A COMPARISON OF GROUP PROCESS DEVELOPMENT IN FACE-TO-FACE AND AUDIO TELECONFERENCE ENVIRONMENTS

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BY

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ABSTRACT

The purpose of this study was to determine whether or not a counselling group conducted on an audio teleconference system would experience a pattern of group process development similar to that purported by the literature for face-to-face groups.

Since the pattern of process development in face-to-face groups is associated with positive outcomes and there exists literature which indicates this process is necessary for successful group counselling, group process was used as basis for evaluating the success of group counselling procedures via the audio teleconferencing modality.

The teleconference group in this study consisted of eight undergraduate education students who admitted to high levels of stress regarding classroom teaching. The group was conducted for ten one-hour sessions over the course of five weeks. Each session was audio-taped and rated independently by two raters using the Hill Interaction Matrix-Group, an instrument designed to analyze group process.

Using participation in the quadrants of the Hill Interaction Matrix Category System (HIM) as an indicator of the similarity of the pattern of group process development in face-to-face and audio teleconference environments,

results of the study indicated that the teleconference group revealed patterns of process development in each quadrant of the HIM that were consistent with the patterns reported by the literature for face-to-face groups. The patterns of development in each HIM quadrant also served to indicate that the teleconference group was experiencing developmental phases.

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I share this accomplishment with my daughter, Sara, and wife, Sandra, whose patience, love and understanding facilitated completion of this study. Her unfailing belief in my pursuit was a source of invaluable support.

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CHAPTER I

INTRODUCTION AND BACKGROUND TO THE STUDY

Group process has received considerable attention in recent decades. Though seldom defined, conceiving of process as a cluster of phenomena is common among researchers and reviewers. Bednar and Kaul (1978), in a review of group process, examined group structure, cohesion, self-disclosure and feedback. Morran and Stockton (1980), in their focus on the critical aspects of group research, considered processes that included self-disclosure, structure, cohesion, interpersonal feedback, leadership, and pregroup preparation. Gazda (1984), also reflected a phenomena approach to process in his discussion of core group processes. He examined processes that include cohesion, conforming with group norms, feedback, immediacy, self-disclosure, and expression of power and influence.

An entirely different approach to examining group process is to perceive it as interaction (Burlingame, Drescher and Fuhriman, 1984). Yalom (1975) described group process as a fluid, ongoing interaction between group members (leader included). He examined group process on both verbal and nonverbal content levels. Conceiving of group process as interaction has also been echoed in the literature by other researchers, including Bales (1950), Hill (1965), and Hartman (1979).

Conceiving of group process as phenomena and group process as interaction is not always exclusive. Both Hill (1965) and Yalom (1975) have considered group process as both phenomena and interaction. This approach was used by the current author throughout this study. Process phenomena served as a vehicle to carry the content (member and non-member centered) through to the group's termination. Klein (1985) took this position too, asserting that sophisticated use made of various processes will serve to lubricate, support and move the content along to the next informational point.

Numerous studies (Thelan and Dickerman, 1949; Bales, 1950; Bennis and Shepard, 1956; Schutz, 1958; Bion, 1961; Mills, 1964; Tuckman, 1965; Gendlin and Beebe, 1968; Bonney, 1969; Rogers, 1970; Hill and Gruner, 1973; Yalom, 1975; Gruen, 1977; Fisher, 1980; Beck, 1981; Goldberg, 1984; Gazda, 1984; Kuypers, Davies, and van der Vegt, 1987; Steirs, 1987; George and Dustin, 1988; and Tubbs, 1988) have examined the development of group process in face-to-face groups. While authors differ in their primary analytical approach (process as phenomena, process as interaction, or both), it is evident that core elements of group process development can be detected in all studies. Hansen, Warner and Smith (1976) asserted that one can assume a basic pattern of process development in most groups. Stiers (1987) argued that each study examining the process of group

development began with a phase of dependence on the leader, followed by a phase of rebellion and turning away from the leader, which was then followed by a phase in which group members turned towards each other.

A number of other points are important to bear in mind when studying the development of group process. First of all, the literature indicates that group phases do exist. Osborn and Harris (1984) concluded that the consensus of numerous systematic observations in group dynamics is that phases or cycle regularities exist in the natural development of small groups. These authors cautioned though that the phases are general patterns of development and not distinct stages neatly accomplished. They go on to point out that it is frequently difficult to determine the end of one phase and the beginning of another. Secondly, for any group, the phases will probably not be of the same length and a group may recycle a phase or may not proceed beyond a given phase (Hare and Naveh, 1984). Finally, the actual stages of group process are enumerated by various authors in somewhat different ways (Hagen and Burch, 1985). Therefore, while the number of phases and the nomenclature describing the phases may vary from one author to the next, there is considerable agreement on the general character of the development of group process in face-to-face groups.

While the literature has yielded agreement on the general character of group process development in face-to-

face environments, it also seems to indicate that this process is a necessary prerequisite for successful group counselling in this environment. Smith (1983), in a study examining group process and outcomes in group workshops, noted that group members reported increased benefits from the experience when the pattern of group process resembled the general character of group process development reported for face-to-face groups. Kuypers et al. (1987) in a comparison of arrested groups and groups that experienced all the phases of group process reported for face-to-face groups, noted that only group members in the fully developed groups reported helpful feedback which was intrinsic to consensual validation.

The literature also indicates that there is a significant relationship between the phases in the development of group process and positive outcomes in groups. Smith (1987) noted that after attending group workshops in which groups experienced developmental phases, participants developed and to some extent sustained a more positive self-concept and also created and sustained positive changes in their relationships with others. Hagen and Burch (1985) reported that there is a significant relationship between member satisfaction and the phases of group process.

While the literature abounds with studies examining the development of group process in face-to-face environments,

only two studies could be found that identified the development of group process in environments where there is no visual contact. These studies (Welsh, 1978; Manaster, 1971) addressed the issue of the development of group process in groups whose members were blind. Though the authors of both studies provided little detail on the nature of this process, sufficient information was provided to allow the current author to assert that the process may not be too different from that occurring in face-to-face groups. In light of existing literature emphasizing the importance of nonverbal cues during the reception of a message, this may be a surprising result. Mehrabian (1981), for instance, reported that when we receive a message we rely on facial nonverbal cues 55% of the time, vocal nonverbal cues 38% of the time and actual words that are spoken only 7% of the time. Davis (1973), with a slightly more modest proposal, claimed that no more than 35% of the social meaning in any conversation is embedded in the words that are spoken.

No study(ies) could be located identifying the process of group development on the teleconference system. This led the author to wonder whether or not the process of group development is independent of mode of communication. In other words, will the general character of group process development, as described by the literature for face-to-face groups, be evident in a group whose members communicate via the audio teleconferencing modality?

Only three studies (Karras, 1978; Evans, Werkhoven and Fox, 1982; Evans and Jaureguy, 1983;) could be found that have attempted group counselling via teleconferencing. Of these, none have attempted a description of the development of group process, although Karras (1978) hinted that the process may not be too different from that found in face-to-face groups. This is reflected in the statement:

> As in all groups, members juggled for favor and dominance, tried out roles, formed alliances, struggled with monopolists, accepted and rejected each other, and repeatedly tested the safety of self-disclosure. (p. 244)

Demonstration of the congruency between group process on the teleconference system with that of group process in face-to-face environments could serve as a means for measuring the success of group counselling via the audio teleconferencing modality. After all, group process in face-to-face groups has been correlated with positive outcomes and appears to be a necessary prerequisite for successful group counselling in face-to-face groups.

An assumption inherent in the above reasoning ought to be mentioned at this time. It will be assumed since the development of group process, as described by the literature for face-to-face groups, is necessary for successful group counselling in this environment, the same process, if occurring on the audio teleconferencing system, ought to be a necessary prerequisite for successful group counselling via audio teleconferencing.

To date there have not been many methods of group process analysis that would attract researchers (Beck, 1981). The mass of the data involved is extremely cumbersome. Nevertheless, several quality efforts have been made (Stone, Dunphy, Smith, and Ogilvie, 1966; Mann, 1967; Runkel, Lawrence, Oldfield, Rider, and Clark, 1971). The present study utilized a method of group process analysis which has received considerable attention in the literature; The Hill Interaction Matrix Category System (HIM).

The HIM classifies group members' verbal interactions into five 'work/style' categories (Responsive, Conventional, Assertive, Speculative, and Confrontive) and into four 'content/style' categories (Topic, Group, Personal, and Relationship).

The five 'work/style' categories can be further categorized into two major divisions. The first division is labelled 'Pre/work' and includes the Responsive, Conventional, and Assertive categories. The second division is labelled 'Work' and includes the Speculative and Confrontive categories.

The four 'content/style' categories can also be further categorized into two major divisions. The first division is labelled 'Member Centered' and includes the Personal and Relationship categories. The second division is labelled 'Non-member Centered' and includes the Topic and Group categories.

The matrix of the two dimensions generates 20 cells (Figure 1). Four of the cells representing verbal activity (members simply respond to the leader's questions) were dropped in this study. The remaining 16 cells were collapsed into four quadrants, with each quadrant comprised of four cells (Figure 2). Further details of this category system and the Hill Interaction Matrix-Group (HIM-G), an instrument derived from the HIM, are discussed in Chapter 3.

Since there have been studies (Hill and Gruner, 1973; Sisson, Sisson, and Gazda, 1977) which have related specific quadrants of the HIM to specific phases of group process development for face-to-face groups and since studies (Anderson, 1964; Ahearn, 1969; Hill and Gruner, 1973; Dejulio, Bentley, and Cockayne, 1979) have reported the pattern of group process development for face-to-face groups, as measured by participation in the quadrants of the HIM, this study focused on the extent of participation in the HIM quadrants over the life of the teleconference group. Any significant changes in the extent of participation in the HIM quadrants served to indicate that the teleconference group was experiencing developmental phases. Furthermore, the pattern of participation in the HIM quadrants over the life of the teleconference group was compared with the pattern that has been reported for face-to-face groups. This provided a means of assessing the similarity of group process development in face-to-face and teleconference environments.

Figure 1. Hill Interaction Matrix

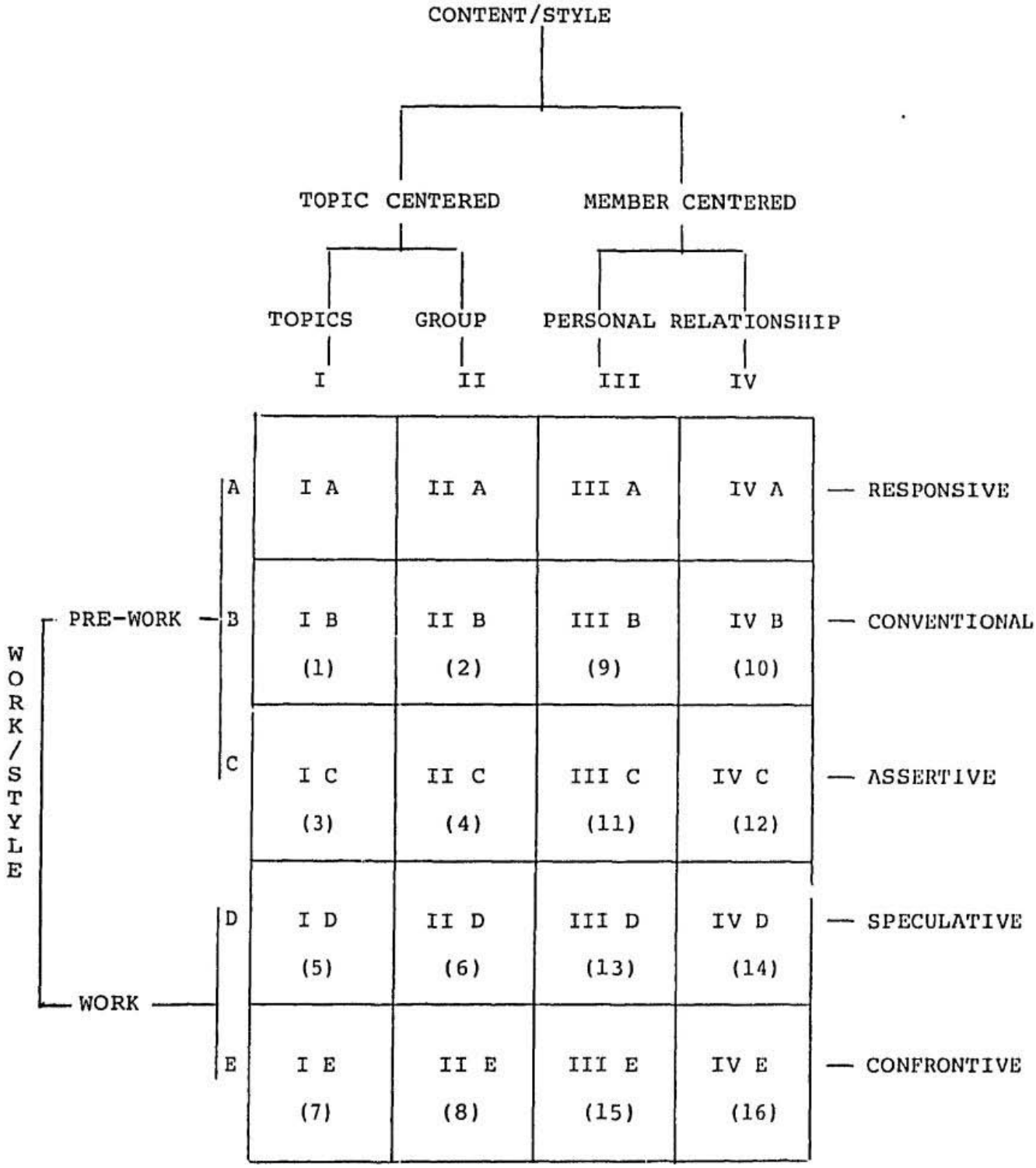
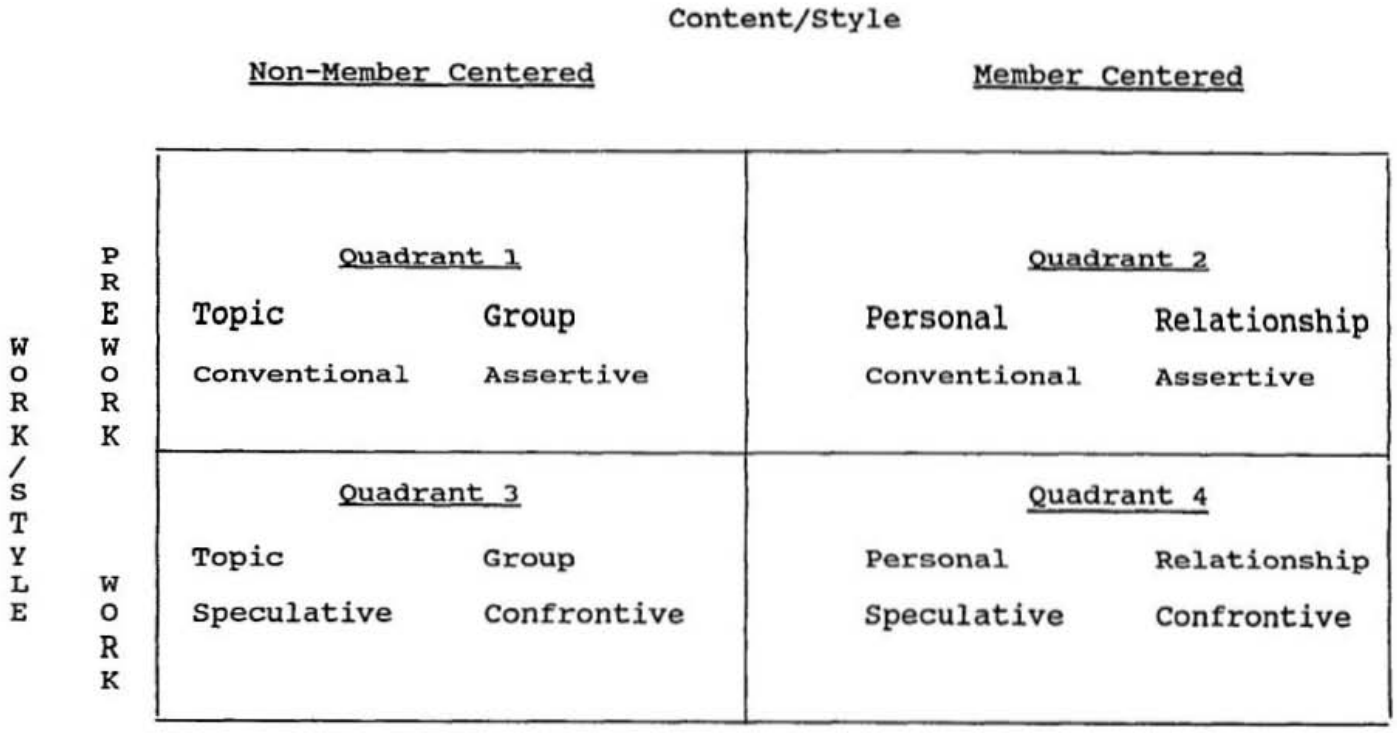


