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Saara Grizzell

*The University of Texas Rio Grande Valley*

Julie Smart

Michael J. Lambert

Jamison Fargo

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### Recommended Citation

Grizzell, S., Smart, J., Lambert, M. J., & Fargo, J. (2016). The Use of Feedback in Group Counseling in a State Vocational Rehabilitation Setting. *Journal of Applied Rehabilitation Counseling*, 47(4), 10–19. <https://doi.org/10.1891/0047-2220.47.4.10>

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# *The Use of Feedback in Group Counseling in a State Vocational Rehabilitation Setting*

Saara Grizzell  
Julie Smart  
Michael J. Lambert  
Jamison Fargo

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**Abstract:** *This study examined the impact of providing progress feedback to individuals with disabilities receiving services at a state vocational rehabilitation (VR) agency. Thirty individuals were randomly assigned to receive either group therapy (treatment-as-usual, TAU) or group therapy plus feedback (treatment, Fb) during a 10-week counseling program at one of five agency offices. Each week, participants attended a 90-minute session and completed a measure of mental health (Outcome Questionnaire-45). Longitudinal multilevel models were used to evaluate the hypothesis that participation in the Fb group would lead to improved mental health. The effect of the intervention was conditional on receipt of public benefits for three mental health outcomes: interpersonal relationships ( $p=.025$ ); social role performance ( $p=.021$ ), and overall mental health functioning ( $p=.028$ ). Additionally, a significantly greater proportion of participants were employed at the end of the study ( $p=0.012$ ). Further research is needed to evaluate the efficacy of feedback interventions in VR settings.* **Keywords:** employment outcomes, feedback, group counseling, progress monitoring, public benefits, vocational rehabilitation counseling

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State and federal agencies of vocational rehabilitation (VR) have a well-developed progress monitoring system in the form of program status indicators, such as status codes. Several changes to these codes have been made in recent years (RSA, 2013). Nonetheless, codes that have been historically used include: 02 – applicant; 10 – found eligible/development of IPE; 12 – IPE completed; 16 – physical and mental restoration; 22 – in employment; and 26 – successfully rehabilitated, case closed (Fabian & MacDonald-Wilson, 2005). Although some state VR agencies have moved away from relying upon these codes, codes are still useful for managing large data sets, tracking fiscal expenditures, informing policy, and assisting the VR counselor in monitoring individual cases.

Rather than solely focusing on outcomes, case status indicators denote a specific kind of progress during the course of service. Nonetheless, the VR system does not monitor other aspects of rehabilitation counseling which may be important to progress and outcomes. To this end, VR agencies have no formal mechanism for monitoring the quality of the working alliance. In addition, there is no formalized monitoring of the client's mental health, such as level of symptom distress, ability to fulfill social roles and quality of interpersonal relationships. Nevertheless, such variables are considered important correlates in obtaining and maintaining employment for individuals with and without disabili-

ties (Cook & Razzano, 2000; Hoffmann, Kupper, Zbinden, 2003; Lambert, Kahler, Harmon, Burlingame, & Shimokawa, 2013; Rollins, Bond, Jones, Kukla, & Collins, 2011).

Although the VR system does not monitor these other important areas of counseling, providing general information about counseling progress has been offered for some time in medical and mental health settings. However, providing counselors and clients with formal standardized feedback about the client's specific response to treatment is a more recent trend (Shimokawa, Lambert & Smart, 2010). Unlike traditional approaches that focus on treatment outcomes utilizing aggregated scores, formal monitoring of client-specific progress, otherwise known as patient-focused research, utilizes a methodology in which the client's progress is monitored in clinical settings throughout treatment and therapists are warned if the client is predicted to be a treatment failure. This approach has been found particularly helpful in decreasing the deterioration rates of clients identified as not responding to therapeutic interventions (Hawkins, Lambert, Vermeersch, Slade, & Tuttle, 2004).

While progress monitoring has been utilized and found positively related to client outcomes in other counseling settings (Hawkins, et al., 2004; Lambert, et al., 2001a; 2002a; Shimokawa, Lambert & Smart, 2010; Whipple, et al., 2003), other than federal rehabilitation agency status codes, progress monitoring has not, to

our knowledge, been utilized in VR. Furthermore, in an extensive review of the literature, no empirical studies were found on the use of progress monitoring in the VR system. Thus, the primary objective of this study was to examine the impact of providing progress feedback in the context of group counseling on the employment, symptom distress, interpersonal relationships, social role functioning, and overall mental health functioning of individuals with disabilities receiving services at a VR agency.

To this end, participants attended a group counseling program at any one of five VR offices. Thus, there were five counseling groups. Within each counseling group, study participants were divided into one of two conditions: the treatment -- feedback plus group counseling (Fb) condition, or the treatment-as-usual (TAU) condition with the provision of group counseling only. The designation of TAU thus signified that participants in both conditions received the group counseling, whereas only the participants in the Fb condition and associated counselors received the progress monitoring feedback. This study addressed the following research questions:

1. When compared to participants in the TAU condition, will participants in the Fb condition experience a significant decrease in symptom distress (SD), improved interpersonal relationships (IR), social role performance (SR) and overall mental health (MHF)?
2. Will demographic Fb condition subgroups (age, gender, ethnicity, disability category, emotional health functioning, work status, socioeconomic status, receiving social security benefits, receiving subsistence benefits) benefit from the Fb provision more than others?
3. Will those in the Fb condition become employed during the group counseling program at a greater rate than those in the TAU condition?

