

Psycho-educational group treatment for the severely and persistently mentally ill:

How much leader training is necessary to realize patient improvement?

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Abstract: Psycho-educational (PE) groups have been shown to a particularly effective form of treatment for patients classified as severely and persistently mentally ill—SPMI (e.g., schizophrenia, chronic bipolar disorder, etc.). While evidence-based PE group protocols exist, their effective implementation in daily clinical practice may be challenged by a disturbing trend. Specifically, there is growing evidence that health care professionals-in-training may not be receiving adequate training in group-based treatments in general, and PE group treatment in particular. This is evidenced in a survey of inpatient nurses where the majority indicated that they were not sufficiently knowledgeable or competent to effectively deliver PE groups on their inpatient unit. Since nurses play a critical role in service delivery on inpatient units that house SPMI patients, this finding suggests that effective PE group treatment may be compromised by this training deficit. This study tested three training protocols (self-instructional, intensely trained/workshop, and clinical supervision) to determine the resources needed to effectively train inpatient nurses to competently deliver PE group treatment to a SPMI patient population. The authors concluded that the intense training provided in a workshop yielded the most reliable differences in clinicians' knowledge and skill regarding group psycho-education. Implications for further study are discussed.

Acknowledgements

This project was funded by the Group Psychotherapy Foundation as well as Brigham Young University's Comprehensive Clinic. We are especially grateful for the support provided by Nina Brown, Ed.P, Mary Moller, MS, ARNP, and the College of Family, Home, and Social Science at BYU. Finally, the project is indebted to the raters, students, and professors who devoted their time.

Introduction

The general effectiveness of group therapy is well documented (Burlingame, MacKenzie, & Strauss, 2004; Fuhriman & Burlingame, 1994). Moreover, the contemporary empirical literature is sufficiently mature to establish baseline expectations regarding the specific effectiveness of group protocols for different populations. Effectiveness expectations vary based upon patient population. For instance, effective group protocols for children and adolescents suffering from a variety of psychiatric disorders exist; however, there is insufficient evidence to determine the differential effectiveness of specific group approaches for this population (Hoag & Burlingame, 1997; Shapiro & Sharp, 1982). Fortunately, more empirical evidence is available to determine the differential effectiveness of group protocols for adult populations. In a recent meta-analysis, Burlingame, Fuhriman and Mosier (2003) suggest that cognitive behavioral and interpersonal group protocols for mood and eating disorder populations result in greater patient improvement when compared to patient improvement realized when similar group protocols are applied to other patient populations (e.g., medical conditions, stress-related & neurotic disorders).

Interestingly, group protocols for disorders found within the Severe and Persistent Mentally Ill (SPMI) population (e.g., schizophrenia & chronic bipolar disorders) have one of the longer histories in the group literature (Burlingame et al., 2004). Several models have dominated the group literature for SPMI populations. One approach that has produced the most consistent and reliable effects with SPMI patients is the psycho-educational (PE) group format (Burlingame, Fuhriman & Johnson, 2004). PE group protocols focusing upon skills associated with effective disease management (e.g., social skills, symptom or medication management) have been associated with patient improvement in dozens of studies (Burlingame, et al., 2004). For instance, effective PE group formats exist for individuals suffering from such disorders as schizophrenia (Gallagher, 1995; Merinder, Viuff, Laugesen et al., 1999), bipolar disorder (Colom, Vieta, Reinares, et al., 2003; Rothbaum & Astin, 2000), posttraumatic stress disorder (Lubin, Loris, Burt, & Johnson, 1998), bulimia nervosa (Davis, Olmsted, & Rockert, 1990), and depression (Cuijpers, 1998).

Unsurprisingly, within the last 10 years, the PE group format has become a preferred modality of treatment, particularly for the SPMI population. This has been due to several reasons. The effectiveness of this type of treatment is well established (Brown, 2003) and PE groups tend to be cost-effective. Coyne, Wilson, and Ward (1997) stated that PE, "is a form of group work designed to maximize cost efficiency, but not at the expense of effectiveness (p. 149; Coyne, Wilson, & Ward, 1997). The PE group format and the group format in general used to be considered only adjunct to medication, individual and family therapy. However, the recent rise of the PE group modality has come about because of

its more efficient and cheaper costs. The potential for PE group paints a hopeful picture when one considers that the SPMI will consume approximately \$148 billion annually in the United States (Carey & Carey, 1999). The PE group modality in particular and group in general, if applied broadly could bring about economical and treatment advantages. With these figures in mind, finding, establishing, and providing a cost effective treatment like PE group therapy, especially for the SPMI populations, is essential for the future of mental health care.

The PE group format employs very different goals and processes than those found in the traditional North American psychotherapy group (Burlingame, et al., 2004). More specifically, the typical PE group focuses on developing members' cognitive, affective, or behavior skills through a structured and sequenced set of procedures and exercises within and across group sessions (Burlingame & Ridge, 2004). The unique goals and processes of PE groups call for leader skills and competencies that can be strikingly different from those required of traditional psychotherapy groups (cf. Coyne, et al., 1997). Although there are transferable leadership skills between traditional psychotherapy and PE groups (Rindner, 2000), the two formats are sufficiently distinct to require specialized PE group leader training—the first dimension of effective PE group leadership. Fortunately, material to support this training is available (e.g., Coyne, et al., 1997; Brown, 1998, 2003).