Figure 2. Quadrants of the Hill Interaction Matrix



Statement of Purpose

The purpose of this study was to determine whether or not a counselling group conducted on an audio teleconference system would experience a pattern of group process development similar to that purported by the literature for face-to-face groups.

Significance of the Study

This study was designed to demonstrate the similarity of group process development in face-to-face and non-face-to-face (teleconference) environments. A similar developmental process in these environments could serve as a means for measuring the success of group counselling via the audio teleconferencing modality. This could provide a foundation to promote the "system" for the provision of counselling services in isolated or remote areas where such services are rarely available. Furthermore, group counselling via the audio teleconferencing modality might prove to be an ideal method of providing support groups in a wide variety of situations (e.g., working with the visually impaired, the physically handicapped, and with chronically ill persons).

In light of existing literature revealing that some people may be more comfortable in a non-face-to-face type of helping relationship (Novotni, 1981; Evans et al., 1982) and since no visual contact is possible between group members

using the audio teleconferencing system, a particularly interesting application of the approach could involve the provision of counselling services to groups whose central concern represents some degree of embarrassment for group members (e.g., teenage pregnancy groups, AIDS support groups).

General Research Questions

The investigation attempted to answer two basic questions:

1. Will the pattern of group process development, as described by the literature for face-to-face groups, occur in a counselling group conducted on an audio teleconference system?

2. Will a counselling group conducted on the audio teleconference system experience phases in the course of its development?

To address these two general questions, three specific research questions were posed. The data in this study were gathered to address these three questions.

Specific Research Questions

1. Will the teleconference group's participation in Quadrant 1 of the HIM Category System be at its highest in the beginning group sessions and decrease over time so that it will be at its lowest in the final group sessions?

2. Will the teleconference group's participation in

Quadrant 4 of the HIM Category System be at its lowest in the beginning sessions and increase over time so that it will be at its highest in the final group sessions?

3. Will the teleconference group's participation in Quadrants 2-3 [based on composite scores (Q2+Q3/2) for Quadrants 2 and 3] of the HIM Category System increase up to approximately the midway point of the group's existence and then decrease over time as the group moves toward termination?

Definition of Terms

For purposes of this study, the following definitions were used:

1. Group: A collection of individuals in interaction with one another. They share common goals and sets of norms which give direction to their activity. They also develop a set of roles and a network of interpersonal attraction, which serve to differentiate them from other groups.

2. Group process: Refers to the phases of group development and the interactions or phenomena that characterize each phase.

3. Group Counselling: The use of group interaction to facilitate self-understanding as well as individual behavior change.

4. Teleconferencing: Interactive group communication (three or more people in two or more locations) through an

electronic medium.

5. Teleconference System: An electronic communication medium which has the ability to link people into a group setting through dial-up (dial access) lines.

6. "System": The audio teleconference system at Memorial University of Newfoundland.

7. Phase: A period of time during which the group members show a predominant concern with one cluster of behaviors.

Limitations of the Study

The present study is subject to the following limitations:

1. The HIM-G has its greatest utility where scores for one session are compared with another and changes in the data are noted. The HIM-G, however, does not allow for sequential analysis within a meeting (Hill, 1966). Therefore, changes in the developmental phases of group process in a single session could not be detected.

2. The investigation relied on the use of hand-held telephone sets. The telephone has been traditionally viewed as a two-party communication medium. It's for "calling somebody up", not for holding a group counselling session. This attitude might have affected the development of group process. Furthermore, the design of the telephone handset does little to encourage its use for a long period. It is

not known how this could have affected the process of the group's development.

3. It is important to note because this study focused on group process development in only one group, using a developmental group counselling model, any conclusions drawn from the study must be moderated by the small sample size, the resulting statistics, and the counselling model used.

4. The results of this study may not apply to every group that may be conducted in a teleconference environment. It is reasonable to assume, as was pointed out for face-to-face groups (Caple, 1978), that every teleconference group is unique and therefore defies any neat classification scheme. However, it is legitimate to seek a pattern of process development that is applicable to teleconference groups in general.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this investigation was to determine whether or not a counselling group conducted on an audio teleconference system would experience a pattern of group process development similar to that purported by the literature for face-to-face groups. Areas tnat are related to the study will be explored in this chapter. These areas include:

1. A general discussion of teleconferencing;
2. A review of studies addressing the issue of group counselling/therapy via the audio teleconferencing modality;
3. A review of group process development in groups whose members are blind; and
4. A review of group process development in face-to-face groups.

Teleconferencing

Teleconferencing was first introduced in the 1960's with American Telephone and Telegraph's Picturephone (Rogan and Simmons, 1984). However, at that time, there was limited demand for the new technology. Travel costs were reasonable and consumers were less than willing to pay the monthly service charge for using the Picturephone, which was regarded as more of a novelty than as an actual means for everyday communication (Rogan and Simmons, 1984). However,

things have changed since the 1960's.

Today, teleconferencing has vastly expanded the horizons of education. Much of the attention has been directed to using teleconferencing as a possible means of providing instructural materials to students who may be widely scattered geographically. Azarmsa (1987) has noted a number of studies demonstrating the effectiveness of using teleconferencing in this manner. Studies undertaken at Pennsylvania State University and Kansas State University have concluded that teleconferencing has created a learning environment as desirable as the one created by traditional training, both in terms of amount of learning and attitudes toward learning.

Teleconferencing has also been used extensively outside of the educational setting. Clinckscale (1986) has reported that applications of teleconferencing fall into other categories such as business, politics, medicine, religion and labour unions.

Johansen, Vallee and Spangler (1978) described three basic types of teleconferencing. These include:

(A) Audio Teleconferencing - verbal communication via the telephone.

(B) Video Teleconferencing - television-like communication augmented with sound.

(C) Computer Conferencing - printed communication through keyboard terminals.

The present study used an (4 wire) audio teleconference system on the campus of Memorial University of Newfoundland. A 2-wire (dial-access) feature of this system permits the inclusion in any teleconference of individuals with access to an ordinary telephone. This feature allowed participants in this study to use the telephone to interact in a group environment.

One of the major advantages of the teleconference system is its potential to reduce travel costs. Rogan and Simmons (1984) reported that in the United States, teleconferencing can reduce national business travel-associated costs by about 30% annually--a $4.5 billion saving.

Although saving money is a major advantage of teleconferencing, there are a number of other advantages:

1. Teleconferencing improves communication between individuals by allowing more frequent meetings and encouraging wider participation;

2. Teleconferencing discourages socialization as compared to face-to-face groups. Therefore, meetings are shorter and more oriented to the purpose of the meeting;

3. Teleconferencing enhances efficiency: it saves time; keeps key people involved; and provides access to resource people and specialists;

4. Follow up to earlier meetings can be done with relative ease and minimal expense via teleconferencing; and

5. Participants are generally better prepared for teleconference meetings than they are for face-to-face meetings, especially if they are interested in keeping communication costs at a minimum.

While teleconferencing is characterized by a number of advantages, it does have disadvantages:

1. Technical failures with equipment is always a possibility; this includes connections that are not made;

2. No visual contact between persons is possible in audio and computer conferencing;

3. Informal, one to one, social interaction is extremely discouraged on a teleconference system; and

4. Teleconferencing requires greater participant preparation and preparation time if costs are to be kept in mind.

Research has indicated that audio teleconferencing is adequate for a number of communication tasks and is particularly satisfactory for problem solving (Bjorklund and Fredmeyer, 1985). However, an extensive review of the literature by the current author has yielded few studies addressing the issue of personal-social problem solving via audio teleconferencing. The vast majority of studies have documented use of audio teleconferencing in non-therapeutic settings such as in business, politics and education. Nevertheless, three studies (Evans and Jaureguy, 1984; Evans et al., 1982; Karras, 1978) were found that have attempted

group counselling/therapy via audio teleconferencing.

Group Counselling/Therapy via Audio Teleconferencing

Two empirical studies were located in which group counselling/therapy sessions were conducted on an audio teleconference system. However, neither of the studies attempted to describe the process of group development as it emerged in this environment.

Evans and Jaureguy (1983) addressed the issue of whether or not short term group telephone counselling with a visually impaired group of veterans would reveal psychosocial problems and whether these problems could be alleviated by structured phone contact. Twenty-four subjects were chosen from a list of registered legally blind veterans, of which twelve were selected randomly for inclusion in the experimental group. This group received a series of eight telephone group counselling sessions while the control group who were matched for age, aspects of blindness, age of onset and geographic location, received no counselling of any form. Both control and experimental groups were given standardized tests [Wakefield Self-Assessment Depression Inventory and the Personal Assessment of Role Skills (PARS)] before and after the group counselling sessions to determine the effect of group telephone counselling. These standardized tests were administered by telephone after letters of consent were

obtained from both the subject and a significant other.

Participants in each group were telephoned by the counsellor at a designated time and were connected to a conference line on which they could talk to each other as if they were in the same room (Evans and Jaureguy, 1983).

Data analysis using t-tests revealed no significant differences between the experimental and control group on any conditions related to blindness - except duration, cause, degree and age of onset.

Results of the study indicated a significant increase in the social involvement of experimental subjects following the telephone counselling sessions. PARS scores for this group were significantly higher than their pretest means ($p<.01$). There were no significant changes in levels of depression in the sample studied.

The authors of this study, however, fail to present any pretest data. If, for instance, the two groups showed significant differences between means on pretest scores, then the changes in scores may not be due to the treatment but to statistical error. In light of this, it is difficult to attribute the positive changes in the behavior of the experimental group to group counselling sessions on the teleconference system.

Evans et al. (1982) conducted an experimental study to evaluate the effectiveness of an outreach program for 84 isolated elderly persons who had been legally blind for many

years. Group therapy by audio teleconferencing was provided to a sample of 42 while the remaining 42 received no treatment. Groups were matched for age, cause of blindness, and duration of visual loss.

The independent variable was a weekly series of eight, one-hour group telephone counselling sessions with three clients and a facilitator. Fourteen groups constituted the experimental condition. The dependent variables were depression, loneliness, interpersonal relations, agitation, alcohol/drug use, household activity, and social involvement. Pre/post testing of the control group, whose pretest scores did not differ significantly from pretest scores of the treated group, yielded no significant differences on any of the dependent variables.

The T ratios reflecting differences between means before and after the eight-week period were computed for the experimental group for each of the dependent variables. Results indicated significant decreases in loneliness scores, ($p<.01$), as measured by the UCLA Loneliness Scale, and significant increases in household activity scores, ($p<.01$), as measured by Ellsworth's (1975) Personal Assessment of Role Skills.

Since the study was conducted out of the Veterans Administration Medical Center, Seattle, Washington, it leaves the reader to wonder whether the subjects for this research were receiving any other support services from this

Center while the study was being conducted. Furthermore, it is not reported whether there was any contact between any of the group members during the duration of the telephone group counselling sessions. Certainly if any of the subjects were residents of the Veterans Administration Medical Center, it is highly likely there would have been contact between those individuals during the course of the study which would have presented a confounding variable in the study.

One non-empirical study (Karras, 1978) was found in which the author described her experience with conducting telephone conference groups with the chronically ill homebound. The author stated that:

> The phone conference group has been meaningful to its participants. This is borne out in their pursuit of their special relationship outside of the group meetings. Members exchange books and valuable information about special resources. They call each other offering support and diversion. The frequent medical crisis necessitating hospitalization for one or another member generates calls of interest and notes of concern. They share each others accomplishments, encourage each other to utilize other aspects of the program, and admonish each other when they sense that despondency or too much self-pity lies in the way of their living more fully.
>
> Indeed, they can do all this with so much authenticity and authority because they have, in fact, walked in the other fellow's shoes. Their demands of each other to maintain maximal functioning exceed those most therapists feel they could appropriately make of their disabled clients.
>
> Equally precious is that they now also have a group of peers and a set of experiences they can share with their families. Their world has extended beyond their four walls. (p. 245)

Of course, it is very difficult to attribute these

positive results to the telephone counselling group without a control group present in the study. Would these results have been obtained if the same group had met in a face-to-face setting?

