higher than clients in the TAU group when grand mean centered pre ORS scores were controlled.

To determine if the conditional model was a better overall fit in comparison to the covariate only model, a chi-square statistic was used to compare the -2LLs for the covariate only model (539.38) to the conditional model (532.05). Results of this analysis,  $\chi^2(1) = 7.33$ ,  $p = .01$ , indicated that the addition of the feedback variable when controlling for pre ORS scores improved the fit of the model.

### Clinically Significant Change

We hypothesized that clients in the feedback condition would achieve higher rates of reliable and clinically significant change than clients in the TAU condition. Chi-square analyses revealed statistically significant differences,  $\chi^2(3, N = 84) = 7.6$ ,  $p = .05$  between clients in the

feedback and TAU conditions on classifications based on changes in prepost ORS scores. Specifically, clients in the feedback condition on average achieved higher percentages of clinically significant and reliable change compared to the TAU condition (see Table 3). Results provide support for the second hypothesis, in that feedback participants had higher rates of reliable and clinically significant change on the ORS.

### Retention

Clients in the feedback condition were hypothesized to attend more sessions overall and have lower rates of deterioration and premature termination compared to clients in the TAU condition. On average, clients attended 7.33 sessions ( $SD = 2.78$ ; range = 2–11). Clients in the feedback condition attended statistically significantly more sessions than clients in the TAU condition (feedback = 8.0 and TAU = 6.6;  $t[82] = 2.4$ ,  $p < .05$ ).

Results indicated that feedback did not contribute to decreased rates of deterioration and premature termination in this study. As can be seen in Tables 3, approximately the same number of clients deteriorated in each treatment condition, meaning their final scores on the ORS were significantly lower according to respective RCIs than when they began group treatment. The number of clients who terminated prematurely in the feedback ( $n = 7$ ) and TAU conditions ( $n = 13$ ) was not statistically significant,  $\chi^2(1, N = 84) = 2.7$ ,  $p = .10$ .

Table 3  
*Percentage of Clients Who Achieved Clinically Significant Change in Feedback and TAU Conditions on the ORS (N = 84)*

| ORS classifications           | Feedback condition ( $n = 43$ ) |      | TAU condition ( $n = 41$ ) |      |
|-------------------------------|---------------------------------|------|----------------------------|------|
|                               | <i>n</i>                        | %    | <i>n</i>                   | %    |
| Deteriorated                  | 2                               | 4.7  | 2                          | 4.9  |
| No change                     | 9                               | 20.9 | 20                         | 48.8 |
| Reliable change               | 14                              | 32.6 | 7                          | 17.1 |
| Clinically significant change | 18                              | 41.9 | 12                         | 29.3 |

Note. ORS = Outcome Rating Scale; TAU = treatment as usual. ORS,  $\chi^2(3, N = 84) = 7.6$ ,  $p = .05$ .

## Discussion

We had three main findings in the current study. Our primary finding was that larger treatment gains were observed on the ORS in group psychotherapy for clients in the feedback condition compared to the TAU condition. These results are consistent with the other published study that evaluated the efficacy of client feedback using PCOMS in group psychotherapy (Schuman et al., 2014). As in Schuman et al., statistically significant pre–post gains were found for feedback when compared to TAU, although the magnitude of change was slightly larger ( $d = 0.41$  vs.  $d = 0.28$ ). It is possible that the inclusion of the GSRS and length of group intervention in comparison may be a contributing factor to the increase in effect size; however, more research to dismantle and parse out such effects is needed. Though the current group effect size also falls in the medium range (Cohen, 1988), effects of feedback in group therapy appear to be more modest when compared to those found in RCTs using PCOMS for individual therapy ( $d = 0.49$  and  $d = 0.54$ ; Reese et al., 2009) and couples therapy ( $d = 0.50$ ; Anker et al., 2009).

Study results seem to make sense when the differences in the intensity of the feedback interventions are considered in each of the studies. Larger effects were observed in the individual and couple studies where outcome and alliance scores were likely addressed in more detail and as needed. Simply put, more time was dedicated to feedback in the individual and couple studies than in the current study. Conversely, the smallest effect size was found in the Schuman et al. (2014) group study where an abbreviated feedback protocol was used and only five sessions were evaluated. The results for the current study fall somewhere in-between, although this should be interpreted cautiously given the 95% confidence intervals of the effect sizes overlap. However, this does seem to make intuitive sense given that the feedback protocol was not abbreviated and more sessions were evaluated than in Schuman et al.

The second main finding was that more clients in the feedback condition experienced reliable change (32.6% vs. 17.1%) and clinically significant change (41.9% vs. 29.3%) compared to clients in the TAU condition. The percentage

of feedback participants who achieved clinically significant change are almost identical to previous study findings evaluating the efficacy of feedback using PCOMS with couples (40.8%; Reese et al., 2010). Twice as many clients in the feedback condition achieved reliable improvement than those in the TAU condition ( $n = 14$  vs.  $n = 7$ ), which is also similar to findings by Reese et al. (2009). Compared to the Schuman et al. (2014) study, more clients in the current study achieved reliable change (32.6% vs. 20.4%) and clinically significant change (41.9% vs. 28.5%).

The last main finding is that feedback participants attended more group therapy sessions than TAU participants. Findings are similar to results from Slade and colleagues (2008), who found feedback clients attended 1.5 more sessions on average than those in the TAU condition. However, we did not find significant differences between treatment conditions for premature termination rates. Overall, the number of clients who terminated prematurely (i.e., before reaching the clinical cut-off of 25 on the ORS) was low for both conditions (feedback,  $n = 7$ ; TAU,  $n = 13$ ). This may have been due in part to the group screening process and emphasis placed on attending all of the sessions for the semester.