Further complexity is added to describing effective PE group leadership when one considers the variability of foci across PE groups described in the literature. This is evidenced by the diversity of settings

(e.g., inpatient, outpatient, primary care medicine, schools, etc.), populations (e.g., psychiatric, medically ill, normal, etc.), and professions that rely upon the PE group format. In the latter instance, professions that formally endorse PE group range from traditional counseling and psychotherapy associations (e.g., Association of Specialists in Group Work, Coyne, et al., 1997; American Group Psychotherapy Association, Brown, 1998) to primary care medicine (American Nurses Association, ANA, 2000). The diversity of foci across PE groups is illustrated when one considers the cognitive, affective and behavioral skills emphasized in a cancer PE group in a medical setting run by a nurse versus the knowledge and skills emphasized in PE groups for patients diagnosed with an eating disorder run by a social worker in an outpatient clinic! In short, the effective PE group leader must master not only specialized skills associated with PE group treatment (first dimension of effective PE group leadership), but also the content specific to a particular patient population and setting—the second dimension of effective PE group leadership.

In consideration of such findings, an important implement question arises: Who is best equipped to provide PE group treatment? The answer to this question requires evidence that the PE group leader is competent in two domains—general skills & competencies associated with the PE group format and mastery of specific content associated with a specific PE group.

The nursing profession often plays a dominant role in the PE groups offered to SPMI patients found at inpatient psychiatric settings (van Sevelen, Poster, Ryan, & Allen, 1991). Charge nurses on inpatient psychiatric floors are often responsible for leading and/or supervising PE groups on the

inpatient floor (Burlingame, Earnshaw, Hoag, et al., 2002). This nursing role and responsibility has been memorialized in the recent standards of the Society for Education and Research in Psychiatric-Mental Health Nursing (SERPN, 1996). More specifically, group psycho-education is identified in the SERPN standards as a basic training guideline for nurses.

Unfortunately, wide-ranging and troublesome obstacles have been identified that may attenuate the effectiveness of group treatment in general and PE groups in particular. For instance, three recent papers suggest that students in training in North America may be receiving inadequate supervision, training, and experience in small group treatment (Cohen & Garrett, 1995; Fuhriman & Burlingame, 2001; Taylor, Burlingame, Fuhriman, et al., 2001). Cohen and Garrett (1995) stated, “that today’s students have greater opportunities to work with groups but less opportunity to learn the *requisite* skills and knowledge base” (p. 136, italics added). Nicholas and Klein (2000) summed up this disturbing trend in working professionals with the following statement:

“The predominant pedagogy of group therapy in the mental health world today is what we call the “nothing-to-it” theory. Since there is nothing to “it” (doing group therapy), why read about it or get trained and supervised? It is hardly surprising that...so many clinicians themselves seem unable to describe cogently, much less practice [group therapy] skillfully (p. 253).”

This training deficit was evident in general outpatient providers (cf. Taylor et al., 2001), graduate programs designed for future mental health professionals (Fuhriman & Burlingame, 2001; Nicholas & Klein, 2000) and in a survey of nurses working in inpatient facilities. In the latter case, Glotz and colleagues (1994) found that only 52%

of these nurses described themselves as confident in their skills to effectively run a PE group. Of particular note is that this same perception was reported in a survey of nurses (cf. Burlingame, Earnshaw, Hoag, et al., 2002) working in an inpatient psychiatric hospital eight years later! Additional obstacles to conducting effective PE groups identified by the nurses Glotz surveyed included: (a) insufficient knowledge regarding how one conducts small group interventions, (b) a lack of materials/curriculum on the units to support PE groups, and (c) no organized system to implementing PE groups.

To summarize, PE groups have been shown to be particularly effective form of treatment for patients classified as severely and persistently mentally ill—SPMI. The two dimensions of effective PE group leadership include the unique skills and competencies associated with running PE groups—usually acquired through specialized training—and mastery of content uniquely targeted to a particular patient population and setting. Although protocols for training PE group leaders exist, the recent trend in the mental health literature indicates a neglect or diminished emphasis on training new health-care professionals in the group treatment. This training deficit in group treatment may affect nurses who are often called upon to be responsible for PE groups for inpatient SPMI patients. Recent research suggests that the majority of inpatient nurses express little-to-no confidence in managing a PE group on the unit. This study intended to focus on training nurses to conduct PE groups in an inpatient facility comprised of SPMI patients.

Training therapists—A brief overview

Most empirical studies that test the effect of training in the general psychotherapy literature contrast patient outcomes achieved when professionals deliver a treatment versus nonprofessional or para-professionally delivered treatment. Generally, the results from this line of research have been mixed although a meta-analysis conducted by Stein and Lambert (1995) found an advantage for professionals.