With limited studies addressing the issue of group counselling/therapy via teleconferencing, it is not surprising that there have been no attempts to describe group process in this environment. Research involving counselling process can be quite overwhelming and frustrating (Hill, 1982). Hill has noted that in looking at the literature it appears that many researchers do one or two studies in the area and then are never heard from again.

The current author has searched the literature for research involving counselling process in groups whose members are blind. Though no empirical studies could be located, a number of researchers have briefly described group process based on their experience with groups whose members are blind. Since no visual contact between group members occurs in these groups, group process development here might give us a clue to the nature of group process development in an audio teleconference group.

Group Process Development in Groups Whose Members are Blind

Very few studies could be located that addressed the issue of the development of group process in groups whose members were legally blind. However, the two studies found

that addressed this issue seem to indicate that the process of group development in these groups may not be too different from the process of group development in face-to-face groups.

Welsh (1978) reported that groups comprised of blind persons pass through definite phases of development that begins with self-conscious searching to understand the limits, goals, and meanings of the group sessions. After this exploratory phase, Welsh (1978) noted that group members then direct their attention to things that provoke anger. Within this phase the subject matter often relates to the client's expression of personal reactions to others regarding the topic of blindness. This phase is followed by a work phase in which members question the origins of emotions and their effects on the individual. Finally, a phase of group cohesion occurs in which members discuss various means of handling emotions and methods for resolving and meeting emotion-filled situations.

Manaster (1971) reported a very similar account of group process development in counselling groups whose members were blind and institutionalized. In the early life of the group, members usually dealt with their feelings about being institutionalized. The discussion would be rather superficial with a lot of joking and kidding around and only a little discussion of problems and deeper feelings (Manaster, 1971). This phase was followed by a phase where

real problems and feelings began to emerge. Anxiety and feelings of fear and anger were prominent at this stage. In the final phase, resolutions were sought for many of the problems that were brought up in the previous phase and members began to realize that the group was a positive experience for dealing with the future. Members learned that they were not alone, but there were others who shared their problems and concerns.

Although neither Manaster (1971) nor Welsh (1978) proposed a termination phase in the process of group development, Manaster and Kucharis (1972) hinted that this phase does occur. In discussing their experience with a counselling group involving blind teenagers, Manaster and Kucharis (1972) asserted that in the final session of the group's existence, individuals disclosed they felt much better equipped to handle their own problems as a result of their involvement with the group and they were pleased about the progress of the group and members themselves.

Though there have been few studies addressing the issue of group process development in groups where there is no visual contact between members, group process development in face-to-face groups has received considerable attention. Smith (1980) has noted that the theoretical work on phases of group development has been extensive.

Group Process Development in Face-to-Face Groups

Social scientists have discovered a major problem with theories of group process development; that is, they are not stated in testable terms. Even if testable, the mass of data required to trace developmental trends over a number of sessions for a single group would be a formidable task. Consequently, the literature has yielded theories of group process development that are descriptive; based on the experiences of the particular author(s). Gazda (1984) for instance, begins a discussion on his theory of group process development stating:

> It has been my experience that counselling groups go through four rather definite stages.... (p. 63)

Interest in the formulation of theories of group process development can be traced back to the 1920's, 1930's, and 1940's (Hare, 1973). However, the first studies to gain widespread recognition by group leaders, therapists, and counsellors were those developed by Bales (1950) and Bion (1961). Tuckman (1965) summarized these studies along with approximately fifty others in the first major review of theories of group process development. In his review, Tuckman analyzed developmental theories of therapy groups, training groups, natural groups, and laboratory groups and abstracted a theory for the development of groups which today is perhaps the most well-known model of group development (McLeod, 1984). Hare (1973) also noted that

Tuckman's review was representative of the current state of theory about group development.

Based on literature review and his own experiences with groups, Tuckman (1965) purported that groups pass through four major phases in the process of developing. These he named Forming, Storming, Norming, and Performing. Tuckman described patterns of interpersonal relationships and the nature of the work being done by the group in each of the four phases.

The first phase of group development postulated by Tuckman (1965), Forming, includes prework interaction (no members attempting to gain self-understanding) that is characterized by discussion of topics that are not truly concerned with group matters. During this phase, group members test behaviors to determine whether or not they are acceptable to the group. The reaction of the members as well as the group leader determines if the behavior will be accepted. Often, during this phase, group members look to the leader for guidance and support in this new and unstructured environment. At this stage, there is an indirect attempt by group members to discover the task(s) that the group is to accomplish.

During the second phase, Storming, conflict arises. Group members now become hostile toward one another and towards the leader as a means of expressing their individuality and resisting the formation of group

structure. Group members here are 'acting out' rather than 'acting on' their problems (Tuckman, 1965). Members begin to express emotional responses as a form of resisting the techniques of the therapy, laboratory, or training group which requires the "exposure" of themselves. During this phase, members challenge the usefulness of the group.

In the third phase of group process development, Norming, members begin to accept the group and the idiosyncrasies of fellow members (Tuckman, 1965). This phase is characterized by a high degree of cohesion as members wish to maintain and perpetuate the group. Harmony is of primary importance and task conflicts are avoided to ensure harmony. Members now begin to discuss themselves as well as other group members openly. Information is acted upon by group members so that alternative interpretations of the information can be arrived at. Members become very open to each other.

In the Performing phase, the final phase of the group's development, the group now becomes a successful problem-solving instrument; partially due to the high degree of cohesiveness obtained and its means of relating to members as objects since the subjective relationships between members has already been established (Tuckman, 1965). Members are now ready to adopt and play roles that will facilitate accomplishment of group task(s). During this phase, group members show insight into their own

problems, an understanding of their own abnormal behavior, and, in many cases, modifications of their behavior in desired directions (Hare, 1973).

In a more recent formulation, Tuckman and Jensen (1977) proposed a fifth adjourning phase where the group deals with issues of termination. Group members cope with the acknowledgement of their significance to each other and how much the group has meant to them. There is a substantial reduction in the number of counsellee self-disclosures. Much time is focused on what the group accomplished and what individual group members learned.

McLeod (1984) asserted Tuckman's model is consistent, at a general level, with a range of theories of group process development produced by researchers and practitioners using different methods and traditions. Further review of the literature by the current author has led to a conclusion that supported McLeod's assertion.

Smith (1980) noted that Tuckman drew on a number of articles describing the process of group development, of which the best known was that of Bennis and Shepard (1956). These authors reported six phases (see Appendix A) of group development which between them span the four phases described by Tuckman. Smith (1980) maintained that the Bennis and Shepard theory is widely quoted as indicating the manner in which groups develop.

Bennis and Shepard see issues of conflict and authority

as salient in the group early on. The initial phase (Dependence Flight) is characterized by a dependence on the leader. Members experience a great deal of anxiety regarding the ambiguity of the group or its lack of structure and goals. The objective of many group members is to get the group leader to provide some sort of structure that will ease their anxiety. While those with dependent orientations search for topics that would gain the group leader's approval, those with a counterdependent orientation watch for a behavior on the part of the leader that would serve as a springboard for rebellion (Smith, 1980). Interactions among group members tend to be superficial during this phase.

After the leader fails to provide the direct leadership that group members seek, discussions arise that revolve around the concept of leadership, with the intended purpose of pointing out how miserably the group leader is performing his job (Smith, 1980). This phase (Counterdependence Flight) is characterized by hostility; now, however, the hostility that was initially directed mainly toward the leader becomes directed toward the other group members.

During the third phase (Resolution Catharsis), the role of the independents becomes more important. They are the primary source of hope for uniting the dependents and counterdependents. Until this point the independents have not taken an active role in either of the subgroups formed,

mainly because they are unconflicted in terms of their relations to authority figures (Smith, 1980). This phase may signal a turning point for the group. Participants come to recognize that they have to accept responsibility for what happens in the group. Thus, all of their previous behavior has led to a type of catharsis - a purging for their conflicted needs toward dependency and counterdependency (Bennis and Shepard, 1956). No longer feeling a struggle for power, group members now are free to pursue common group goals. They are better able to listen to and accept each others contributions.

Resolution of the dependence needs, leads to a new phase in the development of the group called Enchantment-Flight. Haunted by memories of their past conflicts, group members now attempt to maintain cohesiveness at all costs. The price that a member must pay for this fleeting state of nervous euphoria is loss of individual identity among group members (Smith, 1980). The attitude of group members is one of sacrificing all for the good of the group. There is a concerted effort to maintain harmony among group participants by careful "stroking" of the egos of other members (Bennis and Shepard, 1956).

Soon, however, group members begin to realize that their attempt to smooth over legitimate differences is unreal, and that their denial of problems is not resolving interpersonal issues. Near the end of this phase, group

members no longer can stand the pressures of total group enchantment. Again the group members attempt to flee the situation at hand, leading to replacement of total group enchantment with subgroup enchantment. The group now appears to be back where it started. This division marks the beginning of a new phase called Disenchantment-Flight. This time, however, the division is based on the desired degree of intimacy necessitated by group membership. Whereas the counterpersonals join together to stave off further involvement, the overpersonals unite to demand unconditional positive regard and love (Smith, 1980). The behavior of each of the subgroups is guided by its fear of rejection by other members. The counterpersonals seek to protect themselves by not allowing anyone to get too close to them. Conversely, the demand for amnesty for the behavior of all individuals is based upon the hope that by accepting all others, they, too, will be accepted (Bennis and Shepard, 1956). Consequently, they can preserve their sense of self-esteem.

If the group has been able to overcome the hurdle of the preceding phases, they are now ready to deal realistically with the problem of interdependency. This begins a new phase of group development called Consensual Validation. The direct motivating factor of this phase is the members' acknowledgement that the group is ending. Again, the role of the independents becomes significant. At

this point, a method of evaluation concerning the behavior of all participants must be resolved. Both the counterpersonals and the overpersonals resist any attempt to evaluate each other's behavior. The counterpersonals tend to take the stance that evaluation of group members is an invasion of their privacy and may subsequently lead to catastrophe if participants say what they really think of one another. In their attempt to shield themselves from negative remarks, the overpersonals tend to insist that any type of evaluation would unduly discriminate among group participants (Smith, 1980). The independents seek to resolve the evaluation issue by offering themselves for evaluation. They are able to do this because they have resolved their problems dealing with intimacy.

Consensus for evaluation is gradually reached as a result of rational discussion of what is at stake for each group member. This process facilitates communication and fosters a better understanding of oneself, other group members, and one's own interpersonal style of behavior (Smith, 1980).

Perhaps the theory most recognized throughout the literature in recent years is the one developed by Kuypers et al. (1987). These authors purported that groups are faced with four main problems that are worked through in six sequential phases. The problems concern inclusion, authority, intimacy, and separation.

Inclusion is worked through in the Dependency phase. During this phase, group members introduce themselves and debate how much they want to belong to the group or how willing they are to submit to the goal(s) or task(s) of the group. Inclusion in, or belonging to, the group will be defined in the first place by the willingness to submit to the external demands (formal goal or task) imposed on the group (Kuypers et al., 1987). Members are dependent on the leader to lead them out of their state of confusion.

Soon after, however, in the Counterdependency phase, the group, or part of it, will emphasize the needs of individual members, thereby resisting external demands, and defining group membership as catering to individuals' own needs. This resistance results in an impasse in the group that is broken by certain individuals who attempt to structure and regulate members' activities. These individuals are motivated by the leader's aloofness which characterizes this stage. Kuypers et al. (1987) suggest these attempts to gain control are soon countered by other group members advocating a free and easy anarchy.

The above impasse is ended when one or more group members promote an attitude of mutual respect and caring for other group members. These behaviors characterize the third phase, Enchantment. Criticism and distrust are now replaced by understanding and forgiving. Intimacy and closeness become a chief concern of group members. Members begin to

form personal goals and become more aware of themselves as a coping person. There becomes a marked increase in the number of self-disclosures and members now wish to maintain and perpetuate the group. A new norm arises in which group members sense they are obligated to discuss personal problems. At this stage the group will suppress any expression of negative affect (Kuypers et al., 1987).

Resistance by group members who fear losing their identity in the midst of such intimacy eventually develops. This phase, Disenchantment, is characterized by members accentuating their difference from others. A discussion often arises over identity, be it directly or indirectly, which inspires those who are still puzzled about their earlier experiences in the group to present their own case (Kuypers et al., 1987). Predominately, members begin to ask for feedback about their roles in the group. This moment marks the beginning of a new phase, Consensual Validation, in which group members consensually validate their perceptions or constructions of social reality in the group.

As the group comes to an end, some members are inclined to live in the past - review their experiences in the group, while others are eager to anticipate and live in the future. This marks the beginning of the Termination phase. As Tuckman and Jensen (1977) pointed out, at this stage group members must deal with the pain of separation.

The most recent theory of group process development

(Tubbs, 1988) located by the current author is consistent with the general levels of the above three theories. Tubbs (1988) argued that groups pass through four phases - Orientation, Conflict, Emergence, and Reinforcement, which he claimed are representative of the literature. He described the four phases as follows:

> Phase One (Orientation) seems to be a period in which group members simply try to break the ice and begin to find out enough about one another to have some common basis for functioning. .. In this phase people ask questions about one another, tell where they are from, what they like and dislike and generally make small talk.
>
> Phase One seems to be characterized by establishing of some minimal social relationship before group members feel comfortable getting down to work.
>
> Phase Two (Conflict) is frequently characterized by conflict of some kind or another. After the Orientation phase passes, the pressure to accomplish something sooner or later intensifies, whatever differences may exist. Typically, in this phase the group members begin to thrash out decisions for procedures as well as for determining the solution to the group task. Conflict over procedures may be one way in which group members fight for influence or control in the group.
>
> Phase Three (Emergence) involves a resolution of the conflict experienced in Phase Two. Group cohesiveness begins to emerge and the group settles in to working more comfortable as a unit.
>
> Phase Four (Reinforcement) is a phase of maximum productivity and consensus. Dissent has just about disappeared and the rule of the moment is to pat each other on the back for having done such a good job. Group members joke and laugh and generally reinforce each other for having contributed to the group's success. (p. 178)

It would be a formidable task to describe all the theories of group process development that the author has extracted from the literature. Hill (1973) has noted that

he has collected over one hundred distinct theories of group process development. However, it was the author's inclination to review those theories that have received the most attention in the literature; from the earliest theories to the most recent theory.

