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Measuring Cohesion and Self-Disclosure in Psychotherapy Groups for Patients with Advanced Cancer: An Analysis of the Psychometric Properties of the Group Therapy Experience Scale

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Abstract

Objectives: Understanding the group process informs group interventions. However, there is little systematic research on group process variables in psychotherapy groups for patients with cancer.

Methods: We analyzed the psychometric properties of the Group Therapy Experience Scale and evaluated its potential importance in advanced cancer therapy groups.

Results: The GTES demonstrated good internal consistency (coefficient alpha=.84). An exploratory factor analysis with varimax rotation yielded four factors. Although all four models were explored, the 1- and 2-factor models appeared to provide the best fit for the data. The GTES total score was negatively correlated with group size and positively correlated with number of groups attended by participants. Furthermore, the GTES total score was correlated with post-intervention spiritual well-being, benefit finding, post-traumatic growth and quality of life.

Keywords

group cohesion; self-disclosure; cancer; factor analysis; treatment outcome

Group interventions are common in health psychology and behavioral medicine settings. A wide range of interventions have been developed for various types of illnesses, including psychoeducational interventions, support groups delivered by non-professionals, and more traditional psychotherapy approaches such as psychodynamic, existential, and general counseling groups (Himelhoch, Medoff, & Oyeniyi, 2007; Meyer & Mark, 1995). However, little research has focused on identifying specific components of treatment groups that lead

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to clinical improvements. Research that investigates the impact of group process variables can inform these interventions.

Group cohesion, one such process variable, may be understood as the way in which group members work together to meet the participants' emotional needs or a common goal (Carron & Brawley, 2000). Some research (e.g.,Bernard et al., 2008; Burlingame, Fuhriman, & Johnson, 2002) characterizes group cohesion as analogous to the construct of therapeutic alliance in individual psychotherapy, which is widely recognized as essential to the process of change (Horvath & Luborsky, 1993; Weck, Grikscheit, Jakob, Hofling, & Stangier, 2014). Studies have demonstrated the benefits of cohesion in groups targeting individuals with alcohol use disorders (Osilla, Kulesza, & Miranda, 2017), early psychosis (Lecomte, Leclerc, & Wykes, 2017), anxiety disorders (Norton & Kazantzis, 2016), sexual abuse history (Jennings & Deming, 2015), binge-eating disorder (Gallagher et al., 2013), addiction (Ait-Daoud et al., 2006), social phobia (Taube-Schiff, Suvak, Antony, Bieling, & McCabe, 2007), and borderline personality disorder (Marziali, Munroe-Blum, & McCleary, 1997).

Despite studies showing the importance of cohesion in psychotherapy groups, there is limited research addressing this construct in the treatment of individuals diagnosed with cancer. May et al. (2008) studied cancer survivors attending a group-based physical rehabilitation-training program, finding that the relationship between group cohesion and outcome differed significantly by gender. Greater cohesion led to an increase in quality of life and physical functioning for both men and women. However, greater cohesion led to less fatigue in men but not women, whereas women who reported a stronger bond with other members demonstrated lower post-intervention quality of life. Another study (Andersen, Shelby, & Golden-Kreutz, 2007) administered a two-item measure of cohesion to 114 breast cancer patients, finding a significant relationship between group cohesion and satisfaction with the intervention. Patients who reported high levels of cohesion also reported higher levels of post-treatment physical activity and functioning, and had lower levels of post-treatment emotional distress.

Self-disclosure is another commonly studied element in research on group processes, and is considered to be a core component of successful group therapy (Lasky & Riva, 2006). In one study (Mosalanejad, Koolaee, & Behbahani, 2012) of 80 women undergoing treatment for infertility, the group randomly assigned to cognitive behavioral therapy with emotional self-expression experienced a significant reduction in psychological distress compared to the control group, suggesting that emotional self-disclosure may decrease distress in infertile women. The role of self-disclosure has also been studied in groups specifically targeting patients with cancer. In one study of over 90,000 participants communicating in an online cancer support community, Wang, Kraut, and Levine (2015) found that self-disclosure of any kind (negative or positive events, or negative emotions) increased the amount of emotional support received, which in turn, predicted continued participation in the online group.