One of the few studies that examined different methods of training (Burlingame, et al., 1989) found a direct relationship between the level of training received by therapists and patient outcomes. More specifically, this study tested three procedures for implementing and training therapists in time-limited individual treatment: (a) simply imposing time-limits on a therapist and asking them to conduct treatment with no training; (b) therapist self-instruction where therapists read a time-limited therapy manual and then conducted treatment without any formal training and; (c) intensely trained therapists that went through a workshop and then had their time-limited therapy supervised by peers. In this study, clients of experienced therapists had consistently superior outcomes when compared with the clients of less experienced therapists supporting Stein and Lambert's (1995) conclusions. The study also reported that rates of client improvement paralleled the intensity of the therapists' training, irrespective of therapist experience. Greater improvement on several measures of outcome was demonstrated by clients who had been assigned to therapists receiving more training, suggesting that both experienced and less experienced therapists both benefited from skill training.

Unfortunately, the group psychotherapy literature has lagged far behind the individual literature in its exploration of methods for training group leaders. The group literature has seen far more conceptual than empirical papers (Fuhriman & Burlingame, 2001) leaving us with few empirical guideposts for effective methods of training group leaders; however, exceptions do exist. Burlingame and Barlow (1996) found little difference in outcomes of professional versus non professional group leaders but later reported that these outcomes were achieved by professional and nonprofessional leaders using very different therapeutic processes (Barlow, Burlingame, Harding-Roundy & Behrman, 1997). Other papers have found similar equivalence between professionally and nonprofessionally led groups (cf. Burlingame et al., 2004). Unfortunately, we could not locate a single paper that has contrasted different methods of training group leaders. Given the paucity of well trained group therapists (Fuhriman & Burlingame, 2001; Cohen & Garrett, 1995; Nicholas & Klein, 2000), a test of how one might train effective group leaders in the field seemed timely. The first phase of our research intended to partially replicate the Burlingame, et al., (1989) training investigation focusing on training unit nurses to conduct PE groups for SPMI patients.

Institutional context of study

Addressing the aforementioned obstacles to effective PE group delivery requires an established infrastructure that utilizes and supports group treatment. The study was conducted in a large inpatient psychiatric facility—the Utah State Hospital (USH)—that has developed such an infrastructure (Burlingame, Earnshaw, Hoag, et al., 2002). This infrastructure—

called the Group Competency Program (GCP) — consists of a multi-tiered administrative structure (central, unit & staff administrative representation) that focuses on issues related to quality group programming and the resources needed to effectually implement such. The USH GCP also aspires to the implementation of evidence-based group treatments governed by quality standards and indicators endorsed by regulatory agencies (Health Care Financing Administration: HCFA, Joint Commission on Accreditation of Healthcare Organizations: JCAHO). A recent test of the USH GCP program suggests that it has had small but promising effects on the quality of group treatment SPMI patients receive (cf. Burlingame et al., 2002). This study contributed to this foundation as it addressed specific skill deficits identified in the nursing staff in the delivery of PE groups to SPMI patients.

STUDY 1

Hypotheses

The global question driving this study was: What level of training in PE group treatment is necessary to improve patient outcome? Our earlier work (Burlingame, et al., 1989) found that even minimal training of therapists produced better outcome for patients. Thus, in many respects the hypotheses of this study rest upon our work in training time-limited individual therapists.

1. A nurse's knowledge and skill in conducting a PE group of SMPI inpatients will be directly related to the level of training that s/he receives (dimension 1 of PE group leader competence and dimension 2 of group leader specific competence). Specifically, intensely trained nurses will report higher levels

of knowledge, skill, and competence in running PE groups after they are trained than their less trained counterparts—nurses who receive minimal (self-instructional) training.

2. Expected patient outcomes associated with a specific PE group (knowledge & skill related to PE group content) will be reliably higher in groups led by leaders who have received more training. Specifically, patients in groups led by intensely trained nurses will report greater knowledge and skill acquisition than patients in groups led by nurses who received only self-instructional training.
3. Small group processes that have been linked to patient improvement will be reliably different in groups led by nurses who have been trained to recognize and implement such. Specifically, group climate (engagement, conflict & avoidance) will be more favorable for groups led by nurses having more training.

METHOD

Participants

Patients. The Utah State Hospital is an inpatient psychiatric facility with 328 beds that averages 90% occupancy. The hospital has twelve units that operate in a semi-autonomous manner tailoring treatment to specific patient needs. These units treat children, adolescents, adults, forensic patients and elders.

The psychiatric sample (n=40) selected from the aforementioned hospital population had a mean age of 43.2 (SD =

10.6) ranging from 21 to 60 years of age, and consisted of 17 males and 23 females. The sample was 92.5% of the sample was Caucasian, 5% was Hispanic, and 2.5% was American Indian/Alaskan Indian. Over half (52.5%) of the patients had never been married, 40% were divorced, and 7.5% married. Patients were selected on the basis of their diagnosis, namely if their primary diagnosis aligned on the spectrums of schizophrenia, bipolar, or major depressive disorders. Patients were not included if severe cognitive deficits were found along the multi-axial system of the DSM-IV-TR diagnosis. The primary diagnoses for this sample on Axis I as classified by the DSM-IV-TR were 52.5% schizophrenia, 30% schizoaffective, 7.5% major depression, 7.5% bi-polar, and 2.5% psychotic not otherwise specified. The average length of stay was 512.9 days (SD = 493.7; Range = 57-2188). After selection took place, the patients were divided up into groups that consisted of four to five patients.