## Method

### Research Design

We conducted a repeated measures randomized control trial of the Fb as compared to the TAU over a 10-week period. Prior to randomization, a bucket procedure was used to match participants within each site based on primary disability type (physical, cognitive, and psychiatric) and current distress level as measured with the Outcome Questionnaire-45 (OQ-45, Lambert, Kahler, Harmon, Burlingame, & Shimokawa, 2013) at baseline. Participants were then randomized into the Fb or TAU condition using the same bucket procedure. Prior to enrollment, Internal Review Board approval was obtained.

### Participants and Group Facilitators

*Participants.* Participants were informed that the purpose of the study was to explore the impact of providing group counseling with feedback on client progress in a VR setting. They were informed that they would be randomly placed in one of two study conditions (e.g. either the Fb or TAU). Participants were fully informed about the nature of the TAU condition and, in the event feedback was found to improve outcomes, participants in the TAU condition would be offered the feedback treatment at the end of the study.

Participants were recruited from each group counselor's caseload and were thus associated with one of five state VR offices in the intermountain region of the United States. Inclusion criteria included participants who were: at least 18 years of age; receiving VR services; and able to read, write, comprehend and speak English sufficiently to complete self-report questionnaires and communicate without difficulty. Additional criteria included the agreement of participants to complete a paper-pencil questionnaire on a weekly basis, were able to interact with others appropriately; able to attend 80% of the group intervention meetings; possessed the cognitive capacity to benefit from a cognitive-behavioral approach; and were mentally stable and able to benefit from peer feedback. Participants who had serious emotional dysregulation issues (e.g. angry outbursts, verbal, physical aggression) were excluded from this study.

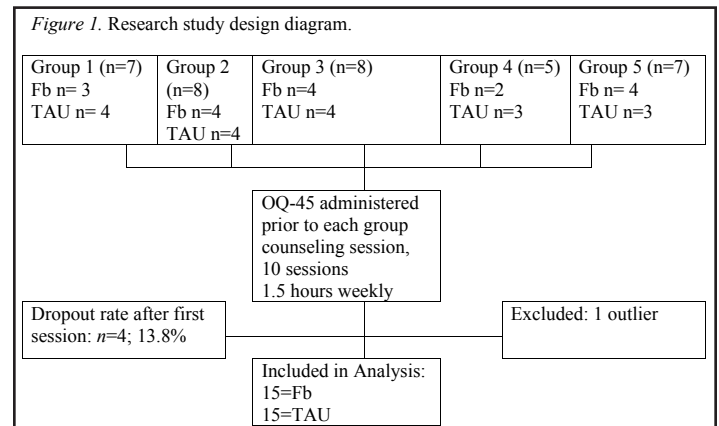
Originally, 44 individuals were enrolled into this study. However, prior to the commencement of the group counseling program, 9 enrollees declined participation due to scheduling, transportation, or other issues. Thus, at the start of the group counseling program, each separate group consisted of 5 to 8 members, for a total of 35 participants (drop-out rate after first session: 13.8%). Figure 1 illustrates group membership, data collection, and data analysis.

*Group Facilitators.* Ten masters-prepared rehabilitation counselors acted as group facilitators in the present study. Because there were five counseling groups, each group was conducted by a facilitator and a co-facilitator. Facilitators were VR counselors employed fulltime across five offices within a VR state agency. Thus, facilitators conducted group counseling sessions at the same office in which both facilitators were employed. It was necessary to utilize facilitators at each of the participating offices, rather than using one facilitator for all five groups, as the agency felt that having one group counselor recruit and run five groups would be impractical. In addition, the researchers of this study wished to minimize any potential threats to internal validity that might ensue if services were provided by two different counselors (e.g. the VR counselor and the group facilitator).

### Instruments

The Outcome Questionnaire-45 was used as a measure of both progress and outcome in this study (OQ-45; Lambert, Kahler, Harmon, Burlingame, & Shimokawa, 2013). It consists

Figure 1. Research study design diagram.



of 45 items utilizing a 5-point scale (0=never, 1=rarely, 2=sometimes, 3=frequently, 4=almost always). In addition to the symptom distress (SD), interpersonal relationships (IR), and social role performance (SR) subscale scores, the OQ-45 yields a total score that reflects mental health functioning (MFT, overall emotional wellbeing). Possible subscale score ranges are as follows: SD: 0-100; IR: 0-44; and SR: 0-36. Possible total scores range from 0-180. Higher scores indicate greater distress and/or frequency of symptoms and problems.