Although preliminary, these studies suggest a potentially important role for group cohesion and self-disclosure in differentiating individuals who benefit from group-based treatments and those who do not. However, no published research was identified that utilized a

systematic measure of group cohesion or self-disclosure in the context of group psychotherapy for patients with cancer. In an effort to fill this gap in the literature, we analyzed the psychometric properties of the Group Therapy Experience Scale (GTES; Hunter et al., 1996). This scale was developed by combining items from an unpublished group cohesion scale described by Yalom (1985) with six items addressing intimacy and self-disclosure (Taylor & Altman, 1966), and four items relevant to the group experience more generally (e.g., overall satisfaction). The purpose of this paper is to evaluate the psychometric properties of this measure, as well as assess the relative importance of group cohesion and self-disclosure as process variables in group therapy outcomes with advanced cancer patients.

Method

Participants

The current study utilized data from a randomized clinical trial of group psychotherapy for patients with advanced cancer. Participants were recruited between August 2007 and May of 2012 at a major cancer center in an urban location. Research study assistants screened the electronic medical records of patients seen at the outpatient cancer clinics of the hospital to determine study eligibility. Criteria for inclusion were: 1) age 21 years or older; 2) Karnofsky Performance Rating Scale (KPRS; Coscarelli-Schag, Heinrich, & Ganz, 1984; Karnofsky & Buchenal, 1949) score of 60 or greater; 3) Mini-Mental State Exam score (MMSE; Folstein, Folstein, & McHugh, 1975) above 20 if the participant was evaluated face to face or 17 if screened via telephone; 4) able to understand and communicate in English; and 5) confirmed diagnosis of a stage 3 (except breast and prostate cancer) or stage 4 solid tumor cancer. Patients were excluded if they had a severe psychiatric disturbance as determined by the research assistant.

The study sample (N = 125) was mostly female (n = 95; 76.0%) with an average of 58.0 years of age (SD = 10.6, range: 27 to 91) and 16.1 years of education (SD = 2.3, range: 12 to 20). The majority of participants identified as Caucasian (n = 102; 81.6%) and non-Hispanic (n = 110; 88.0%); 35 were African-American (28.0%) and 15 (12.0%) were of other racial/ethnic background. Nearly half of the sample (n = 62; 49.6%) was married and most participants were Catholic (n = 48; 38.4%) or Jewish (n = 31; 24.8%). All participants had advanced cancer. Most (n = 110; 88.0%) had been diagnosed with stage 4 metastatic illness, whereas 13 participants (10.4%) had stage 3 disease (data were missing for two participants). The most common cancer diagnoses were breast (n = 44; 35.2%), followed by colon/rectal (n = 20; 16.0%), lung (n = 20; 16.0%), and pancreatic (n = 19; 15.2%).

Procedures

A total 3291 patients met inclusion criteria and were approached for possible study participation, either in person or through an informational mailing. Of those approached, 2589 (78.7%) declined to participate, often citing limited time, lack of interest, and geographic or scheduling barriers as the reason; 449 individuals (13.6%) were deemed ineligible (e.g., non-English speaking, low MMSE score, etc.) and 253 (7.7%) consented to participate in the study. Groups of eight to ten patients were randomized to one of two group

interventions utilizing block randomization, 132 to meaning-centered group psychotherapy (MCGP; Author, 2015) and 121 to supportive group psychotherapy (SGP; Cain, Cohorn, Quinlan, Latimer, & Schwartz, 1986; Payne, Lundberg, Brennan, & Holland, 1997). Note that although groups began with 8–10 participants, progressive illness and patient deaths throughout the study often led to smaller groups as time went on. Group size ranged from 2 to 10 participants. Roughly half of the sample (n = 125) completed the 8-week intervention study and were included in the present analysis. The sample consisted of 28 different groups, 14 groups of patients who were assigned to MCGP and 14 groups assigned to SGP (the nature and content of these interventions are described in detail elsewhere; Author, 2015). All groups were co-led by two trained facilitators (all of whom had at least a Master's degree in a mental health discipline; e.g., psychology, psychiatry or social work), and met in the same location for 90 minutes per week. All participants completed a battery of questionnaires before the first group session/pre-intervention (T1), immediately after the last group session/post-intervention (T2) and 2 months following the last group session/follow-up (T3).