## Study Limitations

There are four major limitations in the current study. First, the biggest weakness of this study was the sample size. An a priori power analysis conducted indicated approximately 120 clients were needed for a level of power ( $\beta = .80$ ) appropriate for this study to detect an effect size of  $d = 0.50$ . The post hoc power analysis concluded power ( $\beta = .69$ ) was insufficient to detect a medium effect size ( $d = 0.50$ ), therefore the results should be interpreted with some caution. In addition, the sample was not diverse, with most of the sample being White, heterosexual identified women, thereby limiting generalizability of results. In addition, over half of the sample (58.3%) had already received individual therapy at some point prior to attending group therapy. It is possible that clients were in less distress, contributing to fewer pre–post therapy gains across group treatment. A small sample size also limited our ability to conduct

additional analyses that would permit certain comparisons with other feedback studies. For example, we attempted to evaluate whether outcome and retention differed for those considered NOT in feedback and TAU conditions. However, given the small sample of those NOT, we were unable to conduct this comparison. Although the sample size is small relative to many individual psychotherapy outcome studies, and limiting to some degree in the current study, it is also comparable to those found in group therapy outcome studies (e.g., Davies et al., 2008).

Second, is the limited generalizability of our findings given we evaluated one type of group approach (i.e., interpersonal process) provided in a university counseling center. Although it seems intuitive to conclude that the effects of client feedback were diluted because less time was available to discuss the client feedback measures due to the group format, perhaps that is not the case. Another possibility is that the interpersonal process approach to group psychotherapy, which utilized a strong focus on the “here and now” in both conditions, reduced the effect of feedback. Discussions generated using the immediacy technique to understand how members were doing in the moment perhaps mimicked or was similar to the process of overtly discussing client changes on ORS and GSRS each session. Although more research is needed to understand this effect, the current study is an improvement over the abbreviated version of PCOMS found in Schuman et al. (2014).

Third, treatment fidelity was not formally monitored outside of coleaders’ verbal acknowledgment that they followed the study protocol. We attended weekly group supervision to monitor the coleaders’ administration of client feedback measures and to verbally verify that they were using the client feedback/signal system as intended in their respective groups. Monitoring fidelity more formally through observation via video recordings or developing a rating form to assess adherence to the protocol may have enhanced the study design. Unfortunately, given the setting, these options were not feasible.

Last, there were measurement or data limitations of note. Although the purpose of the

study was for clients to provide feedback to their coleaders via the PCOMS assessments provided, these measures were self-report measures of client functioning. Self-report measures are generally known to inherently have some degree of bias toward social desirability and lack validity in how that client may be objectively assessed (Barker, Pistrang, & Elliott, 2002). In addition, a second outcome measure was available for use but not included in the study, as the focus of the measure was not consistent with the aim of the group therapy provided. The current research would be strengthened with a second outcome measure of interpersonal concerns. Finally, as is typical with naturalistic studies, missing data were observed between pre–post treatment observations. We were not able to monitor reasons for missed sessions or premature termination.

### Implications and Future Recommendations

Two implications from this study are noted. First, this study extends the client feedback literature to include results on the effects of feedback in group psychotherapy. The results provide some evidence that client feedback can be useful for improving treatment outcomes and improving treatment retention, although this initial study suggests the benefits are more modest than client feedback used in individual or couple therapy. Second, study findings may have pragmatic implications to providers governed by managed care. Using client feedback to enhance outcome and retention may well complement the efficiency already afforded by this widely used treatment modality in community resources (Taylor et al., 2001).

Given the findings of the current study, future research for client feedback in group psychotherapy is warranted. Studies with larger and more diverse samples of clients from outside of a university counseling center setting are needed. We also suggest that a more formalized check of treatment integrity be developed to better estimate the level of fidelity to the intervention as well as to facilitate better understanding of how the process of client feedback is implemented and utilized. For example, observing the video recordings of group sessions may provide an

understanding of the strength of the intervention as well as how the intervention could be delivered more effectively. Finally, we know very little about why client feedback works. It is recommended that future studies be designed to isolate processes related to feedback (i.e., monitoring group cohesion) on outcome. For example, future studies should dismantle individual constructs within the client feedback system, such as monitoring group cohesion and outcome alone compared to TAU. Doing so may promote a better understanding of processes underlying client feedback, particularly in the group psychotherapy format.

### Conclusions

The efficacy of client feedback is substantial enough in individual and couple psychotherapy that it is now considered a form of evidence-based practice, with both the OQ System and PCOMS being recognized by the SAMHSA National Registry of Evidence-based Programs and Practices. Client feedback in both research and practice are consistent with the definition of an EBP as purported by the APA Presidential Task Force on Evidence-Based Practice (2006), being “the integration of best research evidence with clinical expertise and patient values” (p. 273). Although individualizing client care may seem contradictory to the format of group therapy, the use of client feedback offers a focus on both supporting individual needs while also formally checking in on client perceptions of group processes. Such practice is well aligned with the American Group Psychotherapy Association Practice Guidelines for Group Psychotherapy (Bernard et al., 2008; The American Group Psychotherapy Association, 2007). Specifically, Bernard et al. (2008) suggests that “in addition to the therapist’s clinical sense, empirical assessment tools provide a structured approach to ‘taking the pulse’ of the group interpersonal climate to ascertain what may be obstructing or facilitating interpersonal processes at the group level” (p. 17). Client feedback may serve as a method to more formally “take the pulse” of the group, to understand what is needed both at individual and group levels to promote change in this complex format of treatment. It is hoped that this study serves a

foundation from which additional work will be conducted to further evaluate the efficacy of client feedback in group therapy, but also to understand how client feedback relates to the processes by which change occurs in a group format.

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Received June 24, 2014

Revision received February 10, 2015

Accepted February 13, 2015 ■