Tubbs (1988) has presented the nomenclature describing the phases of various theories of group process development in a table format where corresponding phases of the different theories are aligned in parallel format. Included are the Bennis and Shepard and Tuckman theories. Also included are a number of other theories of group process development that have received widespread attention in the literature. The current author, through extensive review of the literature, has expanded this table (Appendix A), listing the nomenclature describing the phases of some other theories of group process development that have received a prominent status in the literature. Appendix A allows for a quick comparison of the corresponding phases of the various theories.

CHAPTER III

PROCEDURES FOR CONDUCTING THE STUDY

This chapter describes the following: (1) the sample included in this study; (2) the research design; (3) the instrument utilized in the study; (4) the administration and scoring of the instrument; and (5) the methodology used in the analysis of the data in this study.

The Sample

The sample in this study consisted of eight undergraduate students in the Faculty of Education, Memorial University of Newfoundland. All subjects admitted to high levels of stress regarding classroom teaching. Subjects were secured on a volunteer basis and selected randomly from 14 volunteers. An explanation was given as to the nature of the study and the focus of the group counselling sessions (Appendix B). Each subject was asked to sign a form (Appendix C) agreeing to participate in the study, to having all sessions audio-taped, and committing themselves to attending all ten sessions. Each subject received a small honorarium for their participation.

Gazda (1984) reported that the phases through which counselling groups progress are most clearly visible in closed groups, that is, groups that retain the same membership throughout the duration of the group's existence. According to Gazda, in open groups, or groups that add new

members as old members terminate and especially when the influx of new members is frequent, the stage development is affected and, as Gendlin and Beebe (1968) have noted, the old members reach a tired phase because of the constant necessity of the old members assisting the new members through the 'breaking through phase' - the phase during which the member experiences an explosive freeing and growth process. For this reason then, the group in this study remained closed.

The Research Design

For this initial exploratory study, simulation of the larger teleconference system was conducted in a modified laboratory environment on the campus of Memorial University of Newfoundland. Each group member was located in a separate office on the above campus and was instructed at a pre-arranged time to call an assigned number (operator at the Telemedicine Centre, Memorial University of Newfoundland, St. John's, Newfoundland). All calls were connected by a "bridge", which allowed each group member to interact simultaneously. During the conference an operator stood by in the view of the group leader, who was situated at the Telemedicine Center and who would hand signal the operator if any member had been disconnected or any other problems occurred.

Ten group counselling sessions (one hour each) were conducted and each was audio-taped via the taping facilities at the Telemedicine Center.

During the first group session the leader requested that individuals refrain from meeting each other until all ten sessions were completed. Since no two participants knew each other on a face-to-face basis, it is highly probable no such meetings took place.

The focus of the group concerned stress management techniques for coping with stress in the classroom.

The group leader conducted the sessions according to a model first outlined by Gazda (1968) as the Functional Approach to Group Counselling and later labelled Developmental Group Counselling (Gazda, 1984). This approach is not confined to any one method, but utilizes any accepted practice that might facilitate change in a client. Sisson et al. (1977) reported that following what is described as an eclectic position, Gazda uses learning principles within the framework of relationship therapy plus the implementation of a wide variety of techniques described in group literature. Carkhuff (1969) described this approach as an attempt to move the group along a continuum which includes high levels of empathy, respect, and trust through the dimensions of concreteness, genuineness, and self-disclosure to confrontation.

Appendix D presents a session by session outline of the

group counselling sessions.

Instrument Utilized in the Study

All ten sessions were analyzed by using the Hill Interaction Matrix-Group (HIM-G) (Appendix E). The HIM-G translates verbal behavior into the two dimensions or styles of group operation that are outlined by the HIM Category System. It has been used extensively on T-groups, encounter groups, and discussion groups. Guttman (1989), also noted that the categories of the HIM-G are appropriate for use in analyzing the interaction of counselling groups. A number of studies (Guttman, 1987; Tindall, 1979; Dejulio et al., 1979; Sisson et al., 1977; Conyne and Rapin, 1977; Ahearn, 1969; Anderson, 1962) have used the HIM-G to analyze the interaction pattern of a variety of counselling groups.

The categories of the Hill Interaction Matrix include two basic dimensions which appear to be critical in distinguishing various groups (Hill and Gruner, 1973). These authors described the dimensions as follows:

> One dimension deals with the "content" that is, what groups talk about. The content/style has four categories - Topic, Group, Personal and Relationship which are presumably exhaustive. A group's style can be characterized by talking about the here and now relationships and reactions of members to each other (Relationship) or talking about the problem of a member in a historical manner (Personal) or about the group itself (Group) or about all of the topics external to the group, e.g., current events (Topic).
>
> The other dimension deals with the level of "work" obtained in a group. Work has five categories - Responsive, Conventional, Assertive, Speculative and Confrontive. In HIM terms, work

> is characterized by someone in the group playing the helping role and someone playing the patient role and attempting to get self-understanding. The lowest level is Responsive which is characterized by the fact that little or nothing is taking place except in response to the leaders probes. Next is Conventional which equates treatment groups with other everyday groups that rely on social amenities, stylized transactions, chit chat, etc. Assertive represents social protest behavior, usually the asserting of independence from group pressure and thereby not accepting or soliciting help from group members. Superficially, it may look like work - a member presenting his problem, but he is 'acting-out' not 'acting-on' his problem. Work categories are two; Speculative and Confrontive; the former being the 'conventional' way of transacting therapy or counselling, i.e., playing the therapeutic or counselling game. Confrontive style is intended to have real involvement and impact, and is characterized by tension and risk-taking.
>
> The dimensions are arranged in matrix form in the HIM with content/style on the horizontal axis and work/style on the vertical axis. The matrix has twenty cells - each of which characterizes typical behavior to be found in groups. (p. 357)

For clarification purposes, the HIM has been presented in Figure 1 (p. 9). The vast majority of studies (Conyne and Rapin, 1977; Pattinson, Rardin, and Lindberg, 1977; Sisson et al., 1977; Magyar and Apostal, 1977; Silbergeld, Manderscheid, and Koenig, 1977; and Powell, 1977) analyzing the process of group development using the HIM Category System, have collapsed the cells of the matrix into quadrants with the Responsive level work/style omitted since it includes only responses to the leader's probes. The remaining 16 cells of the matrix can be divided into four quadrants, with each quadrant consisting of four cells. These four quadrants containing combinations of

content/style and work/style categories are: (1) non-member centered content/style by pre-work work/style; (2) non-member centered content/style by work work/style; (3) member-centered content/style by pre-work work/style; and (4) member-centered content/style by work work/style. Figure 2 (p. 10) illustrated the quadrants of the HIM.

Two studies (Sisson et al., 1977; Hill and Gruner, 1973) have related the various phases of the theories of group process development to the quadrants of the HIM category system (Appendix F). Hill and Gruner (1973) noted that most of the behaviors characteristic of the Orientation phase of their theory of group development (see Appendix A for the nomenclature of the phases of this theory) included prework interaction that was characterized by discussion of topics that were nonmember-centered. In other words, Quadrant 1 reflects the behaviors that characterize the Orientation phase. These authors go on to point out that the Exploration phase of their theory is demarcated by Quadrants 2 and 3, while Quadrant 4 represents the Production phase of group development.

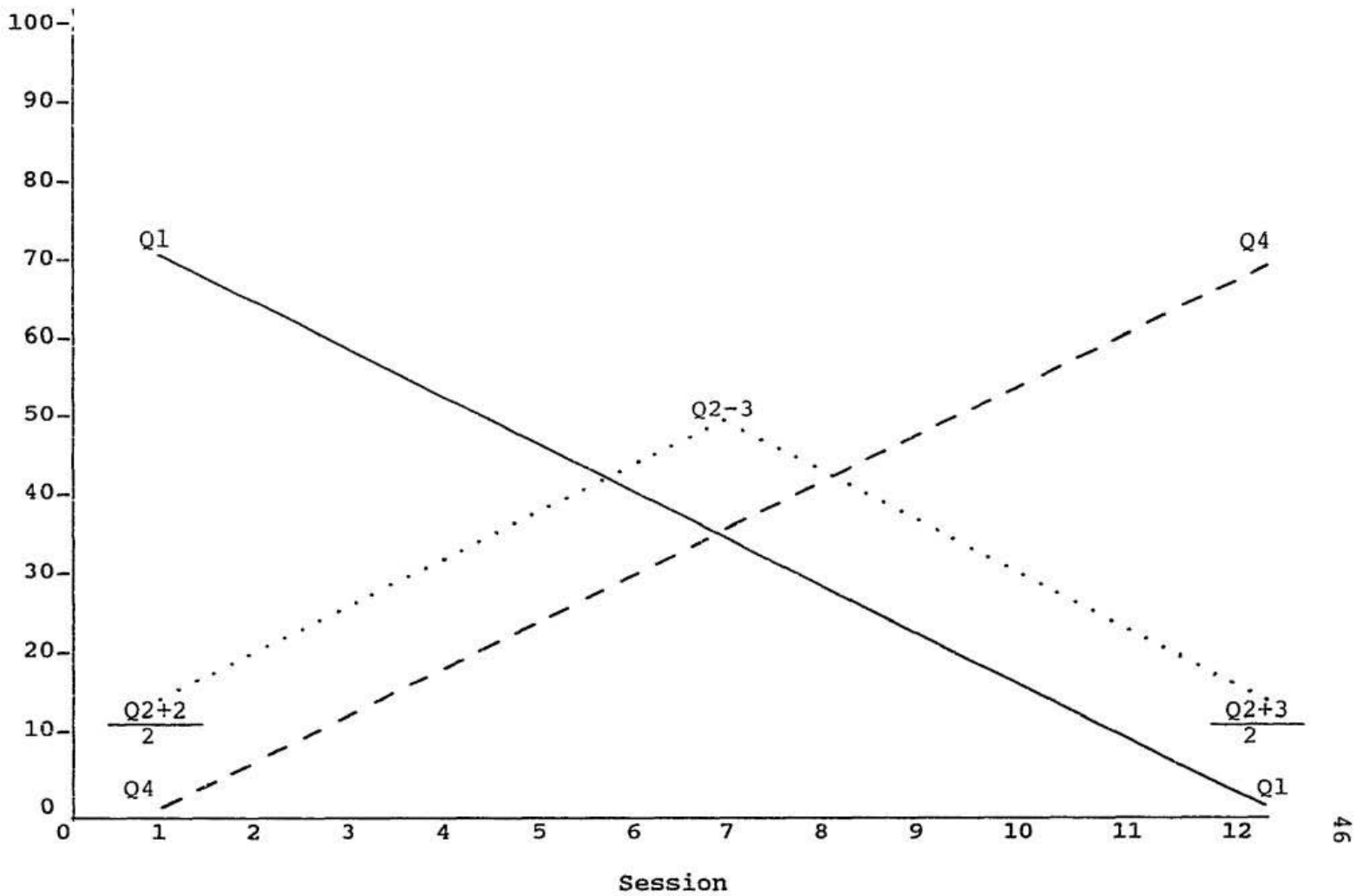
Sisson et al. (1977) also pointed out that the phases of group process development theories correspond to quadrants of the HIM. These authors related the phases of Bonney's (1969) theory of group process development (see Appendix A) to the quadrants of the HIM. They pointed out that Quadrant 1 reflects the behaviors that characterize the

Establishment phase; Quadrant 2 reflects behaviors of the Experimentation phase; Quadrant 3 reflects behaviors of the Operational phase; and Quadrant 4 reflects behaviors of the Creative phase.

The data from a number of studies (Anderson, 1964; Ahearn, 1969; Hill and Gruner, 1973; Dejulio et al., 1979) have reported the pattern of group process development in face-to-face groups, as measured by participation in the quadrants of the HIM. Hill and Gruner (1973) in a study of the developmental stages of closed counselling groups, gathered data to indicate whether or not the groups experienced Orientation, Exploration, and Production phases of development as measured by participation in the four quadrants of the HIM. As mentioned earlier, the Orientation phase reflected behaviors in Quadrant 1, while the Exploration phase reflected behaviors in Quadrants 2 and 3 and the Production phase reflected behaviors in Quadrant 4. The authors hypothesized, based on the theories of group development and HIM constructs, that participation in the HIM quadrants would evolve in a manner outlined in Figure 3.

Results of this study indicated that participation in Quadrant 1 was at its highest during the initial group sessions and decreased over time so that it was at its lowest in the final group sessions. While the results did not duplicate the ideal pattern hypothesized by the authors, participation in Quadrant 1 decreased progressively

Figure 3. Idealized Participation in HIM Quadrants 1, 2-3 and 4



throughout the group sessions yielding a desired negative trend. Participation in Quadrant 4, however, was at its lowest in the beginning sessions and increased over time so that it was at its highest in the final sessions. Again, while the results did not duplicate the ideal trend, participation in Quadrant 4 yielded a positive total direction of change, a close approximation to the ideal pattern. Participation for Quadrants 2-3, which was based on composite scores (Q2+Q3/2) for these quadrants, remained relatively stable over time. This result showed only slight conformity to the ideal pattern.

The authors concluded that all the groups performed uniformly with regard to participation in each HIM quadrant in a manner that was expected from the theory. The only exception was for participation in Quadrants 2-3 which did not peak throughout the sessions. Nevertheless, the authors concluded that these results were fairly optimistic, indicating that there is such a thing as phases in the process of group development and that it is measurable.

Dejulio et al. (1979) used the HIM-G in a study of pregroup norm setting and its effects on group process development in a variety of counselling groups. These authors noted that the general trend in the groups was that the amount of interaction in Quadrant 1 of the HIM Category System decreased over the life of the groups while the amount of interaction in Quadrant 4 increased over the life

of the groups. Participation in Quadrants 2 and 3 showed no significant increases or decreases over the life of the groups.

Further studies conducted by Ahearn (1969) and Anderson (1964) have reported similar findings. In each case participation in the HIM quadrants moved from the upper-left quadrant (Quadrant 1) to the lower-right quadrant (Quadrant 4). Since each of these quadrants had been associated with specific phases of group development, the authors of both studies concluded that the results of the studies supported the notion that there were distinct phases of development for counselling groups.

The present study examined group process development on an audio teleconference system in the same manner as that outlined by the above studies. Any significant changes in the extent of participation in the HIM quadrants served to indicate that the teleconferencing group was experiencing developmental phases. Also, the pattern of participation in the HIM quadrants was compared to the pattern reported for face-to-face groups. This provided a means of assessing the similarity of group process development in face-to-face and teleconference environments.

Administration and Scoring of the Instrument

The HIM-G (Appendix E) is a 72-item rating scale which is filled out by a judge or observer after viewing a group

session, or listening to a tape recording (audio or video), or reading a typescript (Hill, 1977).