MCGP.—MCGP is inspired by the works of Dr. Viktor Frankl, an Austrian psychiatrist who lived during the time of the Holocaust, and informed by Dr. Irvin Yalom, an American existential psychiatrist. This brief intervention utilizes didactics and experiential exercises to enhance meaning and purpose in the life of patients with advanced cancer despite their being faced with a terminal illness. The therapy is collaborative in that patients and clinicians strive to, through exploring sources of meaning, facilitate a deeper understanding of the importance of patients' creating, enhancing, and sustaining meaning in life. These sources of meaning, such as attitude, beauty, and humor, can be drawn on during a particularly difficult time, such as when battling a cancer diagnosis, to mitigate the negative feelings created by the event (Author et al., 2010; Author et al., 2012).

SGP.—SGP is designed to provide support and focuses on topics such as how to communicate with your physician and family, how to obtain information about treatment, and how to handle side effects of treatment (Author, 2003). The essential components include reassurance, explanation, guidance, suggestion, encouragement, affecting changes in the patient's environment, and permission for catharsis (Block, 1996). SGP emphasizes Rogerian person-centered concepts such as genuineness, unconditional positive regard, and empathic understanding. The therapy emphasizes maintaining the focus on cancer, supporting patients in the here and now, fostering expression of emotion, discussion of difficult topics, and creating a sense of being understood (Payne et al., 1997).

Measures

Group Therapy Experience Scale (GTES).—The Group Therapy Experience Scale (Hunter et al., 1996) is a 16-item measure of perceived cohesion, self-disclosure, and satisfaction with group therapy. This measure was selected based on its breadth of content, face validity and brevity. The 16 items use a Likert-type scale, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). In addition, participants were asked an open-ended question, "Was there something in the group that helped or hindered you?" that was not analyzed in this study.

The relationship between the GTES and the following variables/measures was analyzed to determine whether group experience impacts sociodemographic variables, physical and psychological symptomatology, spiritual well-being, religiosity, anxiety, depression, quality of life, hopelessness, post-traumatic growth, benefit finding and social support.

Health Status Measure/Socio-Demographic Questionnaire.—Patients reported the extent of their disease, degree of medical co-morbidity, and concomitant therapies. Past and present psychiatric information was also collected for each patient. In addition, significant medical and life events which occurred during the treatment course and follow-up period were recorded. Socio-demographic information (age, gender, ethnicity, education, marital status, religious affiliation, etc.) was elicited using a standardized questionnaire.

Memorial Symptom Assessment Scale- Short Form (MSAS-SF).—The MSAS is a symptom checklist which elicits information about the intensity, frequency, and distress associated with 32 physical and psychological symptoms (Portenoy et al., 1994). Patients are asked to rate their symptoms during the previous week. An abbreviated version of the MSAS which assesses a single domain for each symptom was utilized. The Cronbach alpha coefficients for the MSAS-SF subscales ranged from .76 to .87, and the MSAS-SF subscales showed convergent validity with Functional Assessment of Cancer Therapy (FACT-G) subscales, performance status, and extent of disease. The test-retest correlation coefficients for the MSAS-SF subscales ranged from .86 to .94 (Chang, Hwang, Feuerman, Kasimis, & Thaler, 2000).

FACIT Spiritual Well-Being Scale (SWBS).—The SWBS is a brief self-report measure designed to assess the nature and extent of an individual's spiritual well-being (Brady et al., 1999; Fitchett, Peterman, & Cella, 1996). This measure generates two subscales: one corresponding to faith and a second assessing meaning and peace. The measure has been demonstrated to have strong internal reliability for both the total score as well as each subscale (coefficient alpha = .87 for the total scale, .88 for the faith factor, and .81for the meaning factor).

