



All Theses and Dissertations

2010-09-06

The Group Selection Questionnaire: Discriminant Outcomes and Effectiveness

Jeffrey Lee Elder

Brigham Young University - Provo

Follow this and additional works at: <https://scholarsarchive.byu.edu/etd>

 Part of the [Counseling Psychology Commons](#), and the [Special Education and Teaching Commons](#)

BYU ScholarsArchive Citation

Elder, Jeffrey Lee, "The Group Selection Questionnaire: Discriminant Outcomes and Effectiveness" (2010). *All Theses and Dissertations*. 2708.

<https://scholarsarchive.byu.edu/etd/2708>

This Dissertation is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in All Theses and Dissertations by an authorized administrator of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.

The Group Selection Questionnaire: Discriminant Outcomes and Effectiveness

Jeffrey L. Elder II

A dissertation submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

Robert Gleave, Chair
Gary Burlingame
Lane Fischer
Mark Beecher
John Okiishi

Department of Counseling Psychology and Special Education
Brigham Young University
August 2010

Copyright © 2010 Jeffrey L Elder II
All Rights Reserved

ABSTRACT

The Group Selection Questionnaire: Discriminant Outcomes and Effectiveness

Jeffrey L. Elder II

Department of Counseling Psychology and Special Education

Doctor of Philosophy

The Group Selection Questionnaire (GSQ; Cox et al., 2004) is a measure that has been developed to facilitate clinical decisions about a client's readiness for group psychotherapy. The GSQ has demonstrated an ability to predict which clients will experience a reduction in distress through the use of group psychotherapy. This dissertation examines the Group Selection Questionnaire's ability to measure client characteristics that predict the client's ability to benefit from receiving group psychotherapy compared to the ability to benefit from receiving another form of treatment, such as individual or a combination of individual and group psychotherapy, as measured by improved scores on the Outcome Questionnaire (OQ-45; Lambert, Gregersen, Burlingame, & Maruish, 2004). Archival data was analyzed using scores from a sample of 156 college-age participants. Multiple regressions showed that the GSQ and its subscales were effective at predicting improvement in symptomatic distress, but did not demonstrate an ability to predict who would benefit more from group, compared to individual or mixed modalities. Limitations of the study, implications for the measure, and future research are discussed.

Keywords: group psychotherapy, outcomes, selection, Group Selection Questionnaire

ACKNOWLEDGEMENTS

My appreciation for the many people who have assisted me in this process cannot be overstated. I wish to acknowledge the many hours that others have invested in contributing to this work. Without them, I would not have been able to accomplish this. I would especially like to thank my chair, Dr. Robert Gleave, for his efforts and sensitivity of knowing when to push me and when to let me lead. I would also like to thank my committee for their time, especially Dr. Lane Fischer for his consistent support and interest in my progress. I wish to express my appreciation to Dr. Steve Smith for his passion, mentorship and listening ear that started me down this path in the first place and has kept me going ever since.

There have been many family members and friends who have cheered me on during these difficult years. I would like to thank my mother, Lisa, and my father, Jeff, for their unwavering faith in me. I would also like to thank my children, Breena and Trey, for allowing me to miss story-time on so many nights when I was away. You may not remember these days, but I always will. Most of all, I want to thank my wonderful wife, Libby, for her sacrifice and hard work to get me to this stage. Her efforts to provide me the time to complete this came at no small cost to her, and I could never have done it without her.

Table of Contents

List of Tables	vi
Introduction.....	1
Review of Literature	3
History of Group Psychotherapy.....	3
Beginning foundations.....	4
World War I Zeitgeist.....	5
Burgeoning diversity in group work.....	7
World War II advancements.....	8
Ethical concerns and repercussions.....	9
Current trends and research demands.....	10
Outcome as a Measure of Effectiveness.....	11
Group Psychotherapy Compared to Individual Psychotherapy	12
Group outcomes compared to individual outcomes.....	12
Factors important to both group and individual psychotherapy.....	13
Effectiveness of Group Psychotherapy	14
Factors unique to group psychotherapy.....	15
Formal change theories.....	15
Interpersonal interactions.....	16
Group leader characteristics.....	16
Group structural factors.....	16
Client characteristics.....	17
Client Readiness for Group Psychotherapy.....	17
Main effect characteristics.....	17
Expectations.....	18
Interpersonal skills.....	19
Group Selection Measures.....	20
Group Therapy Questionnaire.....	21
The Group Selection Questionnaire.....	21
Purpose of the Study.....	22
Methods.....	24

Participants	24
Therapists and Group Leaders.....	24
Procedures	24
Instruments	25
The GSQ.	25
The OQ-45.	26
Statistical Analyses.....	26
Results.....	31
Demographics.....	31
Treatment Group Comparisons	31
Findings Related to the Hypotheses	33
Hypothesis 1: GSQ correlations with OQ-45.	33
Hypothesis 2: GSQ ability to predict improvement through group.....	36
Post-hoc Analyses	37
Discussion.....	38
Summary of Results	38
Reflections on Results	39
Hypothesis 1.....	39
Hypothesis 2.....	43
Implications of Results	44
Limitations.....	45
Future Recommendations.....	47
Conclusions	48
References.....	49

List of Tables

<i>Table 1.</i> Multiple Regression Equations	30
<i>Table 2.</i> Descriptive Data by Treatment Modality	32
<i>Table 3.</i> Relationships Between Group Selection Questionnaire Subscale Scores and Outcome Questionnaire - 45 Change Scores	34
<i>Table 4.</i> Item Similarities Between the OQ-45 and the GSQ	41

Introduction

Group psychotherapy has long been noted as an effective treatment for many forms of mental disorders. Due to the interpersonal environment that group psychotherapy attempts to create, the success of group psychotherapy as a treatment depends on finding an optimal combination of therapist, client and group dynamic factors (Yalom & Leszcz, 2005). If positive combinations of each of these factors is effectively achieved and maintained, it can contribute to the experience of the therapy group. If they are not achieved or maintained, diminished positive change can result (Piper & McCallum, 1994).

Therapist traits constitute an important aspect of group psychotherapy. Group leaders that are able to model appropriate behavior, articulate useful feedback, and attend to the interpersonal process can help guide the group into meaningful interactions (Burlingame, MacKenzie, & Strauss, 2003). Group dynamic factors include the composition traits of the therapeutic group and type and depth of interactions that occur. It is apparent that therapeutic groups that have meaningful and respectful yet challenging conversations will experience more powerful change; whereas, groups with poor interactions and deficient composition may be unable to fully benefit from what group psychotherapy has to offer (Burlingame et al., 2003).

On an individual level, the benefit a client receives from group psychotherapy will largely be contingent upon the traits and variables each client personally brings to the group. There are certain factors that indicate a good group candidate, including interpersonal skills, readiness for group psychotherapy and expectation that the group will be helpful. One of these factors more recently explored is the concept of a client's readiness for group psychotherapy. A client who is ready for group psychotherapy is willing to engage in meaningful ways with fellow group members without domineering (Piper, 1994).

Group psychotherapy research has long called for a measure that can efficiently and accurately measure a client's readiness for therapeutic group work. The Group Selection Questionnaire (GSQ; Cox et al., 2004) is a recently developed measure that purports to focus on discerning an individual's readiness to engage in psychotherapy in a group format. At present, the GSQ is a simple 19-item measure that has demonstrated an ability to predict which clients will likely benefit from group and which will not (Cox et al., 2004). A concern remains, however. It is possible that the Group Selection Questionnaire is measuring constructs that are universal to all forms of psychotherapy and may not be measuring a client's ability to derive benefit from the group modality specifically. Therefore, the purpose of this study is to examine whether the GSQ measures a client's readiness to benefit from group psychotherapy specifically or whether the GSQ measures more global attributes that might contribute to a client's general readiness to benefit from any of the modalities of psychotherapy.

Review of Literature

Having established the relevance of group psychotherapy as a treatment of choice in many instances, it is worth the time to explore the development of group from its beginning stages to more current uses of group. Furthermore, an explanation of the unique characteristics clients need in order to benefit from group will follow, along with a review of the current assessment options and needs of the field.

History of Group Psychotherapy

Groups of people have gathered together to form the foundation for many of the pivotal events that dot the history of mankind. The history of these groups goes back as far as history itself, and human beings have found refuge and protection in the various groups that they united with (Anthony, 1972). Leaders of nations and armies have often recognized the power of groups, and have utilized this power in an effort to propagate their ideals and desires. Socrates, often considered a pillar of philosophical and reasoned thought, perceived the advantages and ability of groups as they impacted the conversation and thinking of all involved in them. He would frequently engage in discussion with others in a group format to verify his ideas and open his mind to alternative modes of thought (Ettin, 1999). Because of leaders such as Socrates, the power inherent in groups has long been acknowledged.

Only relatively recently, however, has psychology as a field become aware of the significant impact that groups can have on the treatment of a wide array of populations and mental disorders. Research into group theory and use of group as a form of psychotherapy has only experienced a brief 100 year interest (Brabender, Fallon, & Smolar, 2004). The insight and understanding provided from such research has brought group psychotherapy into its current status as treatment of choice for many psychological disorders. In order to understand the

interventions and techniques used by group psychotherapists today, it is essential to study the foundations these techniques and interventions rest upon and the history of group psychotherapy research.

Beginning foundations. As is often the case within the field of psychology, the pioneering figures in group psychotherapy and research weren't psychologists by trade. In the formative years of group psychotherapy, those who noted its effectiveness as a treatment modality were primarily physicians. One of the prevailing philosophies of the time was pragmatism, as espoused by such writers as William James (1907). The basic tenets of pragmatism state that the practical value of our ideas is the measure of their validity and utility. These early physicians principally saw a need for a more effective method to teach skills that would help keep specific patients on the road to recovery. One of the first to attempt skill teaching in the group format was Joseph Pratt, whom many refer to as the "father of group psychotherapy". However if he was the father of group psychotherapy, then as stated by Ettinger, "the pregnancy was unplanned" (1999, p. 57). Pratt initially was trying to alleviate his own workload by gathering a group of tuberculosis patients together to teach them hygienic practices. He quickly learned that there was more to these groups than information sharing. In the homogeneous environment that was created, he noticed the psychological work that was done through the social component of group. Members of the group were able to relate to and empathize with one another (Pratt, 1922).

The power of bringing people together was noted by other clinicians of that era as well. Edward Lazell, an early psychiatrist, attempted to educate some of his patients who suffered with bi-polar and schizophrenic tendencies. He reasoned that if they learned psychoanalytic techniques, they would experience a reduction in symptom distress. Although his groups were very didactic in nature, he too noticed a strong social component among the patients in his group

(Lazell, 1921). Lazell started empirically exploring his hypotheses by having his nursing staff note changes in patient's need for sedatives (Fuhriman & Burlingame, 1994).