Nurses. USH employs twelve nursing directors that oversee eighty registered nurses. Four adult units were selected for this study and assigned to one of the treatment conditions (intensely trained or self-instructional—see procedure below). Twelve nurses were selected from volunteers on the four units. Each nurse had little or no formal training in the delivery of PE group treatments. Even though nursing staff have had ample work experience, most have had no formal group training or clinical psychiatric experience.

Training

Dimension 1—PE group treatment.

Training regarding PE groups was based upon Nina Brown's (1998) book, *Psycho-educational Groups*. Six training modules were developed including: (a)

principles of instruction and learning, (b) group leadership (e.g., task and maintenance skills), (c) group dynamics and group stages, (d) group therapeutic factors, (e) ethical issues for group, and (f) managing and problem solving group conflict.

Dimension 2—Symptom Management.

Given the targeted population, the PE group treatment selected focused on symptom management. Payson et al. (1998) found the topics most frequently endorsed by SPMI populations are those that directly related to symptom management. More importantly, Murphy and Moller (1993) explained that due to the neurobiological nature of symptoms associated with SPMI diagnoses, "teaching individuals ... and their families to identify and manage symptoms and cope with symptom triggers are cost-effective interventions that increase over life and decrease the number and/or length of relapses and hospitalizations" (p. 226). Thus, by teaching such a population the knowledge and skills necessary to manage their symptoms, one is (a) providing wanted information with respect to the client's perception and (b) improving the client's health by reducing relapse and increasing overall functioning.

The symptom management program developed by Murphy and Moller (1998) accomplishes both the aforementioned goals by applying a special focus on wellness. This protocol helps the patient (1) identify personal neurobiological symptoms and symptom triggers (e.g., schizophrenia, bipolar disorder, and major depressive disorder), (2) set realistic goals to cope with the symptoms, and (3) manage of his/her own symptoms in order to achieve a satisfactory quality of life according to the person's desires. More specifically, it instructs the patient on cognitive dysfunctions (e.g., memory), anxiety,

depression, mania, psychosis, interpersonal stress, and coping strategies that coincide with each element of their diagnoses.

Instruments

Patient. The patients were asked to complete four measures. One that taps their self-perceived knowledge and skills associated with the PE symptom management group, a second that measures their perception of the PE group climate, a third that captures their overall satisfaction with the groups and finally, and a fourth that measures outcome associated the symptoms being focused upon in the SM portion of the group.

Symptom Management Questionnaire (SMQ-P). The symptom management PE group targets specific knowledge and skills that the patients are expected to acquire. The instrument consists of 40-items that focus namely on symptoms, symptom triggers, and management strategies for the symptom and/or trigger. The patients were asked to indicate on a 5-point Likert scale how confident they felt regarding their skills and knowledge with identifying cognitive difficulties, anxiety, depression, psychosis, mania, and problems with interpersonal relationships. The SMQ-P was administered as a pre and post test measure. Cronbach's alphas were computed on both pre and post intervention administrations and produced high internal consistency estimates; .94 and .93, respectively.

Moller-Murphy Symptom Management Assessment Tool II (MM-SMAT II revised). The symptom management PE group targets specific knowledge and skills that the patients are expected to acquire. The original MM-SMAT II measure is a self-assessment of the information presented in the manualized PE group treatment offered by Murphy and

Moller (1998). This measure is intended to assist *outpatient* individuals within the SPMI to more successfully identify and manage symptoms as well as those typical of relapse. In order to accomplish this task, the MM-SMAT II helps identify negative and positive symptoms as well as the frequency, intensity, and duration of these symptoms. However, this assessment device was considered to be too intensive for an *inpatient* SPMI population. A group consisting of a clinical nurse specialists and psychologists revised the original MM-SMAT II by: a) reducing the number of items in the instrument, b) reducing the amount of information required for each symptom, and c) reformatting the measure. The revised version consists of 60 items where the patient is asked to indicate on a 5-point Likert scale how frequent they have symptoms in the following six domains: cognitive difficulties, anxiety, depression, psychosis, mania, and problems with interpersonal relationships. The MM-SMAT II was administered as a pre and post test measure in order to help the patient identify their knowledge and skill competency as well as help track patient outcomes associated with a specific PE group. Cronbach's alpha were again computed on the pre and post intervention administrations producing comparable results. Specifically, the total scale (all items) produced a high internal consistency estimate (.95) with each subscale producing similarly high values ranging from a high of .86 (depression) to a low of .73 (mania).

Group Climate Questionnaire (GCQ; MacKenzie, 1981). The GCQ is a 12-item self report measure that yields three measures of group process and has been recommended as part of a comprehensive battery of outcome and process instruments (cf. Burlingame, et al., 2004). The *Engaged* scale taps cohesion, self-disclosure,

cognitive understanding, and confrontation, the *Avoiding* scale measures the degree to which members avoid responsibility for the process of change within the group, and the *Conflict* scale measures inter-member distrust and conflict. The GCQ was taken three times during the entire project; beginning, middle, and late phases of each PE group.