Intrinsic/Extrinsic Religiosity Scale (IE-12).—The IE-12 is a 12 item self-report measure that assesses intrinsic and extrinsic religiosity (Maltby, 1999). This measure has adequate internal consistency reliability (alpha range = .66 to .75) and has been increasingly used with elderly and medically ill populations (e. g., Nelson, Author, Author, & Galietta, 2002).

Hospital Anxiety and Depression Scale (HADS).—The HADS (Zigmond & Snaith, 1983) is a 14-item self-rated questionnaire, which has been well-tested as a measure of overall psychological distress in cancer populations, with Depression and Anxiety subscales of seven items each. It has demonstrated strong test-retest reliability in samples of elderly patients and cancer patients. Based on a review of the literature of the validity of the HADS, Cronbach's alpha for HADS-Anxiety varied from .68 to .93 (mean .83), and for HADS-Depression from .67 to .90 (mean .82). Correlations between HADS and other commonly used questionnaires were in the range of .49 to .83 (Bjelland, Dahl, Haug, & Neckelmann, 2002).

McGill Quality of Life Questionnaire (MQoL).—The MQoL is a brief self-report instrument designed to assess various domains of psychological, spiritual and physical functioning among terminally ill patients (Cohen, Mount, Strobel, & Bui, 1995). This measure has demonstrated reliability (internal consistency > .70 for the subscales).

The Hopelessness Assessment in Illness (HAI).—The HAI (Author et al., 2011) is an 8-item measure that is targeted for hope and hopelessness in advanced illness. Preliminary results have demonstrated that it has good internal consistency (Cronbach's alpha coefficient = .86) and validity.

The Post-traumatic Growth Inventory (PTGI).—The PTGI is a 21-item instrument that rates perception of positive change, which has been modified to reflect patients' cancer experience as the life stressor (Tedeschi & Calhoun, 1996). Analysis demonstrated good internal consistency (Cronbach's coefficient alpha = .90) and adequate test-retest reliability (r = .71).

The Benefit Finding Scale (BFS).—The BFS is a 17-item measure of perceived benefits adapted from Behr's Positive Contributions Scale (Behr, Murphy, & Summers, 1992) for a breast cancer population (Antoni et al., 2001; Tomich & Helgeson, 2004). It assesses potential benefits that could result from the cancer experience including personal priorities, acceptance, daily activities, family, world views, relationships and purpose in life. Internal consistency is high across studies, ranging from .91 to .95 (Antoni et al., 2001; Tomich & Helgeson, 2004; Urcuyo, Boyers, Carver, & Antoni, 2005).

Duke-UNC Functional Social Support Questionnaire (Duke-UNC).—The Duke-UNC is an 11-item multidimensional measure of perceived social support (Broadhead, Gehlbach, de Gruy, & Kaplan, 1988). This measure has adequate demonstrated levels of internal consistency and test-retest reliability (> .60) as well as significant correlations with other measures of social functioning.

Statistical Analyses

Analysis of the internal validity of the GTES included examination of item response patterns, item-total correlations, and Cronbach's coefficient alpha. Exploratory factor analysis (with varimax rotation) was also utilized to examine the scale's factor structure. The association between group therapy experience (both the total score and each factor of the two-factor model; described below) and demographic and pre-treatment clinical variables were analyzed using Pearson product-moment correlation coefficients. Multiple regression analyses were used to examine whether group therapy experience predicted clinical outcomes after controlling for pre-intervention levels of the dependent variables and potentially relevant covariates. In order to guard against inflated Type 1 error given several dependent variables, we have used $p < .01$ as the threshold for interpreting results as "significant". Any significance levels between .01 and .05 were regarded as "approaching significance".

Results

Psychometric Characteristics of the GCS

Cronbach's coefficient alpha for the GTES indicated good internal consistency for the 16-item scale (α = .84). Only one item (item 8; *I told the group something I had not planned to tell them*) was identified that would increase coefficient alpha (to .86) if removed. An analysis of the endorsement patterns of each of the 16 items demonstrated a positively skewed distribution for virtually all of the items (with the exception of item 8), with the majority of respondents endorsing "agree" or "strongly agree" to the items (or "disagree" or "strongly disagree" for reverse coded items), indicating a high degree of cohesion, self-disclosure, and overall satisfaction with the group.