This instrument has empirically demonstrated strong construct validity. For example, Beckstead, et al., (2003) compared the OQ-45 to four other instruments (Symptom Checklist-90-Revised, Social Adjustment Rating Scale-Self Report/and other Report, Inventory of Interpersonal Problems-Short Form, Quality of Life Inventory). Three of the four measures agreed with the OQ-45's criteria for functional/dysfunctional 85% of the time at pretreatment. At posttreatment, agreement between the OQ-45 and the other instruments was 82%.

In addition, a minimum of three measures coincided with the OQ-45 criteria for clinically meaningful change. For example, Lambert, et al., (1996) analyzed clinical and normative data to assess this meaningful change and obtained cutoff scores for clinical significance and reliable change following the recommendations of Jacobson and Truax (1991). Lambert et al. (1996) determined 14 points to be the number which determined a client's total score must increase or decrease in order to show reliable change. Thus, clients whose scores drop at least 14 points are considered "improved," whereas those whose scores increase by a minimum of 14 points are considered "deteriorated." Likewise, Lambert et al. (1996) determined a score of 63 as the cutoff for being in the functional/dysfunctional range. Therefore, scores of 64 and above are in the dysfunctional range whereas scores of 63 and below reflect functional status. If clients change reliability and move from the dysfunctional range into the functional range, they are considered to have made clinically significant change. (i.e. "recovered").

The OQ-45 has an internal consistency of 0.93, a 3-week test-retest reliability of .84 (Lambert et al., 2013), and a concurrent validity of positive correlations with the Symptom Checklist 90-Revised ( $r = .78$ ), Beck Depression Inventory ( $r = .80$ ), State-Trait Anxiety Inventory (State Anxiety,  $r = .64$ , Trait Anxiety,  $r = .80$ ), Inventory of Interpersonal Problems ( $r = .53$ ) and Social Adjustment Scale ( $r = .65$ ). Norms for the OQ-45 were developed utilizing data collected nationally (Lambert et al., 2013; Umphress, Lambert, Smart, Barlow, & Clouse, 1997).

Vermeersch, Lambert, and Burlingame (2000) evaluated the sensitivity to change of each item, each subscale score, and total score of the OQ-45. Using patient data from multiple treatment settings, Vermeersch et al. (2000) contrasted changes over time of clients with treatment and those without treatment and found the total score and each subscale to be significantly sensitive to change over time.

In addition to receiving feedback based upon client responses to the OQ-45, counselors were provided with feedback based upon client responses to the Assessment for Signal Clients Questionnaire (ASC, Lambert et al., 2007). The ASC is designed as part of the progress monitoring feedback, and is not considered

an outcome questionnaire. Thus, it is inappropriate to utilize the ASC for hypothesis testing (M. J. Lambert, personal communication, August 10, 2016).

In this study, the ASC was administered at the end of session two. The ASC gives feedback about the following four constructs: problems with therapeutic alliance, motivation toward treatment, social supports, and stressful life events. A five-point scale from 1 to 5 (strongly disagree to strongly agree), is used to measure each construct with higher scores reflecting more positive results (e.g. stronger alliance, better social support, fewer negative life events). A score for each construct is obtained by summing the responses in each category (Lambert et al., 2007). The ASC does not include a total score. Each subscale includes 9 or 11 items according to the construct (e.g. therapeutic alliance and social support, 11 items each; motivation and stressful life events, 9 items each).

Scores range from 11 to 55 for the therapeutic alliance and social support subscales and 9 to 45 for the motivation and stressful life events. For example, in the therapeutic alliance subscale a score at or below 42 indicates the need for the counselor to actively address alliance issues (Lambert, et al., 2007). Although the ASC is typically given only to clients at risk for poor outcomes, all participants in this study were asked to complete the ASC on a one time basis. Given the small sample size of this study, administering the ASC to only not-on-track clients could not yield anything in the way of statistically significant results. In addition, the information provided by the ASC could assist group counselors in providing more meaningful services to group participants.

According to Kimball (2010), the internal consistency coefficients (Cronbach's alpha) for each ASC subscale are: Therapeutic Alliance (.87); Motivation toward Treatment (.81); Social Support (.88); and Life Events (.81) (as quoted in White, Lambert, Bailey, McLaughlin, & Ogles, 2014). Similarly, Probst, Lambert, Loew, Dahlbender, & Tritt (in press), translated the ASC into German and found similar Cronbach Alpha coefficients for each of the subscales (Therapeutic Alliance: .89; Motivation toward Treatment: 0.78; Social Support 0.76; and Life Events: 0.71).

### Procedures

As part of the intake process, the researcher conducted a face-to-face interview with each participant and asked the following questions: (a) what is your employment goal and what do you hope to accomplish during the 10-week group counseling intervention?; (b) what economic status best describes your living situation (lower class, lower middle class, middle class, upper middle class, upper class)?; (c) what is your current work status (working part or fulltime, volunteering, training/going to school)?; (d) if receiving benefits, what types of benefits are you receiving (social security, subsidized housing, food stamps, etc.)?; and (e) other demographic information (age, gender, ethnicity).