Another early pioneer of group work was L. Cody Marsh. He, in a similar fashion, began treating psychiatric patients through a psychoeducational group. Although his techniques were more multi-dimensional (including art, music and dance), he quickly became aware of the group processes that were occurring. He noticed that there was strength and support amongst members, and observed a group altruism that emotionally strengthened his patients (Marsh, 1933). He became so convinced of the usefulness of group that he once wrote, "By the crowd they have been broken, by the crowd they shall be healed" (1933, pp. 406-407).

These medical minds were among the first to describe the influence that group psychotherapy had amongst its members. They diligently sought to empirically study the phenomenon so that others could follow in their footsteps; and follow they did.

World War I Zeitgeist. World War I emerged as a driving force in the use and research of psychology. Group psychology was no exception. Preparation for war required a complete individuation of the soldiers, as their ability to survive hinged upon their cohesiveness within their combat unit. This saving principle soon led to severe psychological problems surrounding morale and assimilation into civilian life after their tour of duty (Anthony, 1972). The political Zeitgeist at the time motivated research in psychological practice to provide better treatment of the soldiers and veterans. It was soon detected that group psychology offered a healing hand that was absent when individual therapy was the exclusive modality (Anthony, 1972).

Along with the impetus from the government officials, the psychoanalytic movement that was budding in Europe provided additional insight into use of group for psychological improvement. Freud, the father of the psychoanalytic approach to therapy, recognized the

beneficial aspects of group and authored a book that expressed these views (Freud & Strachey, 1922). He observed the importance of the role of the group leader as an object for members to form attachment with. This promoted empathy and commonality among the members, and was in turn vital to their improvement.

One of Freud's contemporaries also observed the benefit of group in a psychoanalytic format. Triggant Burrow studied under Freud and Jung and became a strict adherent to their theories on human behavior (Fried, 1972). He sought to allow his patients to remove their defenses in a group format which he believed would promote freedom from the social masks that hinder psychological well-being. Burrow often contradicted Freud in his implementation of psychoanalytic concepts; in particular, Burrow claimed that leaderless groups allowed for more explicit expression of underlying themes, and that the collective experience of the group as a whole was more than the individual contributions of its participants (Burrow, 1928).

Not all who researched and wrote about groups clamored over its positives. As already reflected through the discussion of the psychoanalytics, the role and qualities of group leaders were in question. Gustav LeBon, a French scholar who authored *The Crowd* (1977), discussed the problems with aggregate groupthink and the danger in deferring to a strong leader. He strictly warned against the congregation of easily swayed individuals. William McDougall, a colleague of Lebon's, reiterated Gustav's findings but made a significant distinction that saved the viability of group work in the eyes of some. McDougall argued for the existence of organized groups, which by their very nature necessitated a qualified leader to maintain their organization (McDougall, 1920). Scholars of the period resonated with these concepts, and the importance of the group leader was established (Ettin, 1999).

Burgeoning diversity in group work. The decades preceding World War II saw further implementation of psychoanalytic work in groups. Due to the overwhelming popularity of psychoanalysis at this time, it seems appropriate that psychoanalytic theory would dominate the group psychotherapy landscape as well. Louis Wender was among the first to notice the distinct processes that therapy groups went through. He argued that the interaction of group members inherently lead to processes such as affect, transference and catharsis of previous relationships (Wender, 1940). Alexander Wolf saw groups as a pragmatic solution to the time consuming work of psychoanalytic therapy (1949), and Samuel Slavson expanded the psychoanalytic group work to include children (1940). His work included more activity based group interventions, which brought the psychoanalytic work out of the unconscious mind and into the playtime of his young clients.

During this time, there began to be dissenters amongst the ranks of the psychoanalytic therapists. Perhaps most prominent in this dissention was Jacob Moreno. In a manner similar to that of Slavson, Moreno focused on action oriented therapy; however, he took it a step further. He felt that improvisation and psychodrama were mediums through which psychological health could be maximized, and that the confusion caused by analytic methods only confounded the good that could be done in group psychotherapy (Moreno, 1953). Moreno's insistence on pushing against the psychoanalytic theories so prevalent during that time allowed room for further exploration and questioning of the nature of effective group psychotherapy. His work caused a rift in the group psychotherapy community that created contention and cut off collaboration (Brabender et al., 2004). This rift would significantly alter the horizon of group psychotherapy.

World War II advancements. Once again, war perpetuated psychological thought and advancement. World War II caused significant damage to the emotional and mental lives of those who served their countries. Particularly impacted were the U.S. veterans. The exploding demand for resources created a shortage of available services in the psychological community. This shortage of services catalyzed group psychotherapy once again (Anthony, 1972). Because of the vast experience and experimentation that was permitted by the influx of groups being held, there was a proliferation of ideas and budding theories into what made group most effective.

Wilfred Bion and Henry Ezriel incorporated object relations principles and focus on the unconscious mind expressed in relational interactions among group members (Bion, 1961; Ezriel, 1980). S. H. Foulkes championed the ideal that psychopathology is the blockage of communication, and that group psychotherapy is the perfect format to ameliorate this by providing opportunities in a controlled environment. This new framework diminished the importance of the group leader and placed the responsibility for the group's effectiveness squarely on the shoulders of the group members (1965).

Kurt Lewin, a social scientist from the U.S., saw Gestalt principles in the group process and advocated the concept that group was more than just the summation of the individual group members' personalities. The group was a system wherein conflict and the needs of the individual become aggregate concepts for the group as a unit to understand and explore. He argued that if a group was well organized, well-integrated and well led, then the tension would be evenly distributed and the communication would be more fluid (Lewin, 1951).

Perhaps most distinguishing about this era in the group psychotherapy literature is the focus on the types of interactions between group members and the focus on member characteristics that would yield appropriate contact. Despite the convergence on the relative

contribution of these concepts, the profession was still quite split over the basic format and theory behind effective groups (Brabender et al., 2004).

Ethical concerns and repercussions. The decade of the 1960's saw a lot of turmoil and upheaval in the social fabric of the United States of America. The political climate called for proper treatment of all individuals, and this extended to those who experienced mental health problems. The government passed the Community Mental Health Center Act, which essentially spread the use of group psychotherapy to the masses. Group psychotherapy was once again viewed in the pragmatic light which it had been bathed in since its inception over 50 years previous. Clinics began popping up seemingly overnight, and the increased demand for resources led most of these burgeoning clinics to incorporate group psychotherapy programs (Ettin, 1999). The focus of these groups tended to be more goal directed and were specifically oriented to benefit the aggregate whole. However, there was a backlash against the leaders of these groups, due to the antiestablishment sentiments propagated by the Vietnam War. Clients visiting the clinics demanded egalitarianism in the groups that they participated in (Brabender et al., 2004).

These circumstances promoted the birth of the T-group sensation (also known as sensitivity groups or encounter groups). These pseudo-groups were run by leaders who had no background in psychology or the powerful nature of group psychotherapy. The groups were expected to promote general well-being as they focused on positive aspects of psychology and often recommended full disclosure of personal information. Despite their good intentions, many of these groups ended up hurting the members due to the requirement to decompose psychologically without any resources to compensate for the decomposition. These groups and their outcomes have generally been seen as a black eye for the field of group psychotherapy, and many turned from its implementation (Brabender et al., 2004; Reid & Reid, 1993).

Perhaps due to the sensitive and cautious nature of the psychological community after the T-group experience, group psychotherapy research and practice saw relatively little advancement during the next fifteen years. One exception to this was Irvin Yalom and his research on group psychotherapy (Brabender et al., 2004).

Yalom promoted an interpersonal approach to therapy, and saw group as an ideal vehicle for this type of therapy. Yalom believed that group psychotherapy presented the individual the opportunity to have better relationships with others in a much more vivid and useful way than individual therapy alone (Yalom & Leszcz, 2005). In his groundbreaking work titled *The Theory and Practice of Group Psychotherapy* (1975), Yalom more explicitly delineated the therapeutic factors that contribute to group member success in therapy. He was among the leaders that studied group psychotherapy through controlled experiments, which impacted group in a meaningful way (Brabender et al., 2004).

Current trends and research demands. The development and implementation of group work as an effective therapy for psychological distress has seen many paradigm shifts and debates over the past century. This unrest had caused many to revert to near zealotism in their adherence to their chosen philosophy behind group psychotherapy. Despite the advances in thought, a collaborative effort for development of the field was stymied by self-imposed segregation.

This dearth of collaboration was finally overcome by a force that continues to influence the realm of psychotherapy generally and group psychotherapy specifically. Managed health care has seen a meteoric rise during the past twenty years, and this rise has allowed managers of health care policy to mandate cooperation and empirical validation of the different theoretical orientations prevalent in the group psychology landscape. Managed health care organizations

have reintroduced the group psychotherapy movement to pragmatism through their desire for more cost effective and efficient treatment options. This pragmatism has facilitated the changes and collegiality that can be currently observed in the field of group psychotherapy, and allowed for the passing of earlier dogmatic views (Brabender et al., 2004).

As part of the quest for efficiency, much has been researched in the area of empirically supported treatments. Indeed, some argue that any other treatment options will become obsolete in the near future (Taylor et al., 2001). In hopes of meeting the demands of the health care organizations, many individuals have revisited the various aspects of group psychotherapy to provide an optimal combination of factors in the group setting. Much of the current research surrounding group psychotherapy is designed to investigate how effective group psychotherapy is compared to individual therapy at creating improvement in client distress, why that improvement occurs and what specific client characteristics contribute to maximizing this effectiveness. To further understand these contributing fields of research and the rationale for the current study, each will be highlighted further.

Outcome as a Measure of Effectiveness

To further investigate these research questions, a benchmark for comparative measurement needs to be established. While there may be various methods for measuring effectiveness in psychotherapy, client outcomes have become the standard by which an intervention's usefulness is evaluated. Indeed, Ogles, Lambert, and Masters (1996) argued that good clinical practice utilizes the measure of outcome to inform clinicians about the effectiveness of their interventions. Uninformed therapists run the risk of harming the client if they are not attuned to the improvement or deterioration that a client is experiencing (Ogles et al., 1996). Outcome can be measured through a number of instruments and can utilize many

different variables. Commonly, however, measuring outcome refers to a client-reported reduction in symptomatic distress. The change in symptomatic distress will be used as the criterion for comparison for this study.

Group Psychotherapy Compared to Individual Psychotherapy

One common question for researchers in the field of group work is how effective group psychotherapy is in comparison to individual therapy. As noted, change in client distress levels is frequently used to compare the effectiveness of both these intervention modalities, and therefore makes such comparisons relatively common and meaningful.