Self Satisfaction Survey (SSS). The Self Satisfaction Survey assesses a participant's global satisfaction with their group treatment using a 10-item instrument that has demonstrated adequate reliability ($\alpha = .78$). It has been shown to be sensitive to group program interventions in previous research (Burlingame, et al., 2002; Hoag, Primus, Taylor, & Burlingame, 1996) and was adapted to reflect participation in more than one group to match the USH group program. The SSS was taken three times during the entire project; beginning, middle, and late phases of each PE group.

Nurse. The primary assessment of the nurses focused on the two dimensions of PE group leader competence. The first dimension—understanding of the basic properties of how to run an effective PE group—was drawn from the *Association of Specialist in Group Work--ASGW* standards for PE groups (Coyne, et al., 1997) and Brown's (1998) *Psychoeducational Groups* text. Dimension 2 is rooted in specific knowledge of symptom management and was based upon Murphy and Moller's (1998) symptom management workbook.

Psycho-educational Group Questionnaire (PEG-Q; dimension 1). The PEG-Q is a 52-item instrument that was developed from Brown's (1998) and the ASGW standards. It was developed to test the nursing staff's general knowledge regarding the following: (a) principles of

instruction and learning, (b) group leadership, (c) group dynamics, (d) group stages, (e) ethical issues for group, and (f) managing group conflict. This instrument consisted of multiple choice questions where the nurses were asked to give a response out of several choices. The PEG-Q was administered as a pre and post test measure. Initial reliability analyses revealed low internal consistency (.67) resulting in 6-items that negatively loaded (i.e., negative correlations greater than .3) and were dropped. The revised measure produced adequate internal consistency estimates for both pre and post intervention administrations (.84 & .75, respectively).

Symptom Management Questionnaire-Nurses Version (SMQ-N; dimension 2). The SMQ-N is a 55-item instrument that was developed from Murphy and Moller's (1998) symptom management module assigned for patients with neurobiological disorders (e.g., schizophrenia, bipolar disorder, and major depressive disorder). Specifically, this measure was to establish knowledge competency of nurses in group PE for symptom management. It was designed to tap the following: (a) memory skills and information processing, (b) coping with symptoms and triggers for anxiety, depression, mania, and psychosis, (c) interpersonal stress and stigma, (d) coping with daily activities, and (e) symptom management techniques for the prevention of relapse. The SMQ-N was administered as a pre and post test measure demonstrating adequate internal reliability estimates (.86 & .78, respectively).

Procedure

Twelve nurses were selected, matched on experience level, and assigned to one of two training conditions (self-instructional—SI; intensive training—IT).

All nurses attended an orientation session where the value of group psycho-education was discussed and informed consent was obtained. In addition, the nurses in the SI and IT condition received a brief overview about the group psycho-educational model and a written copy of the model was distributed to all nurses. The SI group was instructed to use the model to guide their patient groups. Within one week of this meeting, the IT group received a 10-hour structured training program consisting of didactic explanation, demonstration, role-playing, and discussion on incorporating the model into their therapeutic style. In addition, the IT group received training regarding Moller and Murphy's symptom management model. All the nurses in the IT condition were instructed not to discuss their clients or their additional training with other nurses until the project was completed.

All nurses, regardless of condition, were instructed to apply their own approach to psycho-educational groups; however, both conditions were encouraged to move through all stages of group psycho-education manual. After the nurse training was completed, all eligible patients who agreed to participate were assigned to the 12 nurses until each nurse had been assigned a minimum of five patients. Preceding assignment to the groups, informed consent was obtained from the patients.

Before assignment to their respective conditions, the nurses were tested on the following: (a) general group PE knowledge and skills (i.e., dimension 1; see PEG-Q above) and (b) specific knowledge regarding symptom management for schizophrenia, bipolar disorder, and major depressive disorder (i.e., dimension 2; see SMQ-N). These same tests were administered following the conclusion of training offered to the IT condition.

The patients participating in the study were asked to complete the MM-SMAT II revised and SMQ-P which was administered before and after the group PE intervention. In addition, in order to assess group process independent student raters from Brigham Young University administered the GCQ and SSS in the early, middle and late phases of each PE group.

Design and Analysis

The overall design used in this study was a quasi-experimental comparison of outcome and process differences between nurses who received the IT condition and the nurses who received the SI condition. Complete data was obtained from all twelve nurses; however, the data from the patients fell into three groups: those that contributed to outcome and process data, those that contributed to only outcome, and those that only partially contributed to the data. This latter group was often the result of frequent discharges which made it impossible to obtain a complete set of outcome and process measures for each measurement point. Because the nurses' training was the targeted intervention, the unit of analysis for the process variables was the group as a whole. Thus, the analysis of the process findings were tested two ways. First, using a repeated measures analysis, process measures' scale totals were summed up across the three collection points and a one-way ANOVA was conducted between the IT and SI conditions. Second, using the number of observations as a covariate, the process measure scales were summed up across the three collections points and a one-way ANCOVA was conducted comparing IT and SI.

The patient outcome measures were expected to reflect a more distal measure of the effect of the two training conditions, i.e., patient progress. In other words, given the

multi-modal treatment that each patient receives at USH (e.g., medication, multiple therapies including occupational, recreation, individual, family, etc.) any reliable difference that might be uncovered by our outcome measures could not be solely attributed to the nurses' training.