At the end of the study, each participant in the TAU condition was given a copy his/her client progress graphs. In the feedback condition, each participant received his/her progress graphs on a weekly basis, with additional copies provided at the end of the study upon participant request. The researcher then interviewed participants by phone ( $n=23$ ) and asked them to rate the accept-



ability and helpfulness of the feedback graphs. Participants in the TAU group were asked to rate how acceptable and helpful the graphs might have been if they had received them during the counseling program. Participants in the feedback condition were asked to rate the acceptability and helpfulness of the progress graphs that they received during the counseling program. As a fidelity check, participants in the feedback condition were also asked the number of graphs they viewed during the group counseling study. Participants in both conditions were asked to rate the extent of progress made toward an employment goal during the counseling program. Finally, each participant was reminded of the group counseling goal he/she set during the first interview prior to the counseling program and was then asked to rate the amount of progress he/she made toward his/her counseling goal.

In addition to participants rating the progress graphs, counselors were likewise asked to rate, on a 1 to 10 rating scale, the acceptability and helpfulness of the clinician feedback reports received each week during the counseling program. While counselors were encouraged to utilize the feedback provided to better serve client's needs, the way in which facilitators used the feedback was not monitored as part of this study. However, counselors were asked each week via e-mail, "*Over the past week, how many feedback reports did you review?*" Counselors in this study indicated viewing clinician progress reports every week 90% to 100% of the time. Similarly, after each session group facilitators rated how closely they followed the manualized group session plan (1=Didn't follow plan to 10=Followed plan completely). The average counselor rating was 8.03 (SD 1.35) across all counseling groups.

Counselors participated in a 15 week training on the provision of group counseling prior to the commencement of this study. This training explored group dynamics, process, stages and phases of group counseling. Furthermore, a variety of counseling skills were demonstrated and counselors practiced these skills in smaller groups. In addition, counselors received a 1.5 hour training that introduced the OQ-45 domains, procedures for the current study, and how to utilize the progress monitoring clinician feedback reports.

#### **Data Collection**

The OQ-45 was administered on a weekly basis during the 10-week counseling program to all participants. Prior to the first counseling session, participants in both conditions were administered the paper and pencil OQ-45 as part of the informed consent and initial interview process. Within one to three days after administration, the researcher entered OQ-45 responses into the OQ Analyst, a HIPPA compliant web based software system that scores questionnaire responses and generates counselor feedback reports and client progress graphs (OQ Measures, 2012).

Feedback graphs and progress reports were given to progress feedback participants and their counselors prior to the next session. For those in the Fb group, client progress graphs were either e-mailed via a secure, encrypted web based e-mail service, or mailed via US postal service. In addition, clinician feedback reports about the progress of participants in the feedback condi-

tion were delivered via secure, encrypted e-mail to specified group counselors.

#### **Feedback Reports**

For purposes of this study, the OQ Analyst software generated feedback based on client responses to questions from two different questionnaires: The OQ-45 (Lambert et al., 2013) and ASC (Lambert et al., 2007).

Feedback reports based on OQ-45 responses to counselors include a progress graph showing the client's progress to date, a brief written message based on the client's progress, and a visual color alert (white, green, yellow, red) corresponding to the client's current functioning/progress. A white alert indicates that the client is functioning in the normal range, whereas a green alert means that the client is making expected progress. Conversely, a yellow alert indicates some chance of negative outcome, and a red alert indicates a high chance of negative outcome.

In addition to the graph, the written message, and the color alert indicator, feedback to the counselor includes the client's most recent responses on critical OQ-45 items, a one-word descriptor indicating the significance of changes in the client's total score over the course of treatment, current level of distress, and a comparison of client subscale scores to score norms. To this end, the critical items referenced above include thoughts of suicide, alcohol use habits, the criticism of others about one's alcohol use, the impact of alcohol/drug use upon school/work functioning, and the ability to manage anger at work/school without resorting to violence. Similarly, therapist feedback includes a one-word descriptor regarding the significance of client score changes (e.g. recovery, reliably improved, no reliable change, or reliably worse/deteriorated). Finally, the client's current distress level is indicated as low, moderate, moderately high, or high.

Feedback reports to clients are similar to that of counselor feedback. For example, client feedback reports include a graph of progress to date. However, unlike the written messages provided to counselors, clients receive a written narrative that includes a mix of positive and negative feedback, with particular care taken to avoid any messages that could be perceived as detrimental to client motivation or self-esteem. A progress report was sent on a weekly basis to clients in the feedback condition.

A second feedback report was generated based upon client responses to the ASC. ASC results were made available to counselors whose clients were in the feedback condition. The feedback sheet given to each Fb condition participant's group counselor provided participant responses to critical items in each of the following areas: therapeutic alliance, motivation toward treatment, social support, and life events. For client responses considered problematic, a color code of red or yellow was provided next to the problem area. In addition, the OQ Analyst software provided intervention suggestions.