Group outcomes compared to individual outcomes. Research has indicated that group and individual therapy are both effective at symptom reduction as measured through outcome variables even when controlling for effect size, treatment and other variables (McRoberts et al., 1998). A review of 24 studies measuring the outcome of substance abuse interventions indicated that there was no difference between individual and group psychotherapy in terms of their effectiveness (Weiss, Jaffee, de Menil, & Cogley, 2004). A different meta-analysis has shown that 31 group studies and 13 individual studies showed no difference in effect-size for treatment for depressed youth between the different modalities (Weisz, McCarty, & Valeri, 2006). Similar improvements were shown between group and individual psychological treatments with cancer patients (Cwikel & Behar, 1999). A number of different studies have shown that individuals with eating disorders experience similar outcomes in symptom reduction regardless of placement in group or individual modalities (Chen et al., 2003; Nevenon & Broberg, 2005; Nevenon & Broberg, 2006). Research has also shown that group is as effective as individual therapy at improving reported outcomes for clients with history of abuse (Nolan et al., 2002), childhood Obsessive-Compulsive disorder (Barrett, Healy-Farrell, & March, 2004), and insomnia (Bastien,

Morin, Ouellet, Blais, & Bouchard, 2004). Numerous studies suggest that both the group and individual psychotherapeutic modalities are effective at treating a wide array of client issues.

This is not to say that group and individual therapy are always equal in all instances or for all mental health concerns. There are specific times when individual therapy may be indicated for treating symptom distress. Stangier, Heidenreich, Peitz, Lauterbach, and Clark (2003) found that for social phobia the use of cognitive interventions were effective when delivered in group format, but were more potent when administered in an individual format. Other research has shown that group psychotherapy may not be as effective as individual therapy for treating patients with medical impairments who also suffer from depression (Baines, Joseph, & Jindal, 2004; Mohr, Boudewyn, Goodkin, Bostrom, & Epstein, 2001). Moreover, clients who suffer from chronic, although stabilized, psychological symptoms may fare better in an individual format as well.

The body of research comparing client outcomes from group to those from individual therapy suggests that certain clients may benefit more from one modality than the other. These findings would also indicate that there are important considerations for clinicians who are faced with the decision of referring their clients to psychotherapeutic treatment. Additional insight into the mechanisms that facilitate change in symptom distress for clients in either modality could shed some light onto these considerations, and promote appropriate referrals.

Factors important to both group and individual psychotherapy. The unique environment created in any type of therapy interaction dictates that some individuals are more likely to benefit from therapy and some are not. Certain client variables contribute to this readiness or lack thereof (Clarkin & Levy, 2004). A good candidate for any form of therapy has been defined as demonstrating a number of influential traits, including expectancy about the help they will

receive from therapy, prior preparation for change, ego strength, psychological mindedness, and interpersonal relatedness (Clarkin & Levy, 2004).

A client's expectancy to receive benefit from any form of psychotherapeutic intervention has been correlated with the duration of treatment, but has shown an inconsistent correlation to outcome (Joyce & Piper, 1998). Prior preparation for change, defined as the "client's own preparation for behavioral, attitudinal, and emotional change as it intersects with help-seeking behavior" (Clarkin & Levy, 2004, p. 206), has been shown to be correlated with length of treatment and outcome, both during and after treatment (Prochaska, DiClemente, & Norcross, 1992). Ego strength is the presence of positive personality assets that can help a client overcome emotional and psychological stress, allowing the client to maintain an identity (Clarkin & Levy, 2004). A number of studies have demonstrated the link between high ego strength and treatment outcomes (Conte, Plutchik, Picard, & Karasu, 1991; Sexton, Fornes, Kruger, & Grendahl, 1990). Psychological mindedness speaks to a client's ability to understand others and their problems in psychological terms (Clarkin & Levy, 2004). Psychological mindedness, or insight, has demonstrated a varying influence into therapy outcome, but it is generally thought that insight contributes to more improvement in therapy (Baer, Dunbar, Hamilton, & Beutler, 1980). Interpersonal relatedness is one of the most frequently studied client factors (Clarkin & Levy, 2004). It refers to the client's ability to relate to other people, both historically and in current relationships. Interpersonal relatedness has also been shown to impact the therapeutic relationship, allowing clients to improve more quickly (Piper, Azim, Joyce, & McCallum, 1991).

Effectiveness of Group Psychotherapy

While psychotherapy utilizing any form of treatment modality provides demonstrated benefit to the client, various leaders in group psychotherapy's brief history have noted the power

of bringing individuals together with the common goal of improving psychological functioning. These leaders' experiences with groups suggested that the group format was helping their clients, but initially there was a dearth of research which could empirically validate their assumptions. Since those beginnings, groups have been researched extensively, in order to improve their utility, highlight the theory behind their effectiveness, and convince colleagues and skeptics that client change was facilitated through group psychotherapy's unique milieu.

Factors unique to group psychotherapy. While group and individual therapy are both helped by certain common factors, continued research has been conducted into why group psychotherapy is effective and how it differs from individual therapy (MacKenzie, 1997; Yalom & Leszcz, 2005). Much of the research has noted a grouping of factors that seem to contribute exclusively to the efficacy of group in producing client change and effective group environments. These factors can be summed into five distinct categories: formal change theories, small group processes, leader characteristics, group structural factors, and patient or client characteristics (Burlingame et al., 2003). These factors are commonly believed to interact with each other and impact group psychotherapy outcomes (Burlingame et al., 2003). Each will be explained further.

Formal change theories. The formal change theories component addresses how therapeutic change comes about and what interventions seem indicated. This would include the therapeutic orientation and specific theoretical underpinnings that a group leader follows. Adherents to the doctrine of group psychotherapy have debated which theoretical orientation is most adept at bringing about change for the group members (Burlingame et al., 2003). In an effort to establish best practice guidelines to maximize client improvement, much of the research on group psychotherapy has focused on this factor.

Interpersonal interactions. The interpersonal interactions commonly experienced in group are categorized as small group processes, Research in this factor has shown that group psychotherapy is often beneficial because of the social and relational interactions that take place in the “social lab” that group psychotherapy provides (Burlingame et al., 2003). Yalom (2005) identified a number of characteristics inherent in group process and the interactions that occur which contribute to its overall effectiveness. Among these are universality, altruism, development of socializing techniques, imitative behavior, cohesion, interpersonal learning and the corrective recapitulation of the family environment. When groups are able to more effectively incorporate one or more of these characteristics, group members experience greater improvement (Yalom & Leszcz, 2005). Although seemingly integral to group outcome, these factors are often thought of as separate from and researched somewhat independently from group effectiveness (Burlingame & MacKenzie, 2003).

Group leader characteristics. Another factor linked to the effectiveness of group psychotherapy is the characteristics of the group leader. The personality traits that a group leader displays can have a significant effect on the overall effectiveness of the group. Among these traits that impact the group are the leader’s openness and manner of interactions (Burlingame et al., 2003). A group leader who is comfortable with the group process and is adept at initiating the here-and-now content may provide a more meaningful group experience for the group members (Yalom & Leszcz, 2005).

Group structural factors. Group structural factors can be understood as the logistical considerations of running group. Some of the structural constructs researched are the frequency of therapy sessions, the setting or environment in which the group is held, and the number of participants in the group (Burlingame et al., 2003). Research has been done to survey the optimal

combination of these factors as they appear to contribute to improved attendance. When attendance is improved, client outcomes are likewise improved. While there are commonly followed beliefs as to what contributes to an optimal group, there have been no established guidelines.

Client characteristics. The last factor that is included in the five-factor model adopted by Burlingame et al. (2003) is patient (or client) characteristics. These characteristics can be demographical in nature, including traits such as age, gender and ethnicity, but may also speak to the inherent personality or interpersonal characteristics in the individual that impact his or her experience in group psychotherapy. Extroversion, sensitivity, expectancy of the helpfulness of group, etc., are examples of traits that are influential in determining the outcomes for the members of the group (Burlingame et al., 2003).

Client Readiness for Group Psychotherapy

As previously stated, all five factors contribute to the overall effectiveness of group psychotherapy and they often interact with each other to influence the group. However, it is often noted that of all these factors, the one most intricately tied to therapeutic outcome is client characteristics (Piper, 1994). This may stem from the notion in psychology that the individual is ultimately responsible for his or her treatment. Certain client characteristics are also believed to be good indicators of which clients will benefit from group and which will not (Piper, 1994; Yalom & Leszcz, 2005). Therefore, when looking to optimize client improvement in group psychotherapy, the factor of client characteristics warrants further investigation.

Main effect characteristics. Piper (1994) proposed that all client characteristics could be separated into either main effects or interaction effects. Main effects are characteristics where there is a direct correlation between the client characteristic and the likely outcome of therapy;

i.e., the aforementioned extroversion or being psychologically minded. Interaction effects, which would include any traits that help or inhibit a client from fitting certain therapeutic models that the therapist or group leader may use, which indirectly may lead the client to not derive as much benefit from the group experience.

Main effect characteristics are further divided by whether or not the trait tends to remain stable throughout therapy. Traits that are stable are designated as static or trait-like (Piper, 1994). These would include demographic characteristics such as gender, ethnicity, and intelligence. Main effect characteristics that may change are known as dynamic or state-like factors. Examples of these types of factors would include any shifting characteristics that the client develops during the course of therapy, such as the ability and desire to use the relational dynamics or here-and-now process of the group.

These main effect client characteristics have been shown to be vitally important to the overall efficacy of the group, and have been used to predict the group process (Burlingame et al., 2003; Piper, 1994), attrition rates of the participants (Piper, 1994), and therapeutic outcome (Bergin & Lambert, 1978; Piper, 1994). Of these potential areas for research, the area of interest in this study is the impact main effect characteristics have on effectiveness or client outcomes. The characteristics that are thought to contribute to effectiveness will be explored further.

Expectations. Client expectancies may include their desired length of treatment, expected outcome, etc. (Luborsky, Chandler, Auerbach, Cohen, & Bachrach, 1971). These expectancies directly affect various aspects of group psychotherapy. For instance, a client's individual hope that he or she will improve through group is shown to impact the overall outcome the client can expect (Luborsky et al., 1971). It is believed that client expectations are so intricately related to

treatment outcome that there has been a call for more universal use of this construct in predicting outcomes (Bostwick, 1987; Piper, 1994; Woods & Melnick, 1979).

Interpersonal skills. Another area that contributes to the effectiveness of group is the group members' interpersonal skills. Clients can demonstrate both positive and negative skills, either of which will alter the impact of the group for that client and possibly for other group members. Positive skills refer to behaviors that allow for positive interaction with others in a relationship. These can be manifest in areas such as sensitivity, social competence, likeability, and friendliness (Piper, 1994). Often individuals with these traits are well-liked and astute at navigating the social environment.