Regardless, patient differences between the IT and SI conditions were examined based upon changes in the patient's reports on the outcome measures using a mixed model; a within subject factor of time (pre and post test) and between subject factor of training condition (IT and SI).

Results

Table 1 depicts the descriptive statistics for both nurse and patient outcome measures at the two administrations. Preliminary T-tests revealed no reliable differences between the two conditions on any measure prior to the training intervention. The intensely trained (IT) nurses increased significantly more in their knowledge of running PE groups than the self-instructional (SI) group nurses as measured by the PEG-Q; $F(1,10) = 11.72, p < .01$. There was a similar difference exhibited with respect to knowledge of symptom management as measured by the SMQ-N although this difference reached trend status using a conventional alpha of .05; $F(1,11) = 3.45, p = .09$. Outlier analysis revealed an outlier in each experimental condition. Accordingly, the robustness of the parametric results were tested using a nonparametric test (Mann-Whitney U) with the same pattern of reliable differences.

There were no differences in patient outcomes on any of the measures (i.e., for the SMQ-P, MM-SMAT II revised or the MM-SMAT II revised subscales) when the IT and SI conditions were compared. However, patients showed reliable pre-to-

post group improvement in their symptoms as measured by the MM-SMAT II; $F(1,26) = 5.52, < .05$. Reliable change was found on three of the six subscales: cognitive difficulties, $F(1,25) = 13.7, p < .01$; mania, $F(1,26) = 8.26, p < .01$; and depression, $F(1,26) = 7.67, p < .05$. A similar pattern of improvement was found on the patient completed SMQ, although it did not reach the conventional level for trend; $F(1,27) = 3.77, p = .06$. Finally, using a repeated measures analysis, we tested for differences between the IT and SI conditions on the process variables (i.e., Engagement, Conflict, and Avoidance as measured by the GCQ; Self Satisfaction as measured by the SSS). The two conditions were indistinguishable with respect to changes on these measures over time (i.e., slope).

Discussion

The primary objective was to empirically test two training methods to improve nurses' knowledge and skills in conducting psycho-educational groups that focused on symptom management with a SPMI population. Given that inpatient nurses are frequently required to run PE groups and often lack training (Glantz, et al., 1994), this question seems timely from a clinical service perspective (Burlingame, et al., 2002). What is needed is more clarity on the differential effectiveness of alternative training methods.

The first hypothesis—contrasting two training methods—was the most proximal and clinically relevant. The results suggest that training nurses in a workshop may produce more knowledge and skill gains than relying upon a self-instructional format. While our findings parallel past research (Burlingame, et al., 1989) and follow conventional wisdom, the norm at many inpatient facilities due to resource

limitations is the self-instructional method. More specifically, nurses at such institutions have limited to nonexistent training in psycho-educational groups (Glutz, et al., 1994) and are often provided with a group manual and an administrative (or clinical) mandate to conduct a PE group (Burlingame, et al., 2002). We attempted to parallel this clinical reality with the SI condition. In short, our findings question the wisdom of a SI method of clinical service delivery, at least from a knowledge and skill acquisition perspective.

A distal measure of differential effectiveness of the two training methods is reflected in patient outcomes. No statistically significant difference was found in any of the process or outcome measures for patients who were in groups led by IT or SI nurses. There is several explanations for these findings. The most parsimonious is that different methods of training nurses have no relationship with the success or failure of patient receiving PE group treatment. Another alternative relates to setting. Treatment at the USH—like most inpatient facilities—is multi-modal with patients receiving medication, individual and family psychotherapy, occupational therapy, recreational therapy, and a host of ancillary treatments. The ability to tease out the effect of any single treatment intervention is virtually impossible. Thus, our test of the effect of training nurses may be limited by the setting of care. Furthermore, even if individual treatment effects could be isolated (e.g., dismantling design), the instruments used may not have been sensitive enough to clinical change as it related to the subject matter taught in the PE training intervention being manipulated.

At the conclusion of study 1, the nurses in each condition were debriefed and the aforementioned results presented. The

researchers received feedback from the IT nurses that led to a second research question. The IT nurses suggested that the aforementioned lack of differences in patient outcomes might be due to the difficulty in translating knowledge and skills learned in the workshop into the group room. They proposed that workshop training followed by weekly supervision might lead to stronger effects in their own knowledge and skill as well as differences in patients outcomes and group processes. Accordingly, a second study was designed and carried out to test the nurses proposition. All nurses in the IT condition were invited to repeat the same protocol with the additional element of weekly clinical supervision from the workshop trainer. Nurses in the SI condition were invited to participate in the IT condition (i.e., workshop) after they were presented with evidence that it might be a more effective method of imparting knowledge and skill in conducting PE groups. The modified design for study 2 as it relates to conditions in study 1 is depicted in Figure 1.