In this study, each group session conducted on the audio teleconference system was audio-taped from beginning to end. Following completion of all ten sessions the tapes were presented to two raters in a random order in an attempt to eliminate the bias caused by possible knowledge of the sequence of sessions. Each rater, however, rated all ten sessions. Following the work of other investigators (Roe and Edwards, 1978; Silbergeld et al., 1977; and Conyne and Rapin, 1977), only the middle 1/2 hour of the session recordings were scored. The raters independently listened to parallel thirty-minute segments (middle thirty minutes) of each sixty-minute tape and completed the HIM-G immediately after hearing it. The raters, who were graduate students in the Department of Educational Psychology, Memorial University of Newfoundland, were each trained to rate the HIM-G. Each rater received approximately four hours of training prior to the rating task. Each rater was blind to the design and identifying factors of this study.

For each cell of the HIM, the HIM-G contains two items focusing on the group leader and two items focusing on the group members. The leader items are concerned with the amount of time the leader sponsors the behavior of the cell, (LS), and the amount of time the leader "goes along with" the group's behavior, (LM). The group members items are

concerned with how many members participate, (MP), and how frequently the behavior occurs, (MF). Thus each cell corresponds to four items on the HIM-G. The exception is the four cells that comprise the Responsive level (A level) of the HIM. The HIM-G contains only one item for each of these cells (Items #30, #14, #19, #3). Also there are four non-specific items. Three have to do with silence and resistance (#10, #50, #56) and one (#64) has to do with the total volume of participation of the group leader. Thus there are 64 standard items plus the four Responsive level items plus the four non-specific items; accounting for the 72 items of the HIM-G.

Since this study is concerned only with items comprising the quadrants of the HIM Category System, (64 standard HIM-G items), the additional eight items were not scored. Appendix G lists the items of the HIM-G, type (LS, LM, MP, MF), and corresponding cells and quadrants of the HIM.

Each HIM quadrant is composed of four cells which are made up of four scores and a total. The scores, ranging from 0 to 6, represent the extent of the group's participation in the behavior described by the item. The scores are the actual position number in the continuum for each item. For instance, in Item #66 in Appendix E: if the rater thought this activity went on between 10% and 20% of the time, he/she would check box #4 and it would be scored a score of

4 on the HIM-G scoring form (Appendix H). The four scores in each cell represent the four different item types for the cell. The first in any cell indicates the rating made on how much the leader sponsors in this cell, (LS), the second on how much he/she goes along with the interaction, (LM), the third indicates how many members participate, (MP), and the fourth indicates how frequently behavior in the cell occurs (MF).

Validity and Reliability of the HIM Category System

Most of the usual methods for determining reliability are not applicable for interaction rating systems (Hill, 1965). Hill (1965) asserted that comparable form and split-half techniques cannot be used and test-retest coefficients can be obtained, but they are not meaningful or persuasive. The preferred technique for obtaining reliability measures for interaction rating systems, as indicated by the literature, has been inter-rater reliability.

There have been two methods of inter-rater reliability used extensively in the literature for the Hill Interaction Matrix. These include the percentage of agreement and product-moment correlation coefficients. Piper, Doan, Edwards, and Jones (1979) reported percentage of agreement reliabilities ranging from .56 to .83 and product-moment correlation coefficients ranging from .78 to .99 for the

HIM-G. Sisson and Sisson (1977) reported product-moment correlation coefficients for the HIM-G in the range of .77 to .90. Magyar and Apostal (1977) reported similar ranges (.56 to .86) for the percentage of agreement reliabilities for the HIM-G. Guttman (1989) reported an inter-rater reliability coefficient of .83 for the HIM-G.

Since this study attempted to ascertain whether or not the process of group development emerged in the same manner in face-to-face and non-face-to-face (teleconference) environments, according to participation in the quadrants of the HIM Category System, the raters' quadrant scores were correlated from ratings of a single randomly selected tape session. The raters' quadrant scores correlated .83 (nonmember-centered * pre/work), .94 (nonmember-centered * work), .89 (member-centered * pre/work), and .94 (member-centered * work). Roe and Edwards (1978) reported similar quadrant correlations for two raters rating segments of a therapy session. These correlations were: .91 (nonmember-centered * pre/work), .97 (nonmember-centered * work), .89 (member-centered * pre/work), and .94 (member-centered * work).

Sisson et al. (1977) reported a validity coefficient of .56 when the HIM-G was compared to the Bonney Scale of Group Process Analysis. Results from their study rejected the null hypothesis that there was no relationship between the ratings with the Bonney Scale and the ratings with the

HIM-G. These authors concluded that the four stages of the Bonney Scale correspond to the four quadrants of the Hill Interaction Matrix.

Lambert and Dejulio (1977) compared the Truax-Carkhuff Instrument of Group Process Analysis with the HIM-G. Validity coefficients ranging from .55 to .61 allowed these authors to assert that there was a significant relationship between the two scales and that this relationship could be taken as evidence of convergent validity.

Extensive reliability, validity and normative studies have been conducted on the HIM Rating System and are reported in the HIM Monograph (Hill, 1966). Sisson et al. (1977) have concluded that in terms of both validity and reliability, the HIM-G is probably the best instrument available for measuring group counselling process.

Methodology Used in the Analysis of Data

A Minitab program was used to enter data from the HIM-G scoring forms into the computer. Six columns of data (session, content/style, work/style, question type, rater, and score) were entered.

The SPSSX System was used for the analysis of data. Composite scores (Q2+Q3/2) for Quadrants 2 and 3 (Quadrants 2-3) were derived for each session.

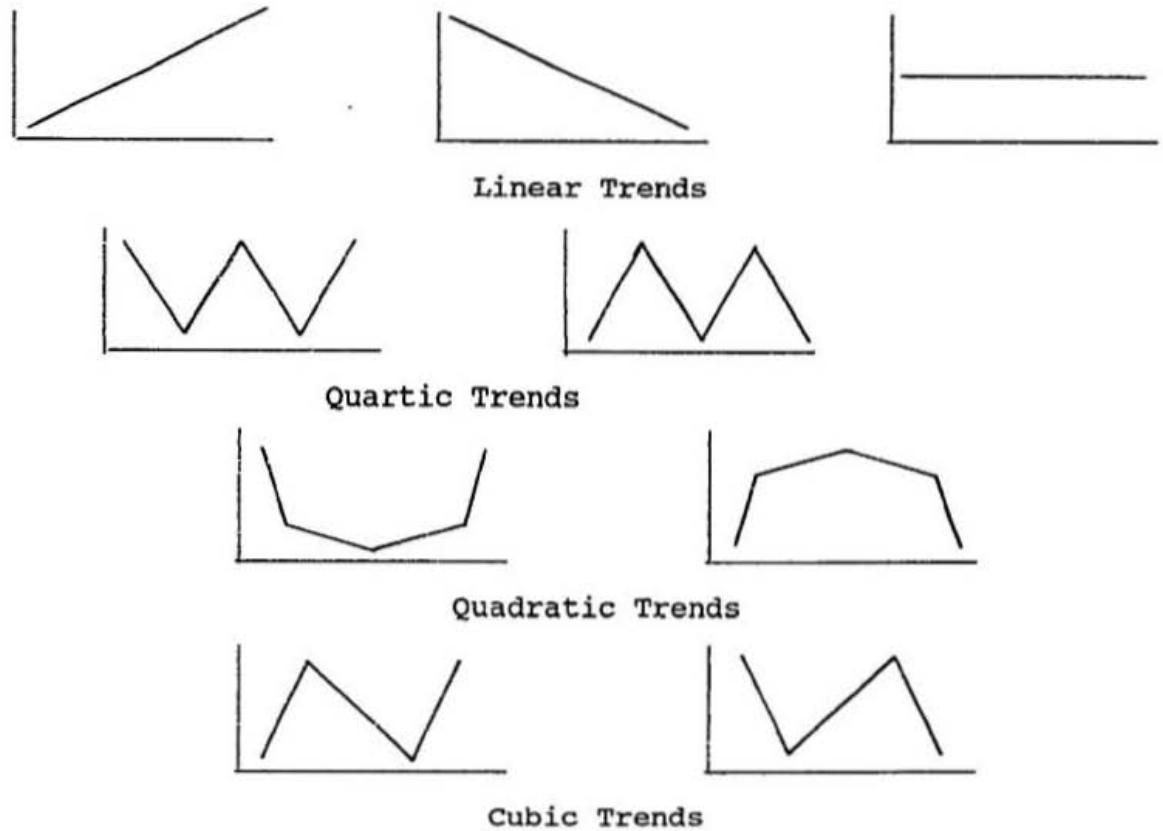
A trend analysis was employed to reveal any trends in the mean scores for Quadrants 1 and 4 and Quadrants 2-3 over

the ten group sessions. A trend analysis allows examination of certain characteristics of the shape between the dependent variable (score) and the independent variable (session). Figure 4 illustrates the basic shapes of the linear, quadratic, cubic, and quartic trends which were significant in this study.

Following the trend analysis, a simple regression analysis was conducted. This is a general statistical technique through which one can analyze a relationship between dependent and independent variables. Score was regressed on session for Quadrants 1 and 4 and Quadrants 2-3 to estimate the slope of the trends. The significance and direction of the slope was then reported.

In this study, statistical significance was reported at the .05 level of confidence.

Figure 4. Shapes Depicted by Linear, Quadratic, Cubic and Quartic Trends



CHAPTER IV

ANALYSIS OF THE DATA

This chapter is structured to address the three specific research questions outlined in Chapter 1. Each question is restated in this chapter followed by a presentation of results and corresponding analysis.

Research Question #1. Will the teleconference group's participation in Quadrant 1 of the HIM-G Category System be at its highest in the beginning group sessions and decrease over time so that it will be at its lowest in the final group sessions?

The first statistical procedure performed on Quadrant 1 data was a trend analysis. Examination of the results obtained from this analysis revealed significant trends for the dependent variable (score), indicating the extent of participation in Quadrant 1, over sessions (independent variable). Table 1 presents a summary of the results of this analysis.

The results of the trend analysis indicated that not only was the linear trend significant but also some higher order trends, including the quadratic, cubic and quartic trends. This was probably due to sampling fluctuation which is evident when the mean scores for Quadrant 1 are plotted for each group session (Figure 5). Figure 5 illustrates the sampling fluctuation in Quadrant 1 data and, therefore, the

Table 1

Summary of Trend Analysis for Quadrant 1 Data

Source	SS	DF	MS	F	P
Linear	221.39	1	221.39	186.23	.001
Quadratic	16.25	1	16.25	13.67	.001
Cubic	5.95	1	5.95	5.00	.026
Quartic	6.25	1	6.25	5.25	.023
Within	368.53	310	1.18		

need to use another analysis to review the trend. It also indicates that there seems to be a definite linear trend which, while not perfect, does describe the general characteristics of the relationship between mean scores and session for Quadrant 1.

A simple regression analysis was conducted for Quadrant 1 data to present a clearer picture of the results reported in Table 1. Since there are 32 data points for each HIM quadrant (2 raters), the regression involved 320 data points for the ten sessions. Results from the regression analysis (Table 2) indicated a significant regression coefficient, (B), $p<.001$. The sign of regression coefficient was negative, indicating the slope of the best fitting line (least-square line) through the points plotted in Figure 5 is negative. Since the slope is negative, this means that the regression line slopes downward to the right. This is

Figure 5. Mean Scores (Quadrant 1) for Each Group Session

Score

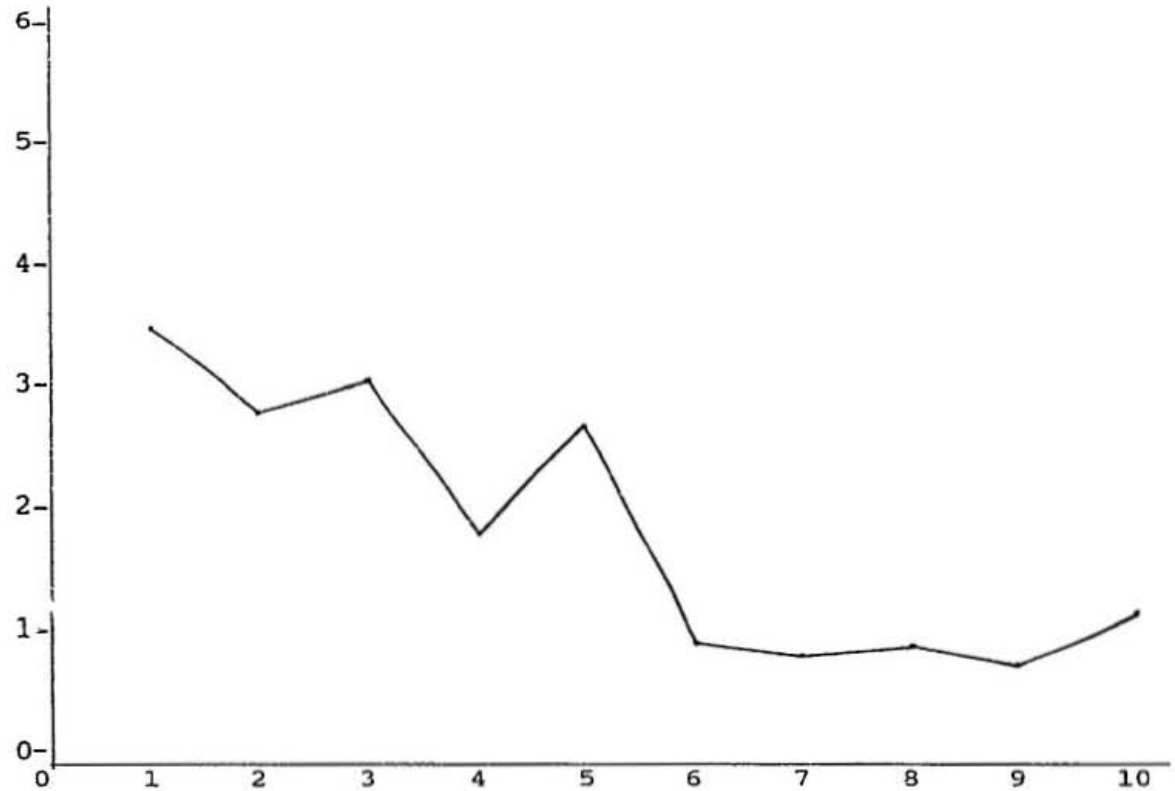


Table 2

Summary of Regression Analysis for Quadrant 1 Data

Variable	B	SE B	Beta	T	Sig. T
Session	-0.2896	0.0235	-0.5691	-12.343	.001

evidence that the highest scores in Quadrant 1, indicating highest participation in Quadrant 1, occurred in the beginning sessions and decreased over the life of the group so that the lowest scores, indicating lowest participation in Quadrant 1, occurred in the final group sessions.