Since group psychotherapy can be much more challenging for the client than individual therapy, it has been expressed that clients using this modality need to demonstrate strong positive interpersonal skills (Woods & Melnick, 1979). Clients in group may be asked to self-disclose and self-explore in the context of other participants. Clients who do not demonstrate an ability for this type of openness may be at risk for early termination (Woods & Melnick, 1979). Moreover, it has been recommended that group leaders should not allow clients devoid of positive interpersonal skills into their groups, as doing so would compromise the function of the group (Piper & McCallum, 1994).

In contrast to positive social skills, negative interpersonal skills are the general propensity to behave socially in abnormal or detrimental ways. Examples of these types of traits are shyness, sociopathy (using others for gain), or defensiveness (Piper, 1994). Since these traits are detrimental to most social interactions, it follows that clients who demonstrate these skills may need to be screened out of the group process, so as not to hinder the overall effectiveness of the group for the other members (Morran, Stockton, Cline, & Teed, 1998). It has been shown that

negative interpersonal skills may lead to feelings of alienation and may also stifle any productive outcome the individual could gain from group (Morran et al., 1998). Clients display traits of deviant social behavior through antagonistic, aggressive, or overly competitive ways, which could negatively impact group and increase attrition rates among their fellow group members (Rutan & Stone, 2001). Therefore, Yalom (2005) noted that these individuals should be “deselected” from attending group before they assume their normal social role, which causes impairment for the other members’ progress. Because of their caustic nature, these negative interpersonal skills have been shown to be harmful to group process in general, but more specifically to cause drop-out, poor social processing, and obstruction of the positive group processing that is so crucial to beneficial group experiences (Piper, 1994).

Group Selection Measures

Despite evidence that group psychotherapy provides significant benefits, clinicians are often faced with the decision of whether group is the modality of choice for their client. Due to the specificity of client characteristics needed to facilitate group work, it would also hold true that certain clients may be better suited for individual therapy (Yalom & Leszcz, 2005). It is evident that factors such as each client’s expectancies and positive versus negative social skills are influential in determining the efficacy of group psychotherapy for the entire group. Because of this, these same factors may be used in determining the optimal blend of personalities and traits that will facilitate healthy group process. Screening for these traits could greatly assist group leaders in systematically forming groups that have a better chance of providing change and distress alleviation for the group members (Piper, 1994). It would be advantageous for group leaders to have a measure that allows for selection based on client answers to these critical factors.

However, there is no universal protocol for which measure to use. Because of this lack of consensus, research teams will often create their own measure or modify an existing one to better fit their needs (MacNair-Semands, 2002; Mussell et al., 2000; Safren, Heimberg, & Juster, 1997). A general consensus in this area would appear beneficial to the research.

Group Therapy Questionnaire. A few such measures are available. The prototypical measure in this domain may very well be the Group Therapy Questionnaire (GTQ), which was developed by MacNair-Semands (2002). The GTQ was developed as a way of assessing clients' interpersonal traits, goals, motivation, and the typical role that they assume in group formats. The GTQ was created as a clinical tool that would aid leaders in forming their groups, and in fact it showed effectiveness in that area. In recent trials, the GTQ was able to affectively predict 58% of clients' attrition behavior (whether they completed group or terminated early) (MacNair-Semands, 2002). Despite this promise, this measure (along with many others that attempt to predict group benefit) appears to be too lengthy for consistent and systematic use. Trials have shown that the measure takes over 45 minutes to complete, and therefore has only been effectively used in full clinical assessment on intake (MacNair-Semands, 2002). Thus, a need remains for a shorter effective measure that can help clinicians.

The Group Selection Questionnaire. The Group Selection Questionnaire (GSQ; Cox et al., 2004) purports to be a measure that can fill the void currently seen in group selection measures. The GSQ requires minimal time for completion, is inexpensive, and may aid group leaders in screening for appropriate group members. The GSQ is a 19-item questionnaire that is scored on a 5-point Likert-type scale, which measures clients' "readiness" for a group psychotherapy experience. Thus far, it has been shown to be consistent on determining this readiness based on three factors: expectancy, participation, and demeanor (Cox et al., 2004). The

measure was created from a review of the literature on group selection and uses clients' expectancies and their propensity for positive and negative interpersonal skills. Cox et al. (2008, 2004) have shown that the GSQ has been effective in predicting attrition, process, and outcome in group psychotherapy. This would suggest that the GSQ may foretell a client's potential for benefiting from group. Therefore, the GSQ may be used as a short screening measure for group leaders to use in forming more effective groups and to predict which clients will flourish in the type of relational environment that group utilizes. The GSQ could be the answer to the recent call in the literature for a measure that could assess these characteristics (Piper, 1994; Yalom & Leszcz, 2005).

The Group Selection Questionnaire has been empirically studied using a number of different methodologies and populations. The first of these was conducted using traumatized youth in Bosnia as part of the UNICEF School-Based Psychosocial Program for War-Exposed Adolescents. A version of the GSQ was administered to the participants prior to the start of therapy and was shown to significantly predict change in outcome for those who participated in group psychotherapy (Cox et al., 2004; Davies et al., 2002). Another study attempted to replicate these findings with sample of students from the Counseling and Career Center at Brigham Young University. In this study, participants were tracked only if they were referred to group (Cox et al., 2004). A later study using psychiatric inpatient participants in Germany demonstrated similar structure to the previously established model for the measure (Loffler et al., 2005).

Purpose of the Study

Despite the diverse methods used to evaluate the GSQ, this study differs from what has previously been done in some significant ways. Prior to this study, participants who had been referred to individual or mixed (both group and individual) therapy after completing the GSQ

hadn't been tracked or included in the data analysis. Furthermore, the current population sample does not rely exclusively on participants who suffer from significant psychiatric concern or distress. Given the potential differences in the current study, additional information about the GSQ can be gained that could help clinicians utilize the data it provides.

This study attempts to verify the overall sensitivity of the GSQ by investigating its predictive capabilities through distress outcome using the Outcome Questionnaire (OQ-45; Lambert, Gregersen, Burlingame, & Maruish, 2004) on a significant sample size. Despite its demonstrated ability to accurately predict improvement through the use of group psychotherapy, there is some thought that the GSQ could be merely assessing readiness for any form of therapy, rather than group specifically. It is therefore hypothesized that the GSQ is not more sensitive to the specific characteristics that indicate a good match for group psychotherapy, and will not effectively differentiate between a good group candidate and a client simply prepared for any modality of therapy. If the GSQ is, in fact, able to effectively discriminate between clients who will benefit more fully from group or individual therapy, clinicians could be better prepared to make appropriate referrals. If the GSQ continues to hold up under scrutiny, it could help change the landscape of client selection for group psychotherapy and provide a resource that has been sought after in the literature and discussion in group research. Hypotheses for this study include the following:

Hypothesis 1: The subscales of the Group Selection Questionnaire (Positive Participation, Negative Participation, Demeanor, and Expectancy) will be correlated with OQ-45 change.

Hypothesis 2: The subscales of the Group Selection Questionnaire (Positive Participation, Negative Participation, Demeanor, and Expectancy) will not predict OQ-45 change when evaluated based on treatment modality.

Methods

Participants

Participants were drawn from the clinical clientele at the Counseling and Career Center (CCC) at Brigham Young University. Clients coming to the site for services were given the opportunity to participate in the research, and a sample of those that met the criteria for inclusion and gave consent to participate were included in the study. All participants were full-time students at the time of treatment (a requirement for psychological services at the Counseling and Career Center).

Therapists and Group Leaders

Therapists providing services to the participants in this study are of diverse training, theoretical background, and years of experience leading groups and performing psychotherapy. Leader characteristics are not under investigation for this study and are thus not assessed.

Procedures

The CCC requires students desiring psychological services to complete the Group Selection Questionnaire upon intake, and to complete the OQ-45 upon intake and before each subsequent therapy session. This data is stripped of any identifying information and then stored in the CCC central database for subsequent analysis.

Data pulled from the CCC database for these analyses spanned three years (from November 26, 2006–December 31, 2009). Using the archival data, initial OQ-45 score, final OQ-45 score, number of individual and group sessions, and GSQ item responses were gathered for selected clients. Participants were excluded if researchers surmised that the last OQ-45 recorded is not representative of termination of treatment. The focus of this research is on completed courses of treatment, and therefore, participants who started therapy in the final two months of

the data collection period and whose final OQ-45 score was recorded within the last three weeks of data collection were omitted.

Participant data was then separated into three categories based on modality of treatment: group, individual, or mixed. Participants were considered part of the group modality category if they had one or more sessions in group and two or fewer individual sessions during their course of treatment. Participants in the individual category had two or more individual sessions, and no other types of psychotherapy. The third category, mixed modality, was for participants who had one or more group sessions with more than two individual sessions. The allowance for two individual sessions for members in the group modality was necessitated by the current triage system in place at the CCC. All clients who come to the CCC are required to complete intake interviews before referrals are given for group psychotherapy. These clients were assigned to these treatment groups on the basis of recommendation and referral from the intake counselor, and were not randomly assigned to different groups.

Instruments

This study employed two separate instruments in an effort to measure client characteristics and individual symptom levels throughout treatment. Client characteristics such as expectancies, clients' abilities to participate in interpersonal interactions effectively, as well as clients' tendencies to act in interpersonally deviant ways were measured using the Group Selection Questionnaire (GSQ; Cox, 2008; Davies, Burlingame, & Layne, 2002), the measure under investigation.

The GSQ. The GSQ (Cox, 2008; Davies et al., 2002) is a short 19-item, self-report questionnaire, scored on a 5-point Likert-type scale. The GSQ has demonstrated four distinct factors, which are labeled Positive Participation, Negative Participation, Expectancy, and

Demeanor. Clients' scores on the Expectancy, Demeanor, and Positive and Negative Participation scales were found in previous research to predict measures of group process, outcome, and attrition (Cox, 2008; Davies et al., 2002).

The OQ-45. In addition to the Group Selection Questionnaire, clients completed the Outcome Questionnaire (OQ-45) (Lambert, Gregersen, Burlingame, & Maruish, 2004). It is a 45-item, self-report measure rated on a 5-point Likert-type scale. It was developed according to a tri-dimensional conceptualization of outcome assessment. The measure is designed to sample an individual's subjective discomfort (the way a person feels inside; SD); their interpersonal relationships (how they interact with significant others; IR); and their social role performance (how they are functioning in life tasks, such as at work or in school; SR). The measure was designed to sample a wide variety of behavioral and psychological aspects of clients' lives, and it is considered widely applicable as an indication of clients' symptom status, as well as their outcome in therapy. Estimates of test-retest reliability in student populations range from .78 to .84 for scale scores (Lambert et al., 2004). The measure has also demonstrated excellent internal consistency, concurrent validity, and reliability estimates significant at the .01 level. Research has demonstrated high correlations of both total scores and scale scores with tests measuring similar constructs.