STUDY 2

Method

Participants

Patients. A new sample (n=41) was selected for study 2 that had a mean age of 39.9 (SD = 11.7) ranging from 19 to 62 years of age, and consisted of 14 males and 27 females. The sample was 95.1% of the sample was Caucasian, 2.4% was Hispanic, and 2.4% was American Indian/Alaskan Indian. Approximately half (48.8%) of the patients had never been married, 34.1% were divorced, separated or widowed, and 17.1% married. Patients were selected on the basis of their diagnosis, namely if their primary diagnosis aligned on the spectrums of schizophrenia, bipolar, or major depressive disorders. Patients were not

Condition	Self-Instruction	Intensely Trained/Workshop	Clinical supervision	Key	
				Previous conditions	
Experimental (South-end)		X	O	Previous conditions	X
				Proposed conditions	O
Control (North-end)	X	O			

Figure 1
Relationship between Study 1 and 2 experimental conditions

included if severe cognitive deficits were found along the multi-axial system of the DSM-IV-TR diagnosis. The primary diagnoses for this sample on Axis I as classified by the DSM-IV-TR were 43.9% schizophrenia, 26.8% schizoaffective, 14.6% major depression, 12.2% bi-polar, and 2.4% psychotic not otherwise specified. The average length of stay was 427 days (SD = 519.7; Range = 50-3337). After selection took place, the patients were once again divided up into groups that consisted of four patients.

Nurses. The twelve nurses that were selected from the nursing staff on the four units were asked to participate once again. Eleven out of the twelve nurses agreed to continue to participate. Each nurse from the previous SI condition, now received formal training in a workshop manner, whereas, nurses in the IT condition now received clinical supervision.

Instruments

Patient. The patients completed three of the four measures used in Study 1. The original SMQ-P was modified into a structured interview to capture the knowledge and skills a patient acquired in their respective symptom management groups. Patients were asked 22 questions by trained raters from Brigham Young University. The questions were based upon the SMQ-P used in study 1 but patient recall was relied upon to tap symptoms, symptom triggers, and coping strategies that were taught in the PE groups. The rater would record patient responses verbatim. If the patient responded with a single answer, the rater would query stating, “Tell me another ... (symptom, symptom trigger, coping strategy)” and record additional patient responses. However, if the patient responded in irrelevant manner or stated that he or she did not know, the rater would continue with the next question. Zero points were awarded for an irrelevant answer or when the patient stated that he or she did not know. One point was awarded for stating one relevant answer and two points were awarded for stating two relevant answers, three points were awarded for stating three relevant answers, and four points were awarded for stating four or more relevant answers. A total of 44 points were possible on the revised SMQ-P.

Nurse. The nurses were asked to complete the same two measures from study 1.

Procedure

The six nurses that had undergone the workshop format (IT) in study 1 received a brief orientation to the new protocol, completed an informed consent followed by a pre-assessment. Following the pre-assessment, the nurses were asked to conduct a symptom management psycho-educational group with different patients selected from their unit. These nurses met weekly with the PE trainer for clinical supervision. In addition, the trainer observed groups 1, 7, and, 12 groups and provided feedback during the regular weekly supervision meeting. The six nurses that underwent the self-instructional format in study 1 received a similar orientation and pre-assessment. They then participated in the IT training described in study 1 followed.

Ten different patients from each unit were selected using the same criteria relied upon in study 1. After obtaining informed consent, the patients were pre-assessed by undergraduate students using the aforementioned outcome measures. As in study 1, student raters from Brigham Young University administered the GCQ and SSS in the early, middle and late phases of each PE group.

Design and Analysis

The design and analysis of study 2 remained exactly the same as study 1. However, instead of comparing the IT and SI condition, the mixed model was composed of a within subject factor of time (pre and post test) and a between subject factor of condition (IT and CS).

Results

Overall, a nurses knowledge and skill in conducting PE groups increased in both conditions from pre-to-post training intervention; $F(1,8) = 9.55, p < .01$.

However, contrary to what we expected the IT condition showed a trend toward an increase in general group psycho-educational knowledge (PEG-N) when compared to the Clinical Supervision condition; $F(1,8)=3.22, p=.11$. Repeated measures analysis for the specific symptom management knowledge (SMQ-N) showed no differences between the two training conditions although both groups showed a reliable increase in symptom management knowledge; $F(1,8)=12.82, p < .01$.

As in study 1, there were no differences between the two training conditions on any of the patient outcome or group process variables. However, patients did improve over the course of the group on the symptom management (SMQ) on the total score.

Discussion

Contrary to expectation, the addition of clinical supervision including in vivo group observation did not lead to improved nurse or patient outcomes. There are several explanations why the IT condition had evidence for equivalent or greater outcomes. The most parsimonious is to conclude that the workshop condition is the most effective training method. Given that learning is a paramount goal for PE groups, it may be that a pedagogical approach to training is best. However, it may be that the effects of clinical supervision were not sufficiently tapped by the outcome measurements used to assess change in dimension 1 and 2. Perhaps they tapped knowledge but not the skills competency to run the group emphasized in clinical supervision. In a related manner, the nurses in the supervision

condition may have hit a “ceiling” of knowledge that was simply met by the IT condition in study 2. Thus, intense training in workshops affects knowledge gained by clinicians to a certain point and no further.

Summary

Modest empirical support was found for training nurses to deliver a symptom management PE group using a workshop format. This finding was replicated with two patient samples using both a between and split-plot design. Differences were found on clinician measures and not on patient outcomes. There was no effect for adding clinical supervision which may be explained by measurement (e.g., ceiling effects), methodology (e.g., unstructured protocol), or actual superiority of the workshop approach. There is a paucity of studies on training therapists to be more effective group leaders and future research is encourage on this topic.