The regression coefficient, (B), in Table 2 may be considered as a measure of the influence of each session upon score. For example, for the regression line, the value -0.2896, indicates that for each successive session there is a corresponding decrease in score of 0.2896 units. In essence then, the value of the regression coefficient yields the slope of the regression line.

The slope of the regression line is -0.2896 with a standard error, (SE B), of 0.0235. Thus it can be concluded with 95% confidence that the true slope is between -0.2661 and -0.3131.

The standardized beta coefficient (BETA) reported in Table 2 gives an indication of the relative importance of each independent variable. It is an extremely useful

statistic when dealing with more than one independent variable which are not all measured in the same metric. It would yield such information as which independent variable introduced the greatest associated changes in the dependent variable.

The importance of the independent variable (Session) in the regression analysis is indicated by the value of the t-statistic (T). A value of -12.343, $p<.001$, indicates session is significant in the regression analysis.

Research Question #2. Will the teleconference group's participation in Quadrant 4 of the HIM-G Category System be at its lowest in the beginning group sessions and increase over time so that it will be at its highest in the final group sessions?

The first statistical procedure performed on Quadrant 4 data was a trend analysis. Examination of the results obtained from this analysis revealed significant trends for the dependent variable (score), indicating the extent of participation in Quadrant 4, over sessions (independent variable). Table 3 presents a summary of the results of this analysis.

The results of the trend analysis indicated that not only was the linear trend significant but also some higher order trends including the quadratic, cubic and quartic trends. This was probably due to sampling fluctuation which

Table 3

Summary of Trend Analysis for Quadrant 4 Data

Source	SS	DF	MS	F	P
Linear	226.04	1	226.04	199.41	.001
Quadratic	4.84	1	4.84	4.27	.040
Cubic	39.78	1	39.78	35.10	.001
Quartic	7.33	1	7.33	6.47	.012
Within	368.53	310	1.18		

is evident when the mean scores for Quadrant 4 are plotted for each group session (Figure 6).

Figure 6 illustrates the sampling fluctuation in Quadrant 4 data and, therefore, the need to use another analysis to review the trend. It also indicates that there seems to be a definite linear trend which, while not perfect, does describe the general characteristics of the relationship between mean scores and session for Quadrant 4. A simple regression analysis was conducted for Quadrant 4 data to present a clearer picture of the results reported in Table 3. Since there are 32 data points for each HIM quadrant (2 raters), the regression involved 320 data points for ten sessions. Results from the regression analysis (Table 4) indicated a significant regression coefficient, (B), $p<.001$. The sign of the regression coefficient was

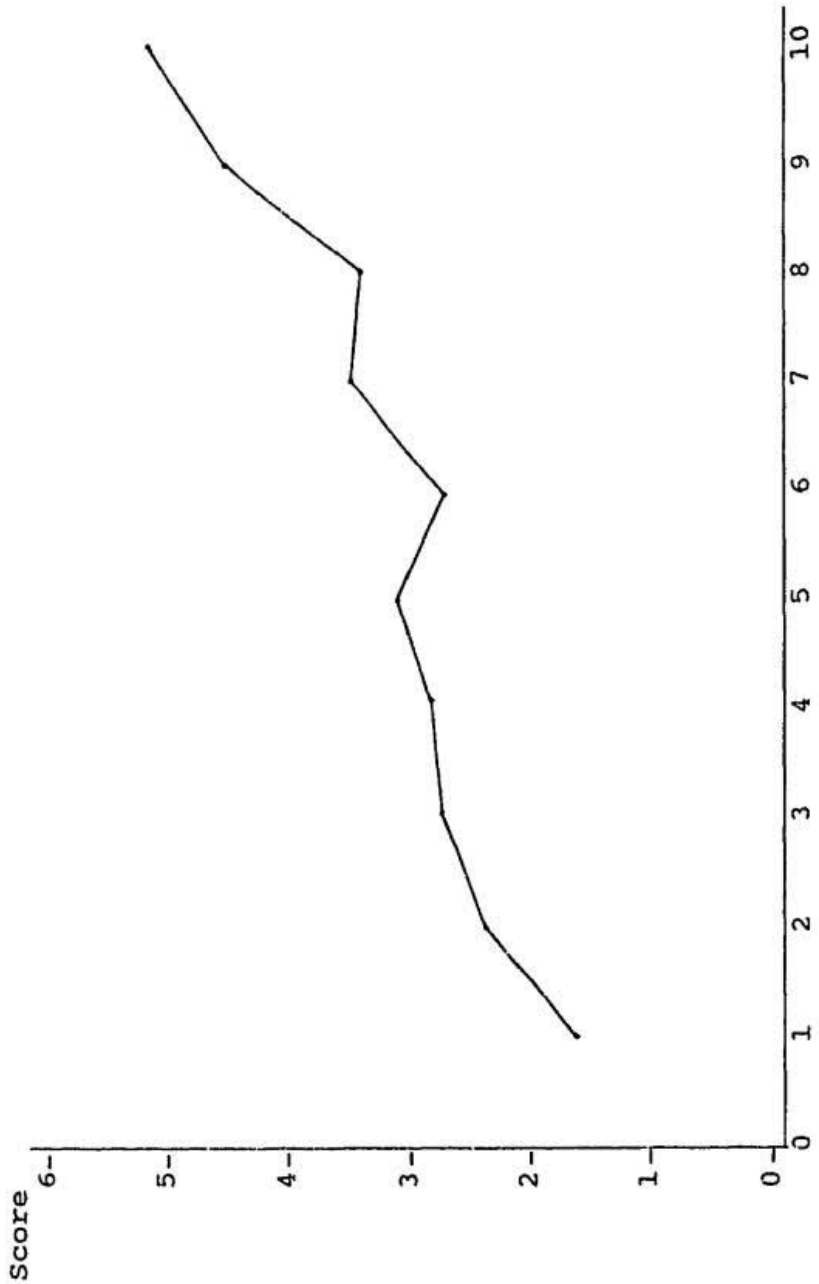


Figure 6. Mean Scores (Quadrant 4) for Each Group Session

Table 4

Summary of Regression Analysis for Quadrant 4 Data

Variable	B	SE B	Beta	T	Sig. T
Session	0.2926	0.0225	0.590	13.031	.001

positive, indicating the slope of the best fitting line (least-square line) through the points plotted in Figure 6 is positive. A positive slope indicates that the regression line slopes upward to the right. This is evidence that the lowest scores in Quadrant 4, indicating lowest participation in Quadrant 4, occurred in the beginning sessions and increased over the life of the group so that the highest scores, indicating highest participation in Quadrant 4, occurred in the final group sessions.

The numbers reported in Table 4 are to be interpreted in the same manner as the numbers in Table 2; for the sake of parsimony, then, they are not described here.

Research Question #3. Will the teleconference group's participation in Quadrants 2-3 [based on composite scores (Q2+Q3/2) for Quadrants 2 and 3] of the HIM-G Category System increase up to approximately the midway point of the group's existence and then decrease over time as the group moves toward termination?

The first statistical procedure performed on Quadrants 2 and 3 data was the computation of composite scores (Q2+Q3/2) for these quadrants. Following this computation the mean score for each session was computed for the new data. These scores are plotted in Figure 7.

Following computation of the mean scores for Quadrants 2-3, for each session, a trend analysis was executed for these scores. Examination of the results obtained from this analysis revealed a significant linear trend for the dependent variable (score), indicating the extent of participation in Quadrants 2-3, over sessions (independent variable). Table 5 presents a summary of the results of this analysis.

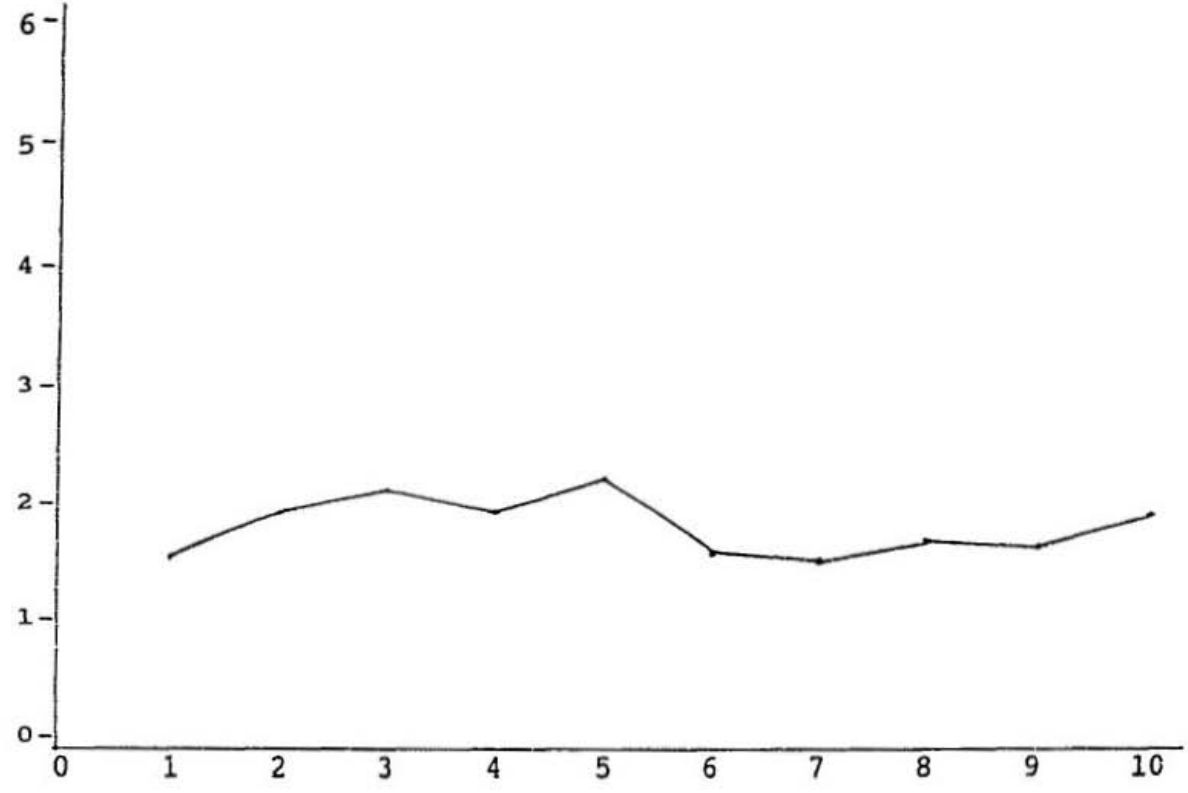
The results of the trend analysis indicated that only the linear trend was significant.

Table 5

Summary of Trend Analysis for Quadrants 2-3 Data

Source	SS	DF	MS	F	P
Linear	15.60	1	15.60	16.180	.001
Quadratic	1.19	1	1.19	1.238	.267
Cubic	1.99	1	1.99	2.065	.152
Quartic	1.30	1	1.30	1.349	.246
Within	298.94	310	0.9643		

Figure 7. Mean Scores (Quadrants 2-3) for Each Group Session



A simple regression analysis was conducted for Quadrants 2-3 data to determine whether or not the regression coefficient was significant at the 0.05 level of confidence. Since composite scores were generated for these quadrants, this regression involved 320 data points as well. Results from the simple regression analysis (Table 6) indicated that the regression coefficient, (B), was not significant, $p<.166$. Therefore, the best fitting line (least-square line) through the points plotted in Figure 7 is assumed to be horizontal. This is evidence that the mean scores for Quadrants 2-3 remained relatively stable over the course of the group sessions and did not peak significantly at the midway point of the group's existence.

Table 6

Summary of Regression Analysis for Quadrants 2-3 Data

Variable	B	SE B	BETA	T	SIG. T
Session	-0.0275	0.0198	-0.0776	-1.388	.166

The numbers reported in Table 6 are to be interpreted in the same manner as the numbers reported in Table 2; for the sake of parsimony, then, they are not described here.

A further discussion and interpretation of the results presented in this chapter is provided in Chapter V.

CHAPTER V

DISCUSSION, RECOMMENDATIONS, AND SUMMARY

This chapter provides an overview of the procedures employed in the study, an interpretation and discussion of results, a discussion of the implications of the study for educational practice and recommendations for further research.

Overview of the Procedures

The purpose of this research was to determine whether or not a counselling group conducted on an audio teleconference system would experience a pattern of group process development similar to that purported by the literature for face-to-face groups.

The teleconference group in this study consisted of eight randomly selected undergraduate students in the Faculty of Education, Memorial University of Newfoundland. The focus of the group concerned stress management in the classroom. Ten, one-hour sessions over the course of five weeks were conducted.

In this study, simulation of the larger teleconference system was conducted in a modified laboratory environment on the campus of Memorial University of Newfoundland. Each group member was located in a separate office on the above campus, while the group leader was situated at the Telemedicine Center, Memorial University of Newfoundland,

where all sessions were audio-taped, courtesy of the taping facilities at the Center.

All tapes were analyzed by two raters using the Hill Interaction Matrix-Group (HIM-G). This instrument translates verbal behavior into four 'work/style' and four 'content/style' categories which generate a matrix composed of four quadrants.

Since there have been studies (Hill and Gruner, 1973; Sisson et al., 1977) which have related specific quadrants of the HIM to specific phases of group process development for face-to-face groups, and since studies (Anderson, 1964; Ahearn, 1969; Hill and Gruner, 1973; Dejulio et al., 1979) have reported the pattern of group process development for face-to-face groups, as measured by participation in the quadrants of the HIM, this study focused on the extent of participation in the HIM quadrants over the life of the teleconference group. Any significant changes in the extent of participation in the HIM quadrants served to indicate that the teleconference group was experiencing developmental phases. Furthermore, the pattern of participation in the HIM quadrants over the life of the teleconference group was compared with the pattern that has been reported for face-to-face groups. This provided a means of assessing the similarity of group process development in face-to-face and teleconference environments.

Participation in the various HIM quadrants, as

indicated by the item scores comprising the quadrants, was the dependent variable in this study while sessions was the independent variable.

A trend analysis was employed to investigate the extent and pattern of participation in the HIM quadrants over the life of the teleconference group. Due to the sampling fluctuation, a further regression analysis was conducted and the significance and sign of the regression coefficient was reported.