Statistical Analyses

An a priori power analysis was run to verify the number of participants needed to obtain an effect size similar to that of previous research investigating the correlation between the GSQ and its subscales and outcome measures (Cox et al., 2004). The average power of all the correlations found, both significant and non-significant, yielded an effect size of 0.16. When using only the correlations found to be significant at the .05 level, an average effect size of 0.34

was obtained. The G*Power 3 program (Faul, Erdfelder, Lang, & Buchner, 2007) was utilized to calculate the number of participants needed to achieve these same effect sizes with the current study. The analysis was run for the omnibus multiple regression models with three predictor variables, an alpha level of 0.0125 (based on the Bonferroni adjustment of alpha for the number of tests run) and a power level of 0.9875. These power analyses suggested an N of 180 to obtain an effect size of .16 (the average of all reported correlations of previous research) and an N of 90 to obtain an effect size of .34 (the average of only the significant correlations in previous research).

An N of 90 would allow for 30 participants in each modality category (individual only, group only, or mixed). When an N of at least 30 is achieved, the curve of the sample will more closely approximate that of the population curve (Sirkin, 1999). While reportedly sufficient, an effect size of .36 is considered large by Cohen's conventions for effect sizes of multiple regressions (Cohen, 1988), and may not be sufficiently sensitive for the purposes of this study. Using the effect size of 0.16 also presents a problem. It appears to be artificially lowered, as most of the correlations used to calculate this effect size were non-significant, and therefore not representative of overall effect sizes found in the research.

As the purpose of running an a priori power analysis was to find the N necessary to obtain a desired effect size while minimize the expense of unnecessary time and energy in collecting superfluous participants, an N of 135 was considered an appropriate compromise. This would require 45 participants in each category and produce an effect size of .22, which is considered a medium effect size (Cohen, 1988) and appears to be consistent with the research.

A preliminary investigation of the archival data demonstrated the relative lack of available participants in the *group only* category. The number of participants that were

categorized as either *mixed* or *individual* far exceeded the number categorized as *group*. As such, all of the *group* participants were included in the present analysis, and a sample of the *individual* and *mixed* participants were selected to match the number of *group only* participants. To the extent possible, cases were drawn from the *individual* and *mixed* modalities that matched the initial OQ-45 score recorded for the participants from the *group* modality, as research has shown that a client's initial OQ-45 score is one of the single best predictors of total OQ-45 change, and this would allow for more control over the confounding effects of this variable.

All statistical analyses of gathered data were conducted using SPSS 17.0. Descriptives and correlation analyses were conducted for the GSQ total score, factor scores (Positive Participation, Negative Participation, Demeanor, Expectancy), initial OQ-45 score, and total change in OQ-45 scores to determine the level of relationship between them.

Four multiple regressions were run to explore the ability of the GSQ subscale scores to predict OQ-45 change, based on the modality of treatment. All regressions were conducted with an enter method with blocks. The first block included the type of treatment received (individual, group, or mixed). The second block included the respective subscale of the GSQ (Positive Participation, Negative Participation, Demeanor, or Expectancy). The third block included the interaction effects between the type of treatment received and the respective subscale.

In order to analyze the nominal variable of *treatment modality*, dummy coded variables were created to allow for comparisons. The variables were coded as *Group* or *Not Group*, *Mixed* or *Not Mixed* and *Not Mixed* and *Not Group*. This allowed for the initial constant beta weight of the regression to represent the *individual* treatment modality and would allow for *individual* treatment as the comparison group.

The continuous subscale scores were also centered. Failing to center the continuous variables increases the likelihood that multicollinearity would be introduced into the regression equations. High multicollinearity leads to complications when analyzing the coefficients in the regression equations (Aiken & West, 1991).

The regression equations followed the model: $\hat{Y} = b_1X + b_2Z + b_3XZ + b_0$ (Aiken & West, 1991), as listed in Table 1. The regressions were run in four different stages, and a Bonferroni adjustment was applied to compensate for the multiple tests (Rosenthal & Rubin, 1984). The revised alpha level set for each test based on this adjustment was 0.0125, so regression equations were only considered significant if the F value for the model was significant at this level.

The hypothesis stemming from the research questions was that the models proposed would not significantly predict OQ-45 score change. Furthermore, it was hypothesized that the interaction effects between the subscales and the treatment variables would not significantly contribute to the overall model effectiveness.

Table 1

Multiple Regression Equations

Equation Number	Formula
(1)	OQ-45 Change = b_1 Positive Participation + b_2 Modality + b_3 Interaction between PP&M + Constant
(2)	OQ-45 Change = b_1 Negative Participation + b_2 Modality + b_3 Interaction between NP&M + Constant
(3)	OQ-45 Change = b_1 Demeanor + b_2 Modality + b_3 Interaction between D&M + Constant
(4)	OQ-45 Change = b_1 Expectancy + b_2 Modality + b_3 Interaction between E&M + Constant

Results

Demographics

There were a total of 156 participants included in the data analysis, with 52 from each treatment modality. From the archival data, 24 participants were devoid of demographic data. Of the remaining 132 participants, 84 were female and 48 were male. The relationship status of the participants was such that of the 132 participants, 120 were single, 9 were married and 3 did not answer. When asked to report their nationality, 122 reported being from the United States, 4 reported being international students, and 6 did not answer. There were no differences in distribution of demographic data between the treatment modalities.

Treatment Group Comparisons

Collected data were explored for descriptive information for the different treatment modalities (see Table 2), and preliminary testing for confounding differences in the data between the treatment categories was performed.

The OQ-45 initial scores of clients in the different treatment categories were compared using a one-way ANOVA. A significant difference was found ($F(2, 153) = 4.48, p < .05$), such that participants in the mixed modality ($m = 76.79, sd = 20.63$) had a significantly higher initial OQ-45 score than either the group only ($m = 65.29, sd = 23.39$) or individual ($m = 65.35, sd = 23.52$).

A one-way ANOVA was computed comparing the OQ-45 change scores of participants in the three treatment categories. There was no significant difference found between the types of treatment a participant received and the eventual OQ-45 change score they reported ($F(2, 153) = .299, p > .05$), indicating that all forms of treatment were equally effective at impacting symptom distress as recorded by the OQ-45.

Table 2

Descriptive Data by Treatment Modality

		<i>N</i>	Mean	<i>SD</i>	Min	Max
GSQ Total Score	Group	52	53.67	8.574	37	71
	Mixed	52	56.44	11.439	32	79
	Individual	52	53.98	9.747	34	74
Positive Participation	Group	52	25.12	5.996	13	36
	Mixed	52	26.52	7.326	12	43
	Individual	52	24.12	6.205	11	38
Negative Participation	Group	52	12.31	2.934	7	19
	Mixed	52	13.92	3.920	5	20
	Individual	52	13.46	3.305	7	20
Demeanor	Group	52	6.58	2.163	3	11
	Mixed	52	5.83	2.455	3	14
	Individual	52	5.81	2.214	3	12
Expectancy	Group	52	9.67	2.684	5	15
	Mixed	52	10.17	3.228	4	15
	Individual	52	10.60	3.063	3	15
OQ-45 Initial Score	Group	52	65.29	23.390	11	115
	Mixed	52	76.79	20.635	41	119
	Individual	52	65.35	23.518	11	118
OQ-45 Change Score	Group	52	-12.52	21.231	-62	37
	Mixed	52	-12.13	24.414	-78	46
	Individual	52	-9.40	21.393	-53	54
Number of Total Sessions	Group	52	8.06	3.274	4	19
	Mixed	52	11.50	3.807	6	22
	Individual	52	7.04	2.417	4	13
Number of Individual Sessions	Group	52	.83	.706	0	2
	Mixed	52	5.58	2.235	3	10
	Individual	52	5.73	2.410	2	12
Number of Group Sessions	Group	52	6.42	3.214	2	19
	Mixed	52	4.65	2.736	2	12
	Individual	52	.00	.000	0	0

Another one-way ANOVA was computed comparing the average number of sessions used between participants in the three treatment categories. There was a significant difference found between the average number of sessions a participant received ($F(2, 153) = 27.457, p < .001$), such that participants in the mixed modality ($m = 11.50, sd = 3.81$) had a significantly higher number of sessions than either the group only ($m = 8.06, sd = 3.27$) or individual ($m = 7.04, sd = 2.42$).

To verify consistency in the GSQ subscale scores, a one-way ANOVA was calculated comparing the Positive Participation, Negative Participation, Demeanor, and Expectancy subscale scores between participants in the three categories. No significant differences were found for Positive Participation ($F(2, 153) = 1.78, p > .05$), Demeanor ($F(2, 153) = 1.92, p > .05$), or Expectancy ($F(2, 153) = 1.23, p > .05$). A significant difference was found for Negative Participation ($F(2, 153) = 3.10, p < .05$), such that individuals in the mixed category ($m = 13.92, sd = 3.92$) scored significantly higher than individuals in the group category ($m = 12.31, sd = 2.93$), meaning individuals assigned to the group-only treatment modality endorsed fewer characteristics that indicate an inability to engage openly in groups.

Findings Related to the Hypotheses

Having explored the treatment group comparisons, the information gathered suggests that further analyses of the data for research hypotheses are warranted and permitted.

Hypothesis 1: GSQ correlations with OQ-45. To test the first hypothesis, Pearson correlation coefficients were calculated to explore the relationships between the GSQ subscale scores (Positive Participation, Negative Participation, Demeanor, and Expectancy) and the overall OQ-45 change score (see Table 3). Based on previous research in which the GSQ was shown to correlate with OQ-45 change (Cox et al., 2004), it was hypothesized that significant

Table 3

Relationships Between Group Selection Questionnaire Subscale Scores and Outcome Questionnaire - 45 Change Scores

Correlations, $N = 156$

		Initial OQ-45	OQ-45 Change
GSQ Total Score	Pearson Correlation	.256**	-.235**
	Sign (2-tailed)	.001	.003
Positive Participation	Pearson Correlation	.227**	-.181*
	Sign (2-tailed)	.004	.024
Negative Participation	Pearson Correlation	.177*	-.183*
	Sign (2-tailed)	.027	.022
Demeanor	Pearson Correlation	.195*	-.037
	Sign (2-tailed)	.015	.646
Expectancy	Pearson Correlation	.005	-.149
	Sign (2-tailed)	.950	.064

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

relationships would exist. For the analyses that follow, OQ-45 change scores were calculated by subtracting the final OQ-45 score from the initial score. This created an inverse variable where lower OQ-45 change score actually indicates more symptom distress relief, or improvement.

Significant negative correlations were found to exist between total OQ-45 change score and the two subscales of Positive Participation ($r(154) = -.181, p < .05$) and Negative Participation ($r(154) = -.183, p < .05$), indicating a linear relationship between the two. This would indicate that as a client's reported lack of ability to participate well in group increased, the change in symptom distress they experienced decreased. The other two subscales, Demeanor ($r(154) = -.037, p > .05$) and Expectancy ($r(154) = -.149, p > .05$), showed no significant relationships with OQ-45 change.