We used exploratory factor analysis (principal axis) for the 16 GTES variables. Four factors had eigenvalues greater than 1.0, with eigenvalues of 5.42, 1.45, 1.34, and 1.11. In accordance with Kaiser's rule (Kaiser, 1960), the 4-factor model was explored using varimax rotation. However, this rotation revealed that one of the four factors was comprised of only two items (based on rotated loadings > .40) and another was comprised of only three items. When a 3-factor model was extracted, the third factor was still comprised of only two items. Hence, we explored both 1- and 2-factor models in more detail. Both of these models had several variables that did not load on any factor (three items had loadings below .40 in the 1-factor model and two were below .40 in the 2-factor model), although several of these factor loadings approached the .40 threshold (e.g., .39) and were included in the factor interpretation.

In the 2-factor model, the first factor was comprised of ten items (including one that loaded .39), most of which focused primarily on group cohesion and overall satisfaction with the structure and leadership. Items included "*the facilitator seemed well-qualified*", "*I would like the group to continue past the required number of sessions*", and "*the members did not fit well together*" (reverse scored). Coefficient alpha for this subset of items was .85. The second factor was comprised of five items (including one with a loading of .398) that were focused primarily on self-disclosure. Items included "*I intentionally kept my feelings hidden from the group*" (reverse coded), "*I have told the group things that I usually only tell close friends*", and "*I feel uncomfortable talking about my personal issues with the group*" (reverse coded). Coefficient alpha for this subset of items was .64. One item (item 8) did not load on either factor.

The 1-factor model, on the other hand, had 12 items with factor loadings above .40 and 14 items with loadings above .36 (items 8 and 13 did not load on this factor; see Table 1). However, examination of the scree plot appeared to support the selection of a 1-factor model, as the curve "broke" at the second factor. Moreover, the published literature has typically relied on total GTES scores, suggesting a de facto preference for a single factor model. Given the lack of any clear superiority for either the 1- or 2- factor models, we opted to interpret the 2-factor model as well because it included more of the scale items (15 of the 16 items loaded one of the two factors in the 2-factor model versus 12 of 16 items in the 1-factor model). Moreover, we retained item 8 despite the lack of a significant association with

other scale items (as evidenced in the reliability and factor analyses) in order to maintain consistency with the existing literature (which has utilized all 16 items).

Predictors of Group Therapy Experience

The mean GTES total score for this sample was 68.68 (*SD* = 8.98; range: 35 to 85). There was a trend toward significance when comparing GTES total scores between the two treatment arms (MCGP mean = 66.73, *SD* = 7.23; SGP mean = 63.59, *SD* = 8.60), indicating somewhat greater cohesion and self-disclosure in the Meaning-Centered treatment, $t(\text{df} = 123) = 2.22$, $p = .03$. There was also a trend toward significant differences between groups on GTES factor 1 scores (MCGP mean = 42.63, *SD* = 5.38; SGP mean = 40.14, *SD* = 6.32), $t(\text{df} = 123) = 2.38$, $p = .02$, but not factor 2 scores (MCGP mean = 20.40, *SD* = 2.99; SGP mean = 19.72, *SD* = 3.35), $t(\text{df} = 123) = 1.20$, $p = .23$.

Correlations approaching significance were observed between GTES total scores and group size. Specifically, participants in smaller groups at the start of the intervention obtained higher scores on the GTES, $r = -.19$, $p = .03$, indicating that smaller group size may facilitate cohesion and self-disclosure. In addition, there was a positive correlation between GTES total scores and the number of groups attended, $r = .28$, $p = .001$, though the directionality of this association is unclear (i.e., whether greater cohesion and satisfaction led to more frequent attendance, or more frequent attendance resulted in greater satisfaction, self-disclosure and perceived cohesion). Participant age, gender, race/ethnicity, religion, primary cancer diagnosis, disease stage, physical functioning, and past or current psychosocial service use were not significantly related to GTES total score. There were no significant correlations between GTES total and any of the pre-treatment clinical variables measuring depression, hopelessness, anxiety, religiosity, spiritual well-being, benefit finding, post-traumatic growth, quality of life, social support.