Another explanation for the lack of effect for the supervision condition may have been in the manner of delivery. Stated differently, clinical supervision of small group treatments may require greater structure than offered herein. For instance, Burlingame and colleague developed a structure rating scale designed to capture core evidence-based principles associated with effective group treatment (cf., Burlingame, et al., 2002). This rating scale has been linked to both group processes (e.g., cohesion) and patient outcome in a recent study (Snijder et al., 2004). It may be that clinical observation and supervision that is grounded by such a measure would yield greater effects. This speculation awaits future research to test its merit.

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Table 1
Descriptive statistics for patient and nurse outcome measures in study 1

Outcome measures for study 1	Self-instruction condition				Intensely trained condition			
	Mean	SD	range	N	Mean	SD	range	N
Nurse measures								
Pre-SMQ	30.33	5.82	24-40	6	26.83	9.95	11-38	6
Post-SMQ	33.67	5.13	25-41	6	35.83	7.65	28-48	6
Pre-PEQ	26.67	6.56	20-37	6	20.50	6.44	12-30	6
Post-PEQ	26.50	4.23	21-32	6	29.00	6.60	19-37	6
Patient measures								
Pre-SMQ	130.70	30.96	94-186	20	127.79	26.44	86-187	19
Post-SMQ	135.00	35.99	48-188	13	138.65	22.84	93-179	17
Pre-MMSMAT	141.32	33.71	77-191	19	146.91	32.52	74.72-206	17
Pre-MMSMAT-CD	22.84	7.81	10-38	19	20.75	8.10	10-39	16
Pre-MMSMAT-A	24.79	7.72	10-39	19	28.14	6.39	12-35	17
Pre-MMSMAT-D	23.53	7.76	10-35	19	26.71	7.38	10-41	17
Pre-MMSMAT-M	25.58	7.41	14-44	19	26.14	4.92	13.33-32	17
Pre-MMSMAT-P	20.63	7.65	10-38	19	21.88	7.64	10-33	17
Pre-MMSMAT-IR	23.95	5.80	10-31.11	19	24.52	7.28	10-36	17
Post-MMSMAT	111.78	27.68	53-157.4	14	121.46	33.89	58-181	17
Post-MMSMAT-CD	23.03	7.55	10-36.56	14	22.12	6.41	10-35	17
Post-MMSMAT-A	25.85	10.32	10-44	14	26.71	7.90	11.11-40	17
Post-MMSMAT-D	23.53	7.76	10-35	19	26.71	7.38	10-41	17
Post-MMSMAT-M	21.79	6.57	13-38	14	25.59	6.64	13-36	17
Post-MMSMAT-P	18.93	6.66	10-33	14	22.50	9.84	10-40	17
Post-MMSMAT-IR	22.19	4.92	10-29	14	24.56	9.35	10-48	17

Table 2
Descriptive statistics for patient and nurse outcome measures in study 2

	Intensely trained condition				Clinical supervision condition			
	Mean	SD	range	N	Mean	SD	range	N
Nurse outcome measures								
Pre-SMQ	23.33	5.13	16-30	6	28.00	3.67	24-33	5
Post-SMQ	27.80	3.56	24-33	5	33.80	1.79	31-35	5
Pre-PEQ	19.33	7.17	7-28	6	23.80	3.11	19-27	5
Post-PEQ	21.60	5.22	14-27	5	33.60	7.80	22-39	5
Patient outcome measures								
Pre-SMQ	15.95	6.96	5-30	22	16.26	8.73	0-38	19
Post-SMQ	16.95	4.67	7-26	21	15.81	5.41	8-26	16
Pre-MMSMAT	151.14	50.30	69-294	22	137.63	35.12	61-208	19
Pre-MMSMAT-CD	25.82	9.58	11-50	22	22.00	6.57	10-40	19
Pre-MMSMAT-A	28.82	10.34	10-50	22	24.95	8.95	10-46	19
Pre-MMSMAT-D	26.27	10.76	10-50	22	24.53	10.88	10-50	19
Pre-MMSMAT-M	25.14	8.18	10-50	22	23.16	6.16	10-31	19
Pre-MMSMAT-P	20.45	9.38	10-46	22	18.53	7.76	10-34	19
Pre-MMSMAT-IR	24.64	8.99	10-48	22	24.47	8.84	10-50	19
Post-MMSMAT	129.29	45.55	68-259	21	122.24	30.01	64-175	17
Post-MMSMAT-CD	22.05	8.21	11-44	21	19.94	5.54	10-27	17
Post-MMSMAT-A	24.49	9.87	10-49	21	21.47	7.07	10-41	17
Post-MMSMAT-D	22.19	10.05	10-45	21	19.88	8.43	10-40	17
Post-MMSMAT-M	21.71	7.27	10-38	21	22.65	6.86	10-40	17
Post-MMSMAT-P	17.71	8.09	10-45	21	17.53	9.66	10-50	17
Post-MMSMAT-IR	21.19	7.76	10-41	21	20.76	5.72	10-30	17