#### **Data Analysis**

Prior to statistical analyses, individual groups were compared to determine if there were any differences between them, which were then controlled for in the analyses. To address research question 1, linear mixed-effects models were used to model OQ-

45 subscale outcomes (i.e. SD, IR, SR, and MHF) over time as a function of group membership. The independent variables included time, condition, and site. A term for non-linear change over time was also included. The effect of the intervention would be detected by a significant time by group interaction in the models. Both random intercepts and slopes for time were specified in each model. Since site only had five levels, it was represented in the models as a set of fixed effect dummy variables. Additionally, the relationship between random intercepts (individual pretest performance) and random slopes (individual change over time) were explored in these models.

To address research question 2, a series of similar mixed-effects models were run that additionally included three-way interactions between time, condition, and the following independent variables: age; gender; ethnicity; number of diagnoses; presence psychiatric, physical, cognitive disability; employment at baseline (yes/no); perceived economic status (low versus middle); subsistence benefits (housing, food stamps, utilities); SSA benefits; any benefits (yes/no); and benefits count. These three-way interactions were tested one at a time and dropped from the models if they were not statistically significant.

To address change in employment status, the McNemar test for correlated proportions was used to compare the proportion employed at baseline to those employed at the end of the study. This test was conducted overall and then separately for each condition.

Independent samples *t*-tests were used to analyze the 1 to 10 scale ratings that participants gave about progress toward employment and group counseling goals and helpfulness and acceptability of client feedback graphs.

### Results

Descriptive statistics for participant demographics were stratified by condition and are presented in Table 1. Comparisons showed no differences between the conditions. In addition, pre- and post-treatment OQ-45 subscale and total scores were compared and no differences were found.

#### Research Question 1

The SD and IR scores of participants showed no significant differences by condition and no significant interaction between time and condition. In contrast, the analysis for SR revealed a main effect for time ( $p=0.029$ ) for both conditions. The slope for time was  $-.40$ , indicating that, as sessions progressed, SR scores of participants in both conditions decreased by almost a half a point per session. Over the course of the study, SR scores changed by 5 points, representing a 14% change in the scores of this subscale.

Results for MHF also showed a statistically significant main effect for time only ( $p=0.046$ ). Specifically, the slope was  $-1.40$ , representing an approximate 1.5 point decrease per session and a 14 point decrease (reliable change) over 10 sessions. This represents an 8% decrease in MHF scores for participants in both conditions over the course of the study. These findings suggest that group participant SR and MHF scores improved over the course of receiving group therapy but that these changes could not

be attributed to progress feedback and the use of clinical support tools.

#### Research Question 2

When IR subscale scores were the outcome, a significant 3-way interaction was found between time, condition, and social security benefits ( $p=.025$ ). In the treatment group, the IR scores of participants not receiving social security benefits demonstrated greater reductions with a 9-point decrease between times 1 and 10. The IR scores of participants receiving social security benefits evidenced a steadier 11-point decrease over time. On the other hand, the IR scores of participants receiving social security benefits in the TAU condition reflected a 6-point decrease in interpersonal

Variable	Fb (n=15)		TAU (n=15)		$\chi^2$ or <i>t</i>
Age (years)	39.13(SD=12.82)		41.67(SD=14.55)		$t(28)=-5.08$ ; $p=.617$
Gender					
Male	n=7		n=7		
Female	n=8		n=8		
Race:	%	n=	%	n=	$\chi^2(3)=2.37, p=.50$
Caucasian	80.0	12	86.7	13	
Part Native American	13.3	2	6.7	1	
Hispanic or Latino	6.7	1	6.7	1	
Productive Activity Status:					$\chi^2(1)=.24, p=.63$
Employed (part or full time)	20.0	3	13.3	2	
Volunteer	26.7	4	26.7	4	
Training/School	26.7	4	20.0	3	
Disability Category:					$\chi^2(4)=3.73, p=.44$
Psychiatric	40.0	6	60.0	9	
Physical	6.7	1	13.3	2	
Cognitive	6.7	1	0	0	
Psychiatric-Physical	20.0	3	20.0	3	
Psychiatric-Cognitive	26.7	4	6.7	1	
Number of Diagnoses:					$\chi^2(3)=3.43, p=.33$
One	20.0	3	26.7	4	
Two	40.0	6	53.3	8	
Three or more	40.0	6	20	3	
Diagnoses Kind:					$\chi^2(1)=1.03, p=.31$
Mood Disorder	46.7	7	53.3	8	
Anxiety Disorder	60.0	9	53.3	8	
Attention Deficit	20.0	3	20.0	3	
Learning Disability	20.0	3	0	0	
Substance Related	13.3	2	13.3	2	
Mental Health Other	13.3	2	26.7	4	
Musculoskeletal	26.7	4	20.0	3	
Medical Other	26.7	4	20.0	3	
Living Arrangement:					$\chi^2(7)=3.2, p=.87$
Parents with or without siblings	60.0	9	60.0	9	
Spouse/Significant other	6.7	1	6.7	1	
Spouse and dependent children	13.3	2	6.7	1	
Roommates	13.3	2	13.3	2	
Live by self	6.7	1	13.3	2	
Perceived Economic Status:					$\chi^2(3)=3.96, p=.26$
Lower	60.0	9	33.3	5	
Lower-Middle	6.7	1	20.0	3	
Middle	26.7	4	46.7	7	
Upper-Middle	6.7	1	0	0	
Number of Public Benefits:					$\chi^2(1)=.68, p=.41$
None	46.7	7	40.0	6	
One	26.7	4	20.0	3	
Two	13.3	2	26.7	4	
Three	0	0	6.7	1	
Four	13.3	2	6.7	1	
Benefits by Type:					
Social Security Benefits	20.0	3	33.3	5	$\chi^2(1)=.68, p=.41$
Medicaid/Medicare	13.3	2	26.7	4	$\chi^2(1)=.83, p=.36$
Subsidized Housing	6.7	1	6.7	1	
Food Stamps	26.7	4	40.0	6	$\chi^2(1)=.60, p=.44$
Utility Bill Assistance	6.7	1	13.3	2	$\chi^2(1)=.37, p=.54$