Upon examining the data using a 2-factor model, a significant positive correlation was observed between the first factor (group cohesion and satisfaction) and number of groups attended by the participant, $r = .24$, $p = .01$. There was also a significant positive correlation between the second factor (self-disclosure) and the number of groups attended, $r = .27$, $p = .002$, and significant negative correlations with group size at the start of the intervention, $r = -.22$, $p = .01$, and the group average size, $r = -.22$, $p = .01$. There were no significant correlations observed between either of the two factors with any demographic or clinical variables.

Clinical Outcomes associated with Group Cohesion

We used multiple regression analyses to determine whether group experience impacted clinical outcome. In each of these models, baseline value for the outcome variable was included as a covariate, in order to partial out the unique contribution of group experience on outcome. In these analyses, GTES total scores provided a contribution that approached significance to predicting post-intervention spiritual well-being, $b = .12$, $t(123) = 1.96$, $p = .05$, the new possibilities subscale of posttraumatic growth, $b = .16$, $t(103) = 2.17$, $p = .03$, and the existential domain of quality of life, $b = .18$, $t(122) = 2.36$, $p = .02$. Furthermore,

GTES total scores significantly predicted benefit finding, $b = .21$, $t(105) = 3.23$, $p = .002$,. All other analyses yielded non-significant findings.

Discussion

Our study results indicate that the Group Therapy Experience Scale has adequate reliability for the total 16-item scale and showed expected associations with group size and attendance that are consistent with the literature. Although a two-factor model may be useful in some circumstances, the distinctions between the two factors were modest, particularly given that 10 of the 16 items (and 10 of the 14 that loaded on a 1-factor model) loaded on the first factor. Still, these findings- that group cohesion is a multifaceted construct encompassing (at least) two moderately distinct constructs- are indeed novel. While the scale was developed by incorporating two different scales, it is plausible that our analyses could have demonstrated that the different constructs are entirely overlapping. On the contrary, our findings indicate that the two factors are not based entirely on the distinction between these two scales. Nevertheless, further research across a range of settings may help identify unique advantages conferred by the 2-factor model that distinguished cohesion and satisfaction from self-disclosure.

Again, consistent with the literature, results from the correlational analyses indicated that smaller groups led to a more positive group experience than larger groups, and that group members attended more frequently when they perceived a more positive overall group experience. It is possible that group members may be more comfortable sharing when there are only a few others present, and when these few others with whom they feel a deeper connection keep returning to the group. These results, however, may reflect a circularity, as low levels of cohesion or satisfaction may be unsatisfying for members, leading to lower attendance and smaller overall group size. More systematic research, perhaps including a longitudinal design, is needed to disentangle cause and effect from these significant correlations.

Regression analyses indicated that group experience had a positive influence on several clinical outcomes, including spiritual well-being and post-traumatic growth/benefit finding. Of note, these outcomes were primary goals of the group intervention, suggesting that the group aspect of this treatment provided an important contribution to the patient’s overall experience. Other outcomes, however, were not as strongly impacted, as there was no effect of GTES total scores on depression, anxiety or hopelessness. The ability to impact these more serious symptoms may depend on structural aspects of the treatment rather than the group process more generally. Furthermore, it should be noted that the GTES was not originally made or validated with a clinical or medical population, but rather, was validated with counseling graduate students. As a result, the items may be strong when assessing some types of group’s strengths but may not be as sensitive to the more severe types of changes associated with these constructs.

Clinical Implications

These findings are meaningful for group therapists engaged in clinical work with patients with cancer. It is critical for these therapists to recognize cohesion as an important group

process variable that influences patient outcomes and to attend to the factors that facilitate cohesion. In addition, through this research, therapists should be aware of nurturing cohesion through limiting group sizes to a small number of participants, and enabling supports to encourage participant attendance- a challenge when working with this population- either in person or, if necessary, via phone.