As recent developments in the scoring of the GSQ have shown some inconsistency in composition of the subscales, a Pearson correlation coefficient was also calculated for the relationship between OQ-45 change scores and the overall total GSQ scores. The results indicated a significant negative relationship ($r(154) = -.235, p > .01$) meaning that as a clients preparedness to benefit from a group increased, the amount of symptom relief they experienced through therapy decreased.

To explore the nature of this relationship, additional correlations were calculated for the relationships between the initial OQ-45 score and overall OQ-45 change, and between the overall total GSQ score and initial OQ-45 score. A significant negative relationship was found to exist between the initial OQ-45 score and overall OQ-45 change ($r(154) = -.528, p > .001$). This would suggest that when a client reports higher initial levels of symptomatic distress, the overall change in their OQ-45 score generally decreased more (indicating greater change or relief in symptomatic distress).

A significant positive relationship was also found between GSQ total score and OQ-45 initial score ($r(154) = .256, p > .001$) such that as a clients readiness to benefit from group increased (meaning lower GSQ scores) their initial symptom distress was lower.

Hypothesis 2: GSQ ability to predict improvement through group. To test the second hypothesis, four multiple regressions were run using the block enter method. Each analysis included three blocks. The first block included the dummy coded categorical variables representing group, individual, and mixed therapy. The second block added the variables of the centered subscale scores. The third block added the interaction effects of the variables entered in the first two blocks. The equation of interest for this study was entered in the third block and incorporates all of the main effects and interaction effects, but the block enter method allows for investigation of the relative contribution of the preceding variables.

The first of the proposed multiple regressions was calculated predicting participants' OQ-45 change scores using the main effect variables of the Positive Participation subscale score and category of treatment and the interaction terms between the main effects. The regression equation was not significant ($F(2, 153) = 1.33, p > .05$) with an R^2 of .043. This indicates that Positive Participation was not a significant predictor of OQ-45 change given the modality of treatment the participant experienced.

The second proposed multiple regression analyzed the predictive ability of the main effect variables of the Negative Participation subscale score and category of treatment and the interaction terms of the two on the observed OQ-45 change scores. Again, the regression equation was not significant ($F(2, 153) = 1.40, p > .05$) with an R^2 of .044, implying that OQ-45 change scores are not accurately predicted by the Negative Participation subscale scores when accounting for the type of treatment a participant received.

The third multiple regression equation investigated whether the main effect variables of the Demeanor subscale and the category of treatment and their interaction terms could accurately predict OQ-45 change scores. The equation was not significant ($F(2, 153) = 0.95, p > .05$), with an R^2 of .031. The Demeanor subscale and a participant's treatment category are not able to significantly predict the OQ-45 change score.

The final proposed multiple regression was calculated predicting OQ-45 change scores using a participant's Expectancy subscale score, the type of treatment they were receiving and their interaction terms. This did not yield a significant equation ($F(2, 153) = 0.95, p > .05$) with an R^2 of .031. Once again, when accounting for the type of treatment a person received, the OQ-45 change score was not predicted by the Expectancy subscale.

Post-hoc Analyses

Due to the concern that the number of participants would not yield sufficient power in the analysis, post-hoc power analyses were performed to explore the impact this may have had on the results. Using an effect size (f^2) of 0.03 to 0.04 as found using the R^2 values of the regressions, the post-hoc analyses suggested a power of 0.2 to 0.3, which falls well below the suggested value of .08, as suggested by Cohen (1988). This is an indication that Type II error may be inflated, and the results could be endorsing a false negative.

Discussion

Through the analysis of the data, this study has provided valuable information about how effectively the GSQ subscale scores were able to predict improvement in clients' perceived symptomatic distress. Furthermore, information was obtained about the ability of the GSQ subscale scores to predict appropriate treatment modalities to maximize improvement in perceived symptomatic distress.

Summary of Results

The initial analyses of the aggregate data showed there were no significant differences between the types of treatment the client received and the eventual change in distress experienced as reported on the OQ-45. All treatment modalities (group, mixed, and individual) were similarly effective at treating and remediating subjective distress. Despite the lack of statistical significance, the observed differences between the treatment modalities may be useful at the clinical level. Clients in both the mixed and group psychotherapy treatments demonstrated an average decrease of 12 points on the OQ-45, which indicates a greater reduction in distress than the 9-point reduction observed for clients in individual therapy. Furthermore, the analysis of the number of sessions consumed to obtain these results also indicate that group and individual therapy used significantly fewer sessions to impact this change than the mixed modality. Given these two findings, group psychotherapy seems to be indicated as the most effective and efficient treatment option.

There were no significant differences between the treatment modalities in the participants' average GSQ subscale scores. This improves the variability of GSQ subscale scores in each of the treatment types, and approximates random assignment to treatment type. However, it also indicates that despite its availability, clinicians did not fully utilize the GSQ total and

subscale scores when considering treatment options for the clients they were working with.

Participants who scored high on the GSQ and its subscales were as likely to be referred to group psychotherapy as individual therapy or mixed therapy, despite the indication that they may not benefit as readily from the interpersonal environment group provides.

Reflections on Results

The results of the current study were found to be consistent with the proposed hypotheses. There were however, some interesting findings that differed from previous research conducted on the GSQ. These findings will be noted and explored further.

Hypothesis 1. In response to the first hypothesis of this study, it was found that overall OQ-45 change scores were significantly correlated with the total GSQ, Positive Participation and Negative Participation scores. These findings trend with previous studies that also showed clients' ability to benefit from group was impacted by their endorsement (or lack thereof) of traits that would allow them to use the group environment appropriately.

A somewhat surprising finding was that the GSQ total and subscale scores were negatively correlated with OQ-45 change. This suggests that if a client initially reported less readiness for group psychotherapy or anticipated ability to participate effectively in it, he or she would eventually experience greater reduction in symptomatic distress through the course of treatment, regardless of what modality that treatment was. This seems counterintuitive, as the research hypothesis was that the GSQ is measuring global readiness for therapy traits. A lower GSQ subscale or total score would correlate with characteristics that are considered to be indicators of clients who might positively benefit from therapy.

These findings may be partially explained by the negative correlation also found between initial OQ-45 scores and overall OQ-45 change scores (-.528, significant at the $p < .001$ level in

the data collected for the study). One hypothesis for this negative correlation stems from the 5-point Likert-type scale scoring used with the OQ-45. Lower initial OQ-45 scores may experience a floor effect. An individual endorsing minimal initial symptom distress (low initial OQ-45 score) will likely not experience significant negative OQ-45 change scores (meaning a reduction in symptom distress), as there is not enough variability in the lower end of the OQ-45 scoring range.

Client defensiveness present in the initial stages of therapy may artificially lower willingness to report subjective distress, as they may prefer to be seen as having it all put together. If such an instance were to occur, it is possible that through the course of therapy, as defensiveness is reduced, a client may be more likely to report honestly and admit to increased distress. While this may be seen as an effective outcome in therapy, it would lead to positive OQ-45 change scores (meaning an increase in symptom distress).

Another possible explanation for this is that the potential attenuation of the OQ-45 scores may have impacted the direction of change noted. Natural regression to the mean would imply that initial scores that tend to be extreme on either the high and low end of the scale would trend more towards the mean with repeated measures. As low GSQ scores were correlated with low initial OQ-scores, it would follow that regression to the mean would produce a positive OQ-change score (more distress reported when they approach the mean). The reciprocal would also be true, and these events would help partially explain the negative correlations.

Related to this, one potentially confounding finding for this study was the significant positive correlations between the overall initial OQ-45 scores and most of the GSQ subscale scores and also the GSQ total score. This indicates that as clients endorsed more symptomatic distress prior to coming into therapy, they also reported less readiness to benefit from group

psychotherapy. This was significant ($p < .05$) for all the subscales except Expectancy. It would seem that clients who are in high distress as measured by the OQ-45 are less likely to endorse a sense of developed interpersonal skills.

One hypothesized rationale for these correlations may be the overlap between the foci of the two assessments. One of the domains the OQ-45 purports to assess is a client's interpersonal relationships (IR), where poorer relationships are reflected by higher OQ-45 scores. This domain may mirror the focus areas of the GSQ, as it seeks to explore an individual's interpersonal interaction and communication skills. It has been argued that interpersonal interaction and communication skills are important to positive interpersonal relationships (Yalom & Leszcz, 2005). With these connections established, it isn't too surprising that some of the items from the OQ-45 appear to assess for the same constructs as items in the GSQ (see Table 4).

Table 4

Item Similarities Between the OQ-45 and the GSQ

GSQ Items	OQ-45 Items
I like to share my feelings with others	I get along well with others.
I am an open person	I am satisfied with my relationships with others.
Others tend to see me as withdrawn	I feel lonely.
I argued for arguments sake	I have frequent arguments.
I am abrupt with others if I feel strongly about what I am saying	I have trouble getting along with friends and close acquaintances.
If I disagree with what someone is saying, I will interrupt them before they can.	I have too many disagreements at work/school.

The relationship between the GSQ total score and most of its subscale scores with the initial OQ-45 score may yield another concern. It is possible that the GSQ score may artificially indicate individual therapy for clients who report significant distress.

An interesting artifact of these potential similarities between the GSQ and the OQ-45 may occur when individuals with higher interpersonal distress (as reflected by an elevated OQ-45 score) subsequently report a higher score on the GSQ, indicating a lack of preparation for group and potentially greater improvement in individual therapy. If clinicians were not aware of the nuances of the scoring and items in the GSQ, they may erroneously refer to individual therapy, when group may be the very treatment indicated to help their client's experience better interpersonal relationships.

Another anomalous finding from the present study was the lack of significant correlation between the Expectancy subscale and OQ-45 change. Previous studies (Cox et al., 2004; Davies et al., 2002; Loffler et al., 2005) showed a consistent link between a client's expectation to benefit from group and the eventual improvement experienced.

The primary hypothesis for this finding is the difference in samples for this study in comparison to those for the preceding studies. There are a number of divergences from prior sampling methods. As previously noted, this is one of the first studies that included individual and mixed treatment modalities and compared their GSQ scores with changes in outcomes. It is thought that the addition of individual and mixed therapy participants to the sample may have altered the strength of the correlation. To check this assumption, a correlation was run using the data from clients who were treated using group psychotherapy exclusively, to verify if the group-only participants demonstrated a significant relationship between the Expectancy subscale. This analysis showed that the correlation for group only was larger, but still not significant ($r(50) = -$

.182, $p > .05$). These results for the group-only subset were trending in the same directions as previous research, and may have approximated similar results if given a similar number of participants. Previous studies had three or four times more group-only participants, which would have supplied additional power to the analysis.