problems whereas treatment-as-usual condition participants not receiving social security benefits plateaued between times 1 and 10.

The sharp decrease between time 10 and 11 in the treatment-as-usual condition graph with no benefits was not included in this interpretation as this was based on the scores of only one participant. In addition, the sharp decrease of scores between times 6 to 9 of the TAU condition with social security benefits was not included in this interpretation as these changes reflected the scores of only one participant.

A statistically significant 3-way interaction between subsistence benefits with SR ( $p=.021$ ) and with MHF ( $p=.028$ ) was found. In the treatment condition, SR scores of participants receiving subsistence benefits (e.g. food stamps, utility bill assistance, and temporary assistance to needy families) demonstrated a rapid overall decrease of 6 points from times 1 to 6, whereas the SR scores of participants not receiving subsistence benefits showed a slight overall increase of 3 points from times 1 to 9. On the other hand, in the TAU condition, the SR scores of participants with subsistence benefits showed notable fluctuations in social role functioning and a slight 3-point increase in scores between times 1 and 7. The SR scores of TAU condition participants without subsistence benefits also demonstrated fluctuations in scores, but with an overall decrease of approximately 9 points in problems with social roles over time. Taken as a whole, it appears that the most consistent and stable decreases in problems with social role functioning are for those participants in the Fb condition who have subsistence benefits.

The steep decrease between times 9 and 11 for the no subsistence benefits (both Fb and TAU conditions) were not included in this interpretation as this was based on only one participant score per graph. In addition, the steep decrease between times 6 to 9 were not included in this interpretation as these changes were reflective of only one participant's scores.

MHF scores of participants receiving benefits in the treatment condition, demonstrated a consistent 40-point decrease between times 1 and 6, whereas the MHF scores of participants not receiving subsistence benefits in the treatment condition evidenced greater fluctuations with no overall change from time 1 to time 7. On the other hand, in the TAU condition, the MHF scores of participants with and without subsistence benefits evidenced a 10-point decrease.

The steep decrease between time 9 and 11 in the no subsistence benefits (both TAU and Fb conditions) was not included in this interpretation as this was based on only one participant's scores. In addition, the sharp decrease between times 6 to 9 in the TAU condition with subsistence benefits was not included in this interpretation as these changes were reflective of one participant's scores.

Levels of baseline OQ-45 subscale scores and their change over time were not significantly correlated.

### Research Question 3

Employment rates increased significantly over time for the entire sample ( $p = 0.012$ ), increasing from 17% to 50%. However, when split by condition, these proportions were not statisti-

cally significantly different (from 20% to 53% for Fb; and from 13% to 40% for TAU).

### Post Intervention Employment Ratings

The average rating for perceived progress toward employment goal was 5.54 ( $SD=3.26$ ) for the Fb condition and 4.42 ( $SD=3.18$ ) for the TAU. Participant ratings for perceived employment progress made was significant by condition,  $t=2.77$ ,  $p=.006$ , meaning that participants in the Fb condition perceived employment progress as significantly greater than participants in the TAU condition.

### Discussion

The current study tested the effects of providing progress feedback to a group of VR participants involved in group counseling compared to VR participants involved in group counseling, but not receiving feedback. The OQ-45 was used to examine the outcomes of symptom distress, problems with interpersonal relationships, problems with social roles, and overall mental health functioning. Participants completed the OQ-45 prior to each session. Based on participant responses, progress graphs were generated and provided to each participant assigned to the feedback condition and his/her group counselors. In addition, employment outcomes were measured and used to compare TAU clients' employment with that of clients in the treatment condition. On average, participants receiving feedback on their employment goal rated their progress significantly higher than those not receiving feedback. According to some researchers (Carver & Scheier, 1990; Hsee & Abelson, 1991), interventions that provide information about progress may alter the direction of the receiver's attention. By implication then, it seems plausible that participants in the feedback condition would see themselves as having made greater progress.