Limitations

As with any research, this study is not without its limitations. First, of the large pool of eligible participants, only 253 (7.7%) chose to participate in this study and even fewer, 125, completed the study, creating a unique sample of individuals for which time, effort, and interest were not significant enough barriers to prevent them from participating and completing. As a result, study findings are only generalizable to a subset of individuals who are potentially more liberal and flexible than others, both in regard to their willingness to participate in research and perhaps in their report of outcomes. It should be noted that this low rate of consent and study completion is common when recruiting patients with illnesses such as advanced cancer, particularly for in-person group treatments. The National Cancer Institute (NCI) estimates that less than 5% of adult patients with cancer participate in clinical trials (Go et al., 2005; Lara et al., 2001), and one can argue that recruiting for clinical trials is easier than for psychotherapy trials, as participants often expect a tangible benefit from clinical trials.

Another limitation of our study is that study participants comprise a fairly homogenous group of highly educated, employed, and Caucasian patients, thereby restricting generalizability to other populations. Lastly, although participants verbally reported that they desired to drop from the trial due to reasons such as disease progression, mismatch to preferred treatment, or logistical barriers, formal systematic documentation of the reasons individuals discontinue their participation in the trial was not recorded and therefore impossible to interpret.

Lastly, a major limitation of these analyses on the impact of group cohesion on outcome variables is that we were unable to collect outcome data from those patients who dropped from the study and for whom we would assume that group cohesion might have been lower. Had we been able to obtain this data, we may have had even more robust results.

Conclusion

The GTES appears to be a reasonable measure to use to understand the impact of process variables such as cohesion on group interventions with medically ill patients. Furthermore, the proposed 2-factor model that distinguished cohesion and satisfaction from self-disclosure may be useful in elucidating the more subtle interactions in groups characterized by cohesion. More data on larger samples is needed to fully determine its' potential. Future research on the impact of group cohesion on groups for cancer patients should focus on identifying variables that hinder group cohesion or self-disclosure, as well as those that enhance or foster these aspects of the group process. For example, therapist characteristics and patient clinical profiles are likely important covariates for developing a cohesive and therapeutic group. However, because these data were collected in the context of a larger

randomized controlled trial, we did not collect this data, as it was not the primary focus of the study. Nevertheless, attention to the group experience appears to be an important consideration for group-based interventions among patients with advanced illness.

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Table 1

Group Therapy Experience Scale properties

Item #	Item	Mean (S.D.)	Item-total *r*	Alpha if removed	Factor loading (Single Factor Model)
1	I revealed a great deal about myself in the group	4.25 (.70)	.58	.83	.58
2	I intentionally kept my feelings hidden from the group.	4.32 (.86)	.44	.83	.46
3	The facilitators seem well qualified.	4.58 (.66)	.50	.83	.57
4	I would like the group to continue past the required number of sessions.	3.93 (1.12)	.41	.83	.48
5	The group feels safe to me.	4.46 (.66)	.66	.82	.74
6	Compared to other groups, I imagine that my group works well together.	4.14 (.86)	.63	.82	.69
7	I would like to replace several group members.	4.13 (1.08)	.61	.82	.68
8	I told the group something I had not planned to tell them.	3.04 (1.33)	.17	.86	.17
9	I would pay to be in this group.	3.31 (1.07)	.55	.83	.60
10	When I talk, I usually discuss mundane matters in the group.	4.17 (.73)	.35	.84	.38
11	I dread going to the group.	4.46 (.95)	.37	.84	.42
12	I feel that the group is supportive of me.	4.38 (.77)	.58	.83	.65
13	I feel uncomfortable talking about my personal issues with the group.	4.07 (1.07)	.30	.84	.33
14	The group facilitators are effective in making me feel like talking.	4.28 (.80)	.44	.83	.51
15	The members of this group do not fit well together.	4.21 (.99)	.67	.82	.75
16	I have told the group things that I usually only tell close friends.	3.63 (1.19)	.41	.84	.40