Another related explanation for the lack of correlation between Expectancy and OQ-45 change scores is the difference in methodology between this study and those employed in previous studies. For the current study, the GSQ data was collected at the client's first contact with the Counseling Center. This is a marked difference from other studies that administered the assessments to participants after they had already committed to the group psychotherapy process. An appropriate therapist referral and orientation to group psychotherapy has been shown to lead to a greater expectation of benefit from group and a greater chance to improve over the course of treatment in the referred client (Burlingame et al, 2006). Thus, Expectancy and the resulting correlation to outcome may have been influenced by the therapist's selling group to the participants in previous studies, which was absent in the current study.

Hypothesis 2. The second hypothesis tested was that GSQ subscale scores, treatment modality, and their interaction effects would not be able to predict OQ-45 change scores. As previously stated, it was hypothesized that the GSQ may be measuring global readiness for therapy rather than readiness for group psychotherapy specifically. The multiple regression equations showed no significant ability to predict the OQ-45 change score. Furthermore, the variables under most scrutiny were the interaction terms included in the equations, as they measured the relative predictive power of the effects of the GSQ subscale scores given the specific levels of the categorical (or treatment) variable. These interaction terms were not found to be significant predictors of change scores. This may be an indication that, while the subscale

scores of the GSQ have a demonstrated relationship with OQ-45 change scores, they may have no significant ability to differentiate between clients who would benefit more from group psychotherapy versus those who benefit most from individual therapy or mixed therapy.

Implications of Results

This study was able to re-create the findings of Cox (2008), wherein the GSQ total score was able to predict psychotherapeutic benefit and change in symptomatic distress as measured by the OQ-45. However the ability to predict benefits from psychotherapy was not exclusively sensitive to the group modality. It was also noted that the general test for discriminate ability in the GSQ subscale scores (Positive Participation, Negative Participation, Demeanor, and Expectancy) indicated that they were equally unable to accurately predict who would benefit most from group psychotherapy or who would benefit most from individual or mixed psychotherapy treatments.

One interpretation of these findings was alluded to previously. As the GSQ and OQ-45 measure similar constructs, the co-linearity between the two may have reduced the ability to accurately measure the variability accounted for by the GSQ and its subscales. Since the OQ-45 reports poor interpersonal relationships as systematic distress, it would follow that an ability to improve these interpersonal relationships would reduce reported symptomatic distress. Research has shown that one of the most effective ways to improve interpersonal interactions is through group psychotherapy (Yalom & Leszcz, 2005). A client who endorses an inability to share feelings with others, an argumentative stance, or the tendency to withdraw from social environments would score high on the GSQ, indicating he or she is not currently an appropriate candidate for group psychotherapy. It could also be hypothesized that these clients are the very

ones who could benefit most from the milieu of group psychotherapy. Exposing such a client to group could create dramatic gains that would be recorded in a lowered OQ-45 score.

If this were the case, then the Group Selection Questionnaire may not be selecting who would be appropriate or inappropriate for group psychotherapy, but rather providing an indication of clients' readiness to benefit from group psychotherapy, as both high and low scorers on the GSQ could benefit from group in different ways.

Another implication of the findings of this study was that while the GSQ subscale scores of Positive Participation and Negative Participation were significantly correlated with OQ-45 change scores on their own, Demeanor and Expectancy were not. This may indicate that the additional items used to create the Demeanor and Expectancy subscales could be superfluous, adding little information not already accounted for by the other items. The Demeanor subscale was especially ineffective at predicting OQ-45 change and furthermore was not correlated significantly with the overall GSQ total score. The items used to create the Demeanor subscale may provide useful information, but are not contributing to the GSQ's ability to predict outcome change. The overall makeup of the GSQ may need refinement and exploration to understand the contribution or necessity of each individual item.

Limitations

There are a number limitations inherent in this study that may minimize the generalizability and validity of the findings. Perhaps most notable is the current flux in the scoring protocols and subscale composition of the Group Selection Questionnaire. Research coming out during the collection of the data used in this study used exploratory and confirmatory factor analyses to change the items that load on different subscales and has called into question which items need to be reverse scored (Cox, 2008). These new developments have collapsed the

Negative Participation and Positive Participation subscales into one single Participation subscale. Furthermore, discussion about these issues has suggested that the Demeanor subscale be disintegrated into critical items, which inform clinicians of client characteristics that could greatly minimize a client's ability to benefit from group psychotherapy and also potentially distract other members in the group. These issues limit the usefulness of the findings in this study, as the subscales used and analyzed are essentially outdated. Utilizing current factor loadings to inform the scoring templates for total GSQ and subscale scores may have yielded better predictive ability.

Another limitation of the study is the nature of the statistical analyses used (specifically multiple regressions). These analyses may not be sensitive enough to the rates of change over the course of treatment, as they look at aggregate impact at the end of treatment. Analyzing similar data using hierarchical linear modeling (HLM) may yield interesting findings about the rates of improvement based on matching GSQ treatment recommendations and received treatment modality. It is possible that clients indicated for group psychotherapy are experiencing more pronounced symptom distress reduction at a quicker rate initially if referred to group psychotherapy. These types of rates of change were not explored and would not be noticed without the use of the more sensitive analytic procedures.

One limitation frequently seen in research is the size of the sample used. This study was no exception. While the sample size obtained for this study was selected because of its reportedly sufficient power, the small sample size used in these analyses may limit reliability. Post-hoc power analyses showed that the power of the present study was significantly limited by the small effect sizes of the multiple regressions. This could be in part due to the size of the sample, but could also be attributable to a small effect actually in the data. A larger sample size where a

bigger random sample of each type of treatment modality was used could improve the reliability of the findings as the sample distribution would more closely approximate that of the population distribution. For the present study all of the group participants who matched selection criteria were used, whereas a sample of the individual and mixed modality participants was used.

Future Recommendations

Acknowledging the limitations of this study, there are recommendations for future research which could illuminate and improve the results found herein. Perhaps most important would be a call for further studies with larger samples to validate or refine the current scoring templates for the GSQ, including the relative contributions of the separate subscales. Until there is consistency in the data, comparisons between studies will likely be inaccurate and only marginally helpful. As the number of individuals completing GSQ measures increases, the scoring and subscale loadings should become more consistent and reliable.

Another recommendation that might help future studies provide more sensitive results would be to incorporate alternative outcome assessments. As noted, clients' OQ-45 scores were significantly correlated with their GSQ scores. This correlation may be confounding the predictive ability of the GSQ and its subscales on the OQ-45. Using a variety of outcome measures could reduce the occurrence of this co-linearity and could yield more descriptive results as to the type of improvement experienced and the specific instances or concerns where the sensitivity of the GSQ is demonstrated in indicating treatment recommendations. One recommendation would be to use qualitative analyses to explore participants' subjective experience in treatment and their sense of improvement. Likert-type protocols (such as the OQ-45) may show some inconsistencies in client interpretations of the rating scales. Furthermore,

quantitative analyses forcing participants to reduce their experience into a number may not be sensitive to the detailed information that could further illuminate the change process.

Future studies could also improve on the methodology used in this study. Due to the archival nature of the data analyzed, experimental controls were not implemented. The potential implications of confounding variables could be minimized if participants were assigned to treatment modalities. This may allow for an even better distribution of GSQ scores and OQ-45 or outcome scores across all treatment categories. Assigning clients with GSQ across the potential range of scores to each of the treatment modalities could allow for more sensitive comparisons about the impact of the treatment modality used and if the GSQ was able to accurately predict improvement.

Conclusions

The Group Selection Questionnaire subscale scores did not significantly predict increased client improvement based on type of treatment received. Despite this finding, the subscale scores were correlated with change in symptom distress. This would indicate that the Group Selection Questionnaire likely provides clinicians with valuable information to help determine a client's ability to utilize interpersonal process to remediate subjective distress. Further analyses of these connections could help refine the Group Selection Questionnaire into the type of measure called for in the group psychotherapy literature.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Anthony, E. J. (1972). The history of group psychotherapy. In H. I. Kaplan & B. J. Sadock (Eds.), *The Evolution of Group psychotherapy* (pp. 1–26). New York: Jason Aronson.
- Baer, P. E., Dunbar, P. W., Hamilton, J. E., & Beutler, L. E. (1980). Therapists' perceptions of the psychotherapeutic process: Development of a psychotherapy process inventory. *Psychological Reports*, 46(2), 563–570.
- Baines, L. S., Joseph, J. T., & Jindal, R. M. (2004). Prospective randomized study of individual and group psychotherapy versus controls in recipients of renal transplants. *Kidney International*, 65(5), 1937–1942.
- Barrett, P., Healy-Farrell, L., & March, J. S. (2004). Cognitive-behavioral family treatment of childhood obsessive-compulsive disorder: A controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 43(1), 46–62.
- Bastien, C. H., Morin, C. M., Ouellet, M. C., Blais, F. C., & Bouchard, S. (2004). Cognitive-behavioral therapy for insomnia: Comparison of individual therapy, group psychotherapy, and telephone consultations. *Journal of Consulting and Clinical Psychology*, 72(4), 653–659.
- Bergin, A. E., & Lambert, M. J. (1978). The evaluation of therapeutic outcomes. In S. L. Garfield & A. E. Bergin (Eds.), *Handbook of psychotherapy and behavior change: An empirical analysis* (2nd ed.). New York: John Wiley.
- Bion, W. (1961). *Experiences in Groups* (2nd. ed.). New York: Basic Books.

- Bostwick, G. (1987). "Where's Mary?": A review of the group treatment dropout literature. *Social Work with Groups*, 10, 117–131.
- Brabender, V., Fallon, A., & Smolar, A. I. (2004). *Essentials of group psychotherapy*. Hoboken, NJ: Wiley.
- Burlingame, G. M., & MacKenzie, K. R. (2003). Evidence-based group practice. Paper presented at the American Group Psychotherapy Association, New Orleans, LA.
- Burlingame, G. M., MacKenzie, K. R., & Strauss, B. (2003). Evidence-based small group treatments. In M. Lambert, A. E. Bergin & S. L. Garfield (Eds.), *Handbook of psychotherapy and behavior change* (5th ed.). New York: Wiley & Sons.
- Burlingame, G. M., Strauss, B., Joyce, A., MacNair-Semands, R., MacKenzie, K., Ogrodniczuk, J., et al. (2006). *American Group Psychotherapy Association's Core Battery–Revised*. New York, NY: American Group Psychotherapy Association.
- Burrow, T. (1928). The group method of analysis. *Psychanalytic Review*, 10, 268-280.
- Chen, E., Touyz, S. W., Beumont, P. J. V., Fairburn, C. G., Griffiths, R., Butow, P., et al. (2003). Comparison of group and individual cognitive–behavioral therapy for patients with bulimia nervosa. *International Journal of Eating Disorders*, 33, 241–254.
- Clarkin, J. F., & Levy, K. N. (2004). The influence of client variables on psychotherapy. In M. Lambert (Ed.), *Bergins and Garfield's handbook of psychotherapy and behavior change* (5th ed.). New York: John Wiley & Sons.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.
- Conte, H. R., Plutchik, R., Picard, S., & Karasu, T. B. (1991). Can personality traits predict psychotherapy outcome? *Comprehensive Psychiatry*, 32(1), 66–72.