Although this study's employment outcomes were significant for both conditions, it must be remembered that such outcomes occurred in the context of a group counseling program. To this end, group counseling has been found efficacious in the cognitive, behavioral, and psychosocial outcomes of individuals with a variety of physical, mental health, and other disabling conditions (Burlingame, MacKenzie, & Strauss, 2004; Ownsworth, Fleming, Shum, Kuipers, & Strong, 2008; Ownsworth, McFarland, & Young, 2000; Whitehouse, 1994). Apparently, the effects of feedback were not strong enough to improve client mental health functioning, beyond the effects of the group therapy intervention.

The group counseling program in this study heavily emphasized specific skills important to workplace success (e.g. giving and receiving feedback, active listening, managing disabilities in the workplace, etc.). During group sessions, participants were given opportunities to role play and apply skills to various workplace scenarios. Given that group work is a natural forum for interpersonal feedback and vicarious learning (Davies, Burlingame, Johnson, Gleave, & Barlow, 2008; Rivera & Darke, 2012), it makes sense that participants in this study would demonstrate a significant overall decrease in problems with social role performance ( $p=.029$ ).



In addition to facilitating better outcomes in global and social functioning, psychoeducation groups have been found efficacious in addressing symptoms of distress and promoting quality of life (Stepakoff, et al., 2006). In the current study, participants evidenced a significant decrease in problems with mental health functioning. However, unlike the findings of Stepakoff and colleagues (2006), the current study did not find a significant decrease in symptom distress. Issues with session attendance might partially explain this lack of significance. For example, the overall average attendance for both conditions was 5.63. It may be that participants need to attend a greater number of group sessions and/or attend for a longer period to demonstrate a significant decrease in symptom distress.

In speaking with participants and counselors, the most commonly cited reason for not attending group was that the participant found employment and was no longer available during group time. Since 9 participants became employed during the program, it stands to reason that attendance would be affected accordingly. Other common reasons for nonattendance included being out of town for extended periods, and feeling discouraged because of missing group sessions. Thus, some caution must be exercised when interpreting low group counseling attendance in the current study, as nonattendance may reflect a positive step for certain participants.

In addition to employment outcomes, study analysis revealed three statistically significant three-way interactions. All of these interactions involved the receipt of subsistence and/or social security benefits. Since this is the first time that the OQ-45 has been used in a VR setting, this finding represents a departure from previous OQ-45 settings. Thus, although this may not be an important demographic variable in mental health or health care settings, receipt of benefits may be an important variable in a VR setting. It also must be remembered that the participants of previous OQ-45 studies were mostly higher functioning college students without the presence of other disabilities, such as physical, intellectual, or cognitive disabilities.

The first of the significant three-way interactions found in this study involved IR as the dependent variable with an interaction between time, condition and social security benefits. Although problems with interpersonal relationships decreased for treatment condition participants with and without benefits, participants in the treatment condition with benefits showed the greatest decrease in interpersonal relationship problems, followed by participants in the treatment condition without benefits. In addition, participants in the TAU condition with benefits evidenced fewer problems with interpersonal relationships over time. However, the IR scores of participants with no social security benefits in the TAU condition evidenced little change. While social security benefits in general appeared to augment the interpersonal progress of participants over time in the group counseling program, the greatest interpersonal gains occurred for participants receiving social security benefits in the treatment condition.

These results might be best understood by appreciating the processes associated with task performance. Kluger and DeNisi (1996) assert that task performance is mediated by three hierarchical levels of linked processes (meta-task, task-motivation, and

task-learning). Kluger & DeNisi (1996) posit that, when performing a task, individuals typically direct their attention to the middle of the hierarchy, that is, toward the focal task. These researchers add that feedback interventions “have the capacity to alter the locus of attention” (p. 262), thus potentially triggering engagement with higher order goals. With reference to the current study then, it may be that the provision of feedback assisted individuals who had social security benefits in shifting from focal tasks to higher level processes, such as those involved with pursuing more satisfying interpersonal relationships. This would also explain why the IR scores of individuals in the TAU group without benefits evidenced little change.

The second three-way interaction involved subsistence benefits (e.g. food stamps, utility bill assistance, and temporary assistance for needy families) over time with SR as the dependent variable. Participants receiving subsistence benefits in the treatment condition by far evidenced the greatest gains in social role performance, followed by participants not receiving benefits in the TAU condition. Conversely, participants in the treatment condition with no benefits showed a slight increase in problems with social role performance, as did participants receiving subsistence benefits in the TAU condition. Thus, in order for feedback to confer the greatest benefit, it may be important to consider the extent to which the basic needs (food, shelter, utilities, etc.) of feedback recipient are met. It likewise appears that the receipt of subsistence benefits without progress monitoring could equally create problems with social role performance, as this suggests a lack of support and guidance in navigating productive activity in the presence of a disability.

It could be argued that group counseling with feedback raised participant awareness about discrepancies in social role performance, and in turn, may have created psychological discomfort. According to Sapyta, Riemer, & Bickman (2005), there are different ways that individuals may choose to reduce their discomfort. Participants in the benefits plus feedback group, by virtue of having additional support (e.g. subsistence benefits), may have been in the best position to respond to this cognitive dissonance with a stronger commitment to resolving social role performance issues. Conversely, participants in the TAU condition may have experienced less cognitive discomfort from the feedback but, without the support of subsistence benefits, may have also had a greater need to resolve social role performance issues (e.g. obtain employment).