Interpretation and Discussion of the Results

The significant linear trend, $p<.001$, for Quadrant 1 data (Table 1) was very evident when the mean scores for Quadrant 1 were plotted for each group session (Figure 5). Though the trend is not perfectly linear, it does describe the general characteristics of the relationship between mean scores for Quadrant 1, indicating the extent of participation in Quadrant 1, and sessions. The first mean score, 3.53, decreased progressively over the ten sessions yielding a negative total direction of change. The regression analysis confirmed this trend, indicating a significant regression coefficient, $p<.001$, (Table 2). Since the sign of the regression coefficient was negative, this indicated that the regression line sloped downward to the right. This meant that the highest scores for Quadrant 1, indicating highest participation in Quadrant 1, occurred

in the beginning sessions, while the lowest scores for Quadrant 1, indicating lowest participation in Quadrant 1, occurred in the final group sessions.

Though this pattern of participation in Quadrant 1 did not duplicate the ideal pattern of participation in Quadrant 1 (Figure 3) that was proposed by Hill and Gruner (1973), the pattern was consistent with the actual results reported by these researchers for face-to-face groups. Hill and Gruner (1973), in a study addressing the issue of group development in face-to-face groups, reported that participation in Quadrant 1 of the HIM-G Category System decreased progressively throughout the life of the groups, yielding a desired negative trend.

Other studies (Dejulio et al., 1979; Ahearn, 1969; Anderson, 1964) which have used the HIM-G to analyze group process development in counselling groups have also reported that participation in Quadrant 1 of the HIM Category System decreased significantly over the life of the groups.

The significant linear trend, $p<.001$, for Quadrant 4 data (Table 3) was very evident when the mean scores for Quadrant 4 were plotted for each group session (Figure 6). Though the trend is not perfectly linear, it does describe the general characteristics of the relationship between mean scores for Quadrant 4, indicating the extent of participation in Quadrant 4, and sessions. The first mean score, 1.56, increased progressively over the ten sessions

yielding a positive total direction of change. The regression analysis confirmed this trend, indicating a significant regression coefficient, $p<.001$, (Table 4). Since the sign of the regression coefficient was positive, this indicated that the regression line sloped upward to the right. This meant that the lowest scores for Quadrant 4, indicating lowest participation in Quadrant 4, occurred in the beginning sessions, while the highest scores for Quadrant 4, indicating highest participation in Quadrant 4, occurred in the final group sessions.

Though this pattern of participation in Quadrant 4 did not duplicate the ideal pattern of participation in Quadrant 4 (Figure 3) that was proposed by Hill and Gruner (1973), the pattern was consistent with the actual results reported by these researchers for face-to-face groups. Hill and Gruner (1973), in a study addressing the issue of group development in face-to-face groups, reported that participation in Quadrant 4 of the HIM-G Category System illustrated the desired pattern of group development in that the results yielded a positive total direction of change.

Other studies (Dejulio et al., 1979; Ahearn, 1969; Anderson, 1964) which have used the HIM-G to analyze group process development in counselling groups have also reported that participation in Quadrant 4 of the HIM Category System increased significantly over the life of the groups.

The significant linear trend, $p<.001$, for Quadrants 2-3

data (Table 1) was very evident when the mean scores for Quadrants 2-3 were plotted for each group session (Figure 6). In this case, however, the trend showed no significant increases or decreases, but remained relatively stable over the ten group sessions. The regression analysis confirmed this trend. Since the regression coefficient was not significant, $p<.166$, the best fitting line (least-square line) through the points plotted in Figure 7 is assumed to be horizontal. This is evidence that the mean scores for Quadrants 2-3 remained relatively stable over the course of the ten group sessions.

Though this pattern of participation in Quadrants 2-3 did not duplicate the ideal pattern of participation in Quadrants 2-3 (Figure 3) that was proposed by Hill and Gruner (1973), the pattern was consistent with the actual results reported by these researchers for face-to-face groups. Hill and Gruner (1973), in a study addressing the issue of group development in face-to-face groups, reported that participation in Quadrants 2-3 of the HIM-G Category System showed little variation over time, and only slight conformity to the expected pattern.

The results of the trend analysis and regression analysis for Quadrants 1, 4 and 2-3 indicated that the pattern of participation in each of these quadrants is consistent with the pattern that has been reported in the literature for face-to-face groups. Thus the study has

demonstrated that the pattern of group process development, as measured by the HIM-G, and reported in the literature for face-to-face groups, occurred in a counselling group conducted on an audio teleconference system.

Furthermore, the study has been successful in demonstrating that the group conducted on the audio teleconference system experienced developmental phases. Since there have been studies (Hill and Gruner, 1973; Sisson et al., 1977) which have related specific quadrants of the HIM Category System to specific phases in the process of group development, an examination of the extent of participation in these quadrants would indicate whether or not the group was experiencing developmental phases. Figure 5 indicated that participation in Quadrant 1 reached a score of 3.53 in the beginning session (approximately 4/5 of the group participating in behaviors in this quadrant or group participating in behaviors in this quadrant 10-20% of time) and dropped to a score of 1.06 in the final session (approximately one group member participation in behaviors in this quadrant or group participation in this quadrant only 0-1% of time). On the other hand, participation in Quadrant 4 (Figure 6) in the beginning session reached a score of 1.56 (approximately one group member participating in behaviors in this quadrant or group participating in behaviors in this quadrant 1-5% of time) and climbed to a score of 5.09 in the final session (approximately 5/6 of

group members participating in behaviors in this quadrant or group participating in this quadrant 20-40% of time). Since participation in Quadrant 1 decreased significantly (as indicated by the regression coefficient for this quadrant-- Table 2) over the life of the teleconference group while participation in Quadrant 4 increased significantly (as indicated by the regression coefficient for this quadrant--Table 4), and since each of these quadrants have been associated with a specific phase in the process of group development (see Appendix F), this is evidence that the teleconference group experienced developmental phases.

Implications for Educational Practice

Studying at a distance has been an established form of education for many years and is now a widely recognized mode of teaching and learning world-wide (Woolf, Murgatroyd and Rhys, 1987). Yet very little has been written on the potential for counselling at a distance.

Since this study has demonstrated that the pattern of group process development, as measured by the HIM-G and as reported in the literature for face-to-face groups, occurred in a counselling group conducted on an audio teleconference system, a medium that has been used extensively in distance education, it is reasonable to make the generalization that group counselling procedures might be successfully conducted

via the audio teleconferencing modality. Since the development of group process, as described by the literature for face-to-face groups, is necessary for successful group counselling in face-to-face environments, the same process, occurring on the audio teleconference system, is likely to be necessary for successful group counselling via this modality.

If the findings of this exploratory research are confirmed, then both educators and counsellors ought to look closely at providing counselling services, via audio teleconferencing, to isolated and remote areas where such services are rarely available and where the need for such services is often extreme. This may provide an effective means of combating such statistics as high dropout rates, high teenage pregnancy rates and high prevalence of alcohol and drug use which are often found in these areas.

The findings of this study may have important implications for counselling individuals who are blind. The results of this study indicated that the pattern of process development, as measured by the HIM-G and reported in the literature for face-to-face groups, occurred in a counselling group conducted on an audio teleconference system. Since there was no visual contact between group members in the audio teleconferencing group, it might be expected that the same process occurs in groups whose members are blind. The little research available in this

area seems to support this hypothesis. This may be invaluable information for leaders of groups whose members are blind. Counsellors and therapists need to understand the sequential nature of group process if they are to maximize the effectiveness of the group experience and to minimize harmful effects. Furthermore, a similar group process as that occurring in face-to-face groups may ensure leaders of groups whose membership consists of blind individuals, that any conflict arising in their groups may not be a function of the physical handicap of group members, but is a natural stage in the development of the group. A caution, however, is in order here. It may be that the mere physical presence of members in groups comprised of blind individuals (in the same room rather than in separate rooms) would be a sufficient condition to alter the process of group development. However, the little research that is available on group process development in groups whose members are blind suggests that this may not be the case.

In light of existing literature (Evans and Jaureguy, 1984) indicating that group counselling procedures with severely physically handicapped persons may encourage concessions motivated by pity and revulsion as a result of members seeing each others crippled and spastic limbs, hearing aids, thick lenses, wheelchairs and mechanical devices, etc.; and since it is reasonable to make the generalization based on the results of this study that group

counselling can be successful in an environment where there is no visual contact between group members (audio teleconference environment), it would appear that group counselling via audio teleconferencing would be an ideal method for providing counselling services to these persons. Removing the face-to-face component of the counselling experience would discourage concessions motivated by pity and revulsion as a result of seeing each other and would encourage each group member to treat one another as a full human being.

This study has demonstrated that the pattern of process development, as measured by the HIM-G and reported in the literature for face-to-face groups, occurred in a counselling group conducted on an audio teleconference system. This could be valuable information to any counsellor conducting groups via audio teleconferencing. Since the literature has indicated that this process is a necessary prerequisite for successful group counselling in face-to-face groups, not only might this process provide an accountability of the effectiveness of group counselling procedures on the teleconference system, but it may allow the counsellor to make modifications in the group process that could enrich the treatment potential of the experience. As Silbergeld et al. (1977) pointed out, interactions among group members can facilitate personal development, and therefore, classification and measurement of these behaviors

can permit evaluation and improvement of intervention programs.

Recommendations for Further Research

1. Since this study addressed the issue of group process development in an environment (teleconference) where no studies could be found dealing with the issue, a validation study confirming the results obtained in this study would seem to be a logical follow-up. This might be considered using the HIM-G or some other instrument that analyzes group process (i.e. Traux-Carkhuff Instrument of Group Process Analysis, Bales Category System for Interaction Process Analysis, Bonney Scale of Group Process Analysis).

2. Group process is but one approach that researchers have utilized to measure the success of a group counselling experience. Gazda (1978) for instance, indicated that the success of a counselling group may also be measured by certain 'core' conditions that must be conveyed by the leader. These include empathy, respect, warmth, concreteness, genuineness, appropriate self disclosure, confrontation and immediacy. Perhaps a study addressing the issue of successful group counselling via audio teleconferencing using these criteria would be in order.

3. This study demonstrated that the pattern of process development, as measured by the HIM-G and

reported in the literature for face-to-face groups, occurred in a counselling group conducted on an audio teleconference system. However, further exploration of group process in teleconference environments is needed. A particularly interesting aspect of group process development that has received considerable attention in face-to-face environments is the identification of criteria which are necessary for the transition between the phases of group process. The transition between each phase is critical to the development of a group. The leader must recognize the transitional phases and facilitate the group to deeper levels. Therefore, a study addressing this concern ought to be conducted in an audio teleconference environment to determine if transitional states occur at all, or if they occur in a fashion similar to or different from that occurring in face-to-face groups.

4. Another particularly interesting aspect of group process development that might be explored in an audio teleconference environment is the relationship of group process to outcomes. If we could make some hypotheses about what it is that happens during the group counselling experience that allowed us to predict one outcome over another, then we might expect more group leaders and therapists to provide counselling services via the audio teleconferencing modality.

5. It is reasonable to assume that a given phase in

the development of group process may be affected by the length of time that the group has together to accomplish its task (Tindall, 1979). A study addressing the issue of group process development in a time-extended audio teleconference environment could be conducted and the results compared to the results of this study. This could provide valuable information to group leaders or therapists regarding whether or not extended group sessions via audio teleconferencing would result in greater socialization and minimal treatment outcomes as was suggested by Hinchley and Herman (1951) for face-to-face extended counselling groups.

6. As the participants reported in Session 10 (Appendix D), there was a wish to meet face-to-face. This was unable to be arranged. However, a further research possibility is to conduct a face-to-face group with the same participants to determine if the group process unfolds in a similar manner.

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APPENDIX A

Theories of Group Development

Theory	Phases of Group Development					
Thelan and Dickerman (1949)	Forming	Conflict	Harmony	Productivity		
Bennis and Shepard (1956)	Dependence Flight	Counterdependence Fight	Resolution Catharsis Enchantment Flight	Disenchantment Fight	Consensual Validation	
Tuckman (1965)	Forming	Storming	Norming	Performing		Termination
Bonney (1969)	Establishment	Experimentation	Operational	Creative		
Hill and Gruner (1973)	Orientation	Exploration		Production		
Fisher (1980)	Orientation	Conflict	Emergence	Reinforcement		
Kuypers, Davies and van der Vegt (1987)	Dependency	Counterdependency	Enchantment	Disenchantment	Consensual Validation	Termination
George and Dustin (1988)	Orientation	Transition	Action			
Tubbs (1988)	Orientation	Conflict	Emergence	Reinforcement		

APPENDIX B

A Tentative Exploration of the Effectiveness of Group Counselling via the Teleconferencing Modality. A Brief Description of the Nature of the Study and the Focus of the Counselling Group

Group counselling via the teleconference system is a ten-session group experience focusing on the stressors in the lives of teachers and possible means of managing them effectively. The group will meet for two, one-hour sessions per week.

Group members will have an opportunity to share their concerns about entering a demanding profession where they will be highly susceptible to stress and to get ideas regarding the effective management of stress.

This is not a therapy group. No group member will be forced to disclose information that he/she does not wish to share. It is hoped that your participation will encourage you to change your behavior in a manner that is conducive to dealing with stress more effectively.

The direction of the group will largely depend on the needs of group members. Members will have ample opportunity to discuss what it is he/she hopes to get from the group experience. The group leader may then pursue those wishes. Possible areas that might be dealt with include: (a) teacher stressors (b) the body's reaction to stress (c) managing stressors (d) time management techniques and (e) diets and exercise and their roles in stress management. Note, these

are possible areas that individual participants may wish to pursue. They do not represent an agenda for the group sessions. It may very well be that none of these topics will be explored once the group begins.

APPENDIX C

A Tentative Exploration of Group Process Development in a Teleconferencing Environment

You are invited to volunteer in a research project breaking new ground in the fields of group process and teleconferencing. The purpose of the study is to use group process as a basis for measuring the success of group counselling procedures in a non-face-to-face (audio teleconference) environment. You will be requested to commit yourself to a maximum of ten, one-hour sessions of group experience. Each of you (a total of eight persons) will be located in one of eight offices located on the campus of Memorial University of Newfoundland and will be requested to call into the Telemedicine Center to "hook onto" the system.

Your identity will be protected in part by the nature of the research itself. No visual contact between group members will be possible since each individual will be situated in a different office on the campus of the University. Each of you will be assigned to a particular office prior to the start of the study. This information may be communicated to you by telephone, in writing, or by members dropping by E3034N or E3058 to receive their assignment.

To ensure confidentiality in all group sessions, the teleconference operator has agreed to turn off the system at

the Telemedicine Center so that he/she will not be able to listen to the group.