- Cox, J. C. (2008). Selecting members for group psychotherapy: A validation study of the Group Selection Questionnaire. Unpublished doctoral dissertation, Brigham Young University, Provo, UT.
- Cox, J. C., Burlingame, G. M., Davies, D. R., Gleave, R., Barlow, S., & Johnson, J. (2004, February). The Group Selection Questionnaire: Further refinements in group member selection. Paper presented at the Annual Conference of the American Group Psychotherapy Association, New York.
- Cwikel, J. G., & Behar, L. C. (1999). Social work with adult cancer patients: A vote-count review of intervention research. *Social Work in Health Care*, 29(2), 39–67.
- Davies, D. R., Burlingame, G. M., & Layne, C. M. (2002). Selecting adolescents for trauma/grief-focused group psychotherapy using a self-report questionnaire. Manuscript in preparation, Brigham Young University, Provo, UT.
- Dies, R. R. (1992). The future of group psychotherapy. *Psychotherapy*, 29(1), 58–64.
- Ettin, M. F. (1999). Foundations and applications of group psychotherapy: A sphere of influence. London: Jessica Kingsley Publishers.
- Ezriel, H. (1980). A Psychoanalytic approach to group treatment. In S. Scheidlinger (Ed.), *Psychoanalytic Group Dynamics: Basic Readings* (pp. 109-146). New York: International University Press.
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175–191.
- Foulkes, S. H. (1965). *Therapeutic group analysis* ([1st American ed.]). New York: International Universities Press.

- Freud, S., & Strachey, J. (1922). *Group psychology and the analysis of the ego*. New York: Boni.
- Fried, E. (1972). *Basic Concepts in Group Psychotherapy*. In H. I. Kaplan & B. J. Sadock (Eds.), *The Evolution of Group psychotherapy* (pp. 27-50). New York: Jason Aronson.
- Fuhriman, A., & Burlingame, G. M. (1994). *Handbook of group psychotherapy : An empirical and clinical synthesis*. New York: Wiley.
- James, W. (1907). *Pragmatism: A new name for some old ways of thinking*. Oxford, England: Longmans.
- Joyce, A. S., & Piper, W. E. (1998). Expectancy, the therapeutic alliance, and treatment outcome in short-term individual psychotherapy. *Journal of Psychotherapy Practice & Research*, 7(3), 236–248.
- Kösters, M., Burlingame, G. M., Nachtigall, C., & Strauss, B. (2006). A meta-analytic review of the effectiveness of inpatient group psychotherapy. *Group Dynamics: Theory, Research, and Practice*, 10(2), 146–163.
- Lambert, M. J., Gregersen, A. T., Burlingame, G. M., & Maruish, M. E. (2004). The Outcome Questionnaire-45. In *The use of psychological testing for treatment planning and outcomes assessment: Volume 3: Instruments for adults* (3rd ed., pp. 191–234). Mahwah, NJ: Lawrence Erlbaum Associates.
- Lazell, E. W. (1921). The group treatment of dementia praecox. *Psychanalytic Review*, 8, 168–179.
- LeBon, G. (1977). *The Crowd*. New York: Penguin Books.
- Lewin, K. (1951). *Field theory in social science; selected theoretical papers* ([1st ed.]). New York,: Harper.

- Loeffler, J., Burlingame, G. & Strauss, B. (2005, August). The Group Selection Questionnaire: A German replication. Presentation to the American Psychological Association, Washington, DC.
- Luborsky, L., Chandler, M., Auerbach, A. H., Cohen, J., & Bachrach, H. M. (1971). Factors influencing the outcome of psychotherapy: A review of quantitative research. *Psychological Bulletin*, 75, 145–185.
- MacKenzie, K. R. (1997). Time-managed group psychotherapy: Effective clinical applications. Washington DC: American Psychiatric Association.
- MacNair-Semands, R. R. (2002). Predicting attendance and expectations for group psychotherapy. *Group Dynamics: Theory, Research, and Practice*, 6, 219–228.
- Marsh, L. C. (1933). An experiment in group treatment of patients at Worcester State Hospital. *Mental Hygiene*, 15, 396–416.
- McDougall, W. (1920). *The group mind, a sketch of the principles of collective psychology, with some attempt to apply them to the interpretation of national life and character*. New York, London,: G.P. Putnam's Sons.
- McRoberts, C., Burlingame, G. M., & Hoag, M. J. (1998). Comparative efficacy of individual and group psychotherapy: A meta-analytic perspective. *Group Dynamics: Theory, Research, & Practice*, 2(2), 101–117.
- Mohr, D. C., Boudewyn, A. C., Goodkin, D. E., Bostrom, A., & Epstein, L. (2001). Comparative outcomes for individual cognitive-behavior therapy, supportive-expressive group psychotherapy, and Sertraline for the treatment of depression in multiple sclerosis. *Journal of Consulting and Clinical Psychology*, 69(6), 942–949.

- Moreno, J. L. (1953). *Who Shall Survive? Foundations of sociometry, group psychotherapy and sociodrama* (2nd ed.). Beacon, NY: Beacon House.
- Morran, D. K., Stockton, R., Cline, R. J., & Teed, C. (1998). Facilitating feedback exchanged in groups: Leader interventions. *Journal for Specialists in Group Work, 23*, 257–268.
- Mussell, M. P., Mitchell, J. E., Crosby, R. D., Fulkerson, J. A., Hoberman, H. M., & Romano, J. L. (2000). Commitment to treatment goals in prediction of group cognitive-behavioral therapy treatment outcome for women with bulimia nervosa. *Journal of Counseling and Clinical Psychology, 68*, 432–437.
- Nevonen, L., & Broberg, A. G. (2005). A comparison of sequenced individual and group psychotherapy for eating disorders not otherwise specified. *European Eating Disorders Review, 13*, 29–37.
- Nevonen, L., & Broberg, A. G. (2006). A comparison of sequenced individual and group psychotherapy for patients with bulimia nervosa. *International Journal of Eating Disorders, 39*(2), 117–127.
- Nolan, M., Carr, A., Fitzpatrick, C., O’Flaherty, A., Keary, K., Turner, R., et al. (2002). A comparison of two programmes for victims of child sexual abuse: A treatment outcome study. *Child Abuse Review, 11*(2), 103–123.
- Ogles, B. M., Lambert, M. J., & Masters, K. S. (1996). *Assessing outcomes in clinical practice*. Boston: Allyn & Bacon.
- Piper, W. E. (1994). Client variables. In A. Fuhriman & G. M. Burlingame (Eds.), *Handbook of group psychotherapy: An empirical & clinical synthesis* (pp. 83–113). New York: Wiley & Sons.

- Piper, W. E., Azim, H. F., Joyce, A. S., & McCallum, M. (1991). Quality of object relations versus interpersonal functioning as predictors of therapeutic alliance and psychotherapy outcome. *Journal of Nervous and Mental Disease*, 179(7), 432–438.
- Piper, W. E., & McCallum, M. (1994). Selection of patients for group interventions. In H. S. Bernard & K. R. MacKenzie (Eds.), *Basics of group psychotherapy* (pp. 1–34). New York: Guilford Press.
- Pratt, J. H. (1922). The principles of class treatment and their application to various chronic diseases. *Hospital Social Services Quarterly*, 6, 401–411.
- Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist*, 47(9), 1102–1114.
- Reid, F. T., & Reid, D. E. (1993). Integration and nonintegration of innovative group methods. In H. I. Kaplan & B. J. Sadock (Eds.), *Comprehensive group psychotherapy* (3rd ed., pp. 244-255). Baltimore, MD: Williams & Wilkins.
- Rosenthal, R., & Rubin, D. B. (1984). Multiple contrasts and ordered Bonferroni procedures. *Journal of Educational Psychology*, 76(6), 1028–1034.
- Rutan, J. S., & Stone, W. N. (2001). *Psychodynamic group psychotherapy* (3rd ed.). New York: Guilford Press.
- Safren, S. A., Heimberg, R. G., & Juster, H. R. (1997). Clients' expectancies and their relationship to pretreatment symptomatology and outcome of cognitive-behavioral group treatment for social phobia. *Journal of Consulting and Clinical Psychology*, 65, 694–698.
- Sexton, H., Fornes, G., Kruger, M. B., & Grendahl, G. (1990). Handicraft or interactional groups: A comparative outcome study of neurotic inpatients. *Acta Psychiatrica Scandinavica*, 82(5), 339–343.

- Sirkin, R. M. (1999). *Statistics for the Social Sciences* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Slavson, S. R. (1940). Group Psychotherapy. *Mental Hygiene*, 24(36-49).
- Stangier, U., Heidenreich, T., Peitz, M., Lauterbach, W., & Clark, D. M. (2003). Cognitive therapy for social phobia: Individual versus group treatment. *Behaviour Research and Therapy*, 41(9), 991–1007.
- Taylor, N. T., Burlingame, G. M., Kristensen, K. B., Fuhriman, A., Johansen, J., & Dahl, D. (2001). A survey of mental health care providers and managed care organization attitudes toward, familiarity with, and use of group interventions. *International Journal of Group Psychotherapy*, 52, 243–263.
- Weiss, R. D., Jaffee, W. B., de Menil, V. P., & Cogley, C. B. (2004). Group psychotherapy for substance use disorders: What do we know? *Harvard Review of Psychiatry*, 12(6), 339–350.
- Weisz, J. R., McCarty, C. A., & Valeri, S. M. (2006). Effects of psychotherapy for depression in children and adolescents: A meta-analysis. *Psychological Bulletin*, 132, 132–149.
- Wender, L. (1940). Group Psychotherapy: A Study of its Application. *Psychiatric Quarterly*, 14, 708-718.
- Wolf, A. (1949). The Psychoanalysis of Groups. I. *American Journal of Psychotherapy*, 3, 525-558.
- Woods, M., & Melnick, J. (1979). A review of group psychotherapy selection criteria. *Small Group Behavior*, 10, 150–175.
- Yalom, I. D. (1975). *The theory and practice of group psychotherapy* (2d ed.). New York: Basic Books.

Yalom, I. D., & Leszcz, M. (2005). *The theory and practice of group psychotherapy* (5th ed.).
New York: Basic Books.