The third three-way interaction involved subsistence benefits over time with MHF as the dependent variable. Participants who received subsistence benefits in the Fb group evidenced the most dramatic decrease in problems with mental health functioning. Participants with and without benefits in the TAU group also demonstrated an overall decreasing trend in problems with mental health functioning. However, the mental health functioning scores of participants in the Fb condition without benefits evidenced little, if any substantial change, over time. The progress of the TAU group with and without benefits may be reflective of the group counseling program in general. However, it appears that the forum for the most reliable and dramatic growth is brought about when feedback, benefits, and group counseling are part of the equation.



### Implications for Practice

This research has several implications for VR practice. First, given the significant findings for ratings of employment progress and end of study employment rates, VR counselors in particular and state agencies in general may wish to supplement status indicators with consistent feedback about progress as a routine part of each client-counselor session. It must be noted however, that the use of the OQ-45 would never supplant status indicators because such indicators tap into a very specific type of progress towards employment, while the OQ taps another type of progress in the areas of symptom distress, interpersonal relationships, social role functioning, and overall mental health functioning (e.g. emotional wellbeing).

Similarly, given the significant impact that group counseling made upon participant social role performance and mental health functioning, the field of VR counseling may wish to implement and consistently offer group counseling as a routine service, although this study did not investigate this question.

Furthermore, it is interesting to note the key role that social security and subsistence benefits played in mediating the impact of group and feedback in the areas of interpersonal relationships, social role performance, and overall mental health functioning. Given the consistent progress that feedback condition participants who received social security or subsistence benefits made in this study, it may be beneficial for VR counselors to place greater emphasis on assisting clients in obtaining needed benefits early in the restoration process.

### Limitations

Because the purpose of this study was to evaluate the effect of feedback, the TAU condition acted as a control to the Fb condition. Stated differently, this study was not about group counseling. Thus, relative to the group counseling condition, there was no control group. This particular study design was chosen to accommodate the reality of conducting research in a service provision environment (a state VR agency). Given the strong service focus of this study's research setting, a research project that offered absolutely no benefit to half of all participants (control group) would likely not be approved by the agency. Therefore, offering group counseling to both the feedback and no-feedback condition seemed the best compromise for studying the effects of feedback in a service oriented agency.

In addition, because this study occurred in a field setting and emphasized ecological validity, no attempt was made to limit the types or level of other services that participants received. Thus, it is impossible to separate the impact that other services may have had upon study outcomes. Given the small number of participants, it is also impossible to attribute clinical relevance to the results of this study. In addition, group counselors were aware of which participants were assigned to what condition. Likewise, each participant was apprised of his/her condition assignment (treatment or treatment-as-usual). This may have influenced both participant and counselor behavior.

Attendance was an issue in this particular study. The average attendance was 5.13 sessions in the feedback group and 6.13 sessions in the treatment-as-usual group. It appears that these at-

tendance issues may have affected participant attitudes toward the group. For example, during the end of study interview several participants recommended that attendance to group be mandatory as some groups had as few as three participants attending any given week. Given that the optimal number of participants in a group is 6 to 8, there is a distinct possibility that these attendance issues may have weakened the effectiveness of the group intervention.

### Conclusion

Taken as a whole, the results of this study suggest that feedback with group counseling enhanced the perceptions of employment progress, social role performance, and mental health outcomes of individuals with disabilities receiving services at a VR state agency.

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**Saara Grizzell**, an assistant professor at University of Texas – Rio Grande Valley, has many years' field experience teaching group counseling and facilitating groups in neuro-rehabilitation, psychoeducation, and addictions recovery. In addition, her experience as a counselor in the field of vocational rehabilitation spans decades.

**Julie Smart**, a professor emerita and a former Program Director of the Rehabilitation Counseling Program at Utah State University, has published extensively in both rehabilitation counseling and general counseling journals and is the author of two books entitled, *Disability, Society, and the Individual* (Pro-Ed Publishers); and *Disability across the Developmental Lifespan* (Springer Publishers).

**Michael J. Lambert**, a professor who holds an Endowed Chair in Psychology at Brigham Young University, studies the outcomes of psychotherapy and has edited, authored, or co-authored numerous books, book chapters, and articles on treatment outcomes. He is the co-author of the *Outcome Questionnaire*, a measure of treatment effects.

**Jamison Fargo**, a professor in the Psychology Department at Utah State University, is currently serving as the associate dean for research in the Emma Eccles Jones College of Education and Human Services. His primary research interests focus on preventing and ending homelessness, particularly among veterans.

**Author Note** - - Saara Grizzell, an assistant professor at University of Texas – Rio Grande Valley. Correspondence concerning this article should be addressed to Saara Grizzell, University of Texas – Rio Grande Valley School of Rehabilitation Services and Counseling, 1201 West University Drive, Edinburg, TX 78539. Contact: (956) 665-5107 or saara.grizzell@utrgv.edu

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