All sessions will be audio-taped using the taping facilities at the Telemedicine Center. The focus of the group will concern stress management in the classroom. The audio-tapes, which will be edited to remove the names of any group member, will then be blindly rated by two graduate students in Educational Psychology, using a group process evaluation scale.

If you have any further questions regarding the nature of this research, please feel free to contact either Derek Elliott (E3034N) or Dr. Norman Garlie (E3058) at the Department of Educational Psychology, Memorial University of Newfoundland.

I _____ agree to participate in this study as outlined in the information provided above.

Date: _____

Signature: _____

APPENDIX D

Outline of Group Counselling Sessions

Session #1.

Content:

1. Introduction of group members.
2. Members conceptions of stress.
3. Focusing on the myths of stress that a number of group members elicited.

Leader's Objectives:

1. To allow group members the opportunity to briefly get to know each other and to feel comfortable communicating as a group.
2. To assist group members to understand that many of their conceptions regarding stress are actually myths.
3. To encourage group members to think of ways that they might use many of these misconceptions to their advantage in dealing with stress in the classroom.

Major Counselling Techniques:

High levels of respect and empathy; mild confrontation; self-disclosure.

Session #2.

Content:

1. Follow-up from last session regarding myths that a number of group members had regarding stress.
2. One group member was interested in the signals of stress. This led to a number of self-disclosing remarks regarding what different individuals perceived as signals of high levels of stress.
3. Discussion of the direction that the group should take.

Leader's Objectives:

1. To ascertain that all group members understand that many of the misconceptions that individuals hold regarding stress can be used to their advantage in managing stress.
2. Group members would better understand the wide

range of signals that warn of high stress levels.
3. To receive feedback regarding the direction the group should take.

Major Counselling Techniques:

High levels of respect and empathy; moderate self-disclosure; open questions.

Session #3.

Content:

1. Follow-up from last session regarding symptoms of stress.
2. Leader disclosed the value of self-talk in the management of classroom stress.
3. This led to one group member wondering about the value of humour in the management of classroom stress.

Leader's Objectives:

1. To encourage group members to use self-talk in the management of classroom stress.
2. To facilitate understanding among group members regarding the serious nature of humour in the management of classroom stress.

Major Counselling Techniques:

Self-disclosure; empathy; immediacy; role playing.

Session #4.

Content:

1. Follow-up regarding the serious role humour plays in the management of classroom stress.
2. Member disclosed low self-esteem and how it affected his ability to manage stress.
3. This led to a discussion regarding the relative meaning of success experiences.

Leader's Objectives:

1. To encourage group members that success in our life is largely determined by our own definitions of success.
2. To facilitate group members' understanding of the

close relationship between stress and self-esteem.

Major Counselling Techniques:

Active listening; empathy; self-disclosure; open questioning.

Session #5.

Content:

1. Active listening and its role in the management of classroom stress.
2. Homework assignment. Members were to engage in active listening during any conversation before the next group meeting.
3. Coping strategies for classroom stress.

Leader's Objectives:

1. Group members, through participating in an active listening experience, would come to realize the value of this exercise in the management of classroom stress.
2. Group members would increase their repertoire of coping strategies for stress by sharing each others strategies.

Major Counselling Techniques:

Active listening; information sharing; mild confrontation and empathy.

Session #6.

Content:

1. Members shared their homework assignment regarding active listening exercise.
2. One group member disclosed that a straining friendship was the source of much stress for her.
3. This led to several supporting comments from other group members and a disclosure of similar scenarios from the other group members.

Leader's Objectives:

1. Group members would become aware of the fact that much of the stress we experience in the classroom may come from outside sources.

2. Group members are not alone with respect to losing a friend and finding themselves 'stressed out'.

Major Counselling Techniques:

Empathy; confrontation and immediacy.

Session #7.

Content:

1. Follow-up from last session.
2. Group discussed whether there was such a thing as positive stress. One member related an experience where the stress he experienced was the source of positive results.
3. Members elicited a number of stressful events they had experienced while others attempted to ascertain whether anything positive resulted from these experiences.

Leader's Objectives:

1. Members would be encouraged to seek out the positive aspects regarding the stress they may experience.
2. Members would be provided with a scenario that illustrated that there is such a thing as positive stress.
3. To elicit one stressful situation from a number of group members in an attempt to seek out any positive aspects of the stress.

Major Counselling Techniques:

Reframing; empathy and confrontation.

Session #8.

Content:

1. Follow-up from last session regarding the issue of positive stress.
2. One group member disclosed his lack of control in the classroom was the source of much stress for him. This led to a number of supporting comments from other group members followed by suggestions that might help him regain control.
3. Members disclosed the value of relaxation exercise in the management of stress in the classroom.

4. Group relaxation exercise.

Leader's Objectives:

1. Group members would be encouraged to use relaxation exercises in managing their classroom stress.
2. Group members would realize that all teachers sometimes lose control in the classroom and that they are not alone in this respect.
3. Group members would exchange techniques that have worked for them to help regain control in the classroom.

Major Counselling Techniques:

Information sharing; high levels of respect and empathy; relaxation training; immediacy; and confrontation.

Session #9.

Content:

1. Follow-up from last session.
2. Group discussed the issue of confidence building in ourselves.
3. This led to a number of self-disclosures from members regarding the fact that they had little confidence in themselves in the classroom.
4. Group discussed various referral sites that might help them deal with the issue of confidence building in themselves.

Leader's Objectives:

1. Group members would learn of a number of programs offered in the city that might help them build confidence in themselves.
2. Group members would receive support from other members regarding their low level of self-confidence.
3. Group members would be encouraged to use a number of self techniques that help build confidence.

Major Counselling Techniques:

Information sharing; empathy; respect; genuineness; and self-disclosure.

Session #10.

Content:

1. Some group members shared with the group their methods of resisting stress.
2. Group discussed the possibility of meeting face-to-face. However this was impossible to arrange.
3. Group evaluated its experience as a group.

Leader's Objectives:

1. Group would evaluate the effects of their group experience.
2. Group members would learn of a number of techniques that others use in resisting stress.
3. Members would be encouraged to use these techniques to resist stress.

Major Counselling Techniques:

Empathy; respect; information sharing; and summarizing.

APPENDIX E

Hill Interaction Matrix-Group

1. Members point out how certain members have characteristic patterns of interaction or members ask for or give reactions to specific behaviors of a member.

0	1	2	3	4	5	6
No Members	One Member	Two Members	Three Members	4/5 Members	5/6 Members	8 or more Members

2. Members express negative, critical or hostile feelings toward the group and its activities.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

3. Group leader attempts to stimulate interaction by probing and sponsoring members about to reacting to or showing awareness of each other with members responding perfunctorily or not at all.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

4. Group leader gives impressions or reactions he has to another member.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

5. Members point out characteristic malfunctions or collaborative avoidances of certain topics or other inadequacies in the group process which prevent the group from serving the therapeutic needs of the members.

0	1	2	3	4	5	6
No Members	One Member	Two Members	Three Members	4/5 Members	5/6 Members	8 or more Members

6. Members discuss certain non-personal topic areas that have significance for understanding their problems but with the focus remaining on the area.

0	1	2	3	4	5	6
No Members	One Member	Two Members	Three Members	4/5 Members	5/6 Members	8 or more Members

7. Members do not accept and are critical of a member's formulations or reports of his past out-group behavior or way-of-life, or a member defends his past out-group behavior or way-of-life.

0	1	2	3	4	5	6
No Members	One Member	Two Members	Three Members	4/5 Members	5/6 Members	8 or more Members

8. Group leader sponsors, probes or otherwise encourages members to reality test a certain member's formulation of his problem and to point out omissions and contradictions in member's presentation of his problem.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

9. Group leader sponsors, probes or otherwise encourages members to discuss how the group operates or might function.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

10. Members are reluctant to participate and do not contribute to the interaction.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

11. Members express negative, or hostile feelings, or delusional ideas about certain conditions, institutions or events.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 members	8 or more members

12. Group leaders socialized informally with the group by talking about current events, gossip and other everyday subjects.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

13. Group leader points out characteristic malfunctions or collaborative avoidances of certain topics or other inadequacies in the group process which prevent the group from serving the therapeutic needs of the members.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

14. Group leader attempts to stimulate interaction by probing and sponsoring members about the group with members responding perfunctorily or not all.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

15. Members do not accept and are critical of a member's formulations or reports of his part or out-group behavior or way-of-life, or a member defends his past, out-group behavior or way-of-life.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

16. Members socialize informally by good-natured give-and-take and joking, indulging in inside-jokes or offering pairing and support.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

17. Members socialize informally by talking about current events, gossip and other everyday subjects.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

18. Members discuss how the group operates or might function.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 members	8 or more members

19. Group leader attempts to stimulate interaction by probing and sponsoring members about themselves; their family, educational background, military experience, etc.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

20. Members give impressions or reactions they have to another member.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

21. Group leader socializes informally by talking about himself or other members in terms of family and educational background; military experience, etc.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

22. Group leader sponsors, probes or otherwise encourages members to discuss certain non-personal topic areas that have significance for understanding their problems with the focus remaining on the area under discussion.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

23. Group leader sponsors, probes or otherwise encourages members to indulge in ribbing, embarrassing, needling or verbally attacking others.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

24. Members express negative, critical or hostile feelings toward the group and its activities.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 members	8 or more members

25. Members point out in a topic discussion of non-personal matters, conclusions or insights derived from the discussion which have implications for the members' personal problems.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

26. Group leader indulges in ribbing, embarrassing, needling or verbally attacking others.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

27. Members socialize informally by talking about the group and its activities.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 members	8 or more members

28. Members socialize informally by discussing themselves; their family and educational background, military experience, etc.

0	1	2	3	4	5	6
no member	one member	two members	three members	4/5 members	5/6 members	8 or more members

29. Group leader sponsors, probes or otherwise encourages member to express negative, critical or hostile feelings toward the group and its activities.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

30. Group leader attempts to stimulate interaction by probing and sponsoring members about discussing current events, gossip and other everyday subjects.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

31. Group leader discusses the manner in which the group operates or might function.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

32. Members express negative, or hostile feelings or delusional ideas about certain conditions, institutions or events.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

33. Members point out characteristic malfunctions or collaborative avoidances of certain topics or other inadequacies in the group process which prevent the group from serving therapeutic needs of the members.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

34. Members give impressions or reactions they have to another member.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 members	8 or more members

35. Group leader socializes informally by good-natured give-and-take and joking, indulging in inside-jokes or offering pairing and support.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

36. Group leader points out in a topic discussion of non-personal matters, conclusions or insights derived from the discussion which have implications for the members' personal problems.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

37. Group leader expresses negative or critical feelings about the group and its activities.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

38. Members point out in a topic discussion of non-personal matters, conclusions or insights derived from the discussion which have implications for the member's personal problems.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 member	8 or more members

39. Group leader sponsors, probes or otherwise encourages member to be critical of a member's formulations or reports of his past, way-of-life or out-group behavior.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

40. Group leader sponsors, probes or otherwise encourages members to point out characteristic malfunctions or collaborative avoidances of certain topics or other inadequacies in the group process which prevent the group from serving the therapeutic needs of members.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

41. Members explore aspects of a certain member's problem.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

42. Members indulge in ribbing, embarrassing, needling or verbally attacking others.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

43. Members reality test a certain member's formulation of his problem by point out distortions, omissions or contradictions in member's presentation of his problem.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 member	5/6 members	8 or more members

44. Members discuss how the group operates or might function.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

45. Group leader sponsors, probes or otherwise encourages members to socialize informally by getting them to discuss themselves; their family and educational background, miliary experience, etc.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

46. Group leader points out in a topic discussion of non-personal matters, conclusions or insights derived from the discussion which have implications for the members' personal problems.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

47. Members socialize informally by talking about current events, gossip and other everyday subjects.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 members	8 or more members

48. Group leader socializes informally by talking about the group.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

49. Group leader sponsors, probes or otherwise encourages member to explore aspects of a certain member's problem.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

50. The group is silent of uncommunicative.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

51. Members point out how certain members have characteristic patterns of interacting or members ask for or give reactions to specific behaviors of a member.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

52. Group leader discusses non-personal topic areas that are relevant to problems of the group members.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

53. Members indulge in ribbing, embarrassing, needling or verbally attacking others.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 members	8 or more members

54. Group leader sponsors, probes or otherwise encourages members to point out how certain members have characteristic patterns of interacting, or to ask for or give reactions to specific behaviors of a member.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

55. Group leader sponsors, probes or otherwise encourages members to point out in a topic discussion of non[personal matters conclusions or insights they may have derived from the discussion which have implications for the member's personal problems.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

56. Members are reluctant to participate and do not contribute to the interaction.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 members	8 or more members

57. Group leader is critical of a members formulation or report of his past, out-group behavior or way-of-life, or the group leader defends his past, out-group behavior or way-of-life.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

58. Members reality test a certain member's formulation of his problem by pointing out distortions, omissions, or contradictions in member's presentation of his problem.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

59. Group leader explores aspects of a certain member's problem.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

60. Members socialize informally by discussing themselves; their family and educational background, military experience, etc.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

61. Members socialize informally by talking about current events, gossip and other everyday subjects.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 members	8 or more members

62. Group leader expresses negative or hostile feelings about certain conditions, institutions or events.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-60% of time

63. Group leader sponsors, probes or otherwise encourages members to socialize informally by getting them to talk about the group and its activities.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

64. Leader participates and contributes to the group interaction.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

65. Group leader sponsors, probes or otherwise encourages members to socialize informally by getting them to indulge in good-natured give-and-take, joking and inside jokes, or offering support and pairing.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

66. Group leader sponsors, probes or otherwise encourages members to socialize informally by getting them to talk about current events, gossip and other everyday subjects.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

67. Members socialize informally by talking about the group and its activities.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-100% of time

68. Members explore aspects of a certain member's problem.

0	1	2	3	4	5	6
no members	one member	two members	three members	4/5 members	5/6 members	8 or more members

69. Group leader sponsors, probes or otherwise encourages members to express negative feelings or delusional ideas about certain conditions, institutions or everyday events.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-60% of time

70. Group leader reality tests a member's formulation of his problem by pointing out distortions, omissions and contradictions in member's presentation of his problem.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-60% of time

71. Members discuss certain non-personal topic areas that have significance for understanding their problems but with the focus remaining on the area under discussion.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-60% of time

72. Group leader sponsors, probes or otherwise encourages members to give impressions or reactions they have to another member.

0	1	2	3	4	5	6
not at all	0-1% of time	1-5% of time	5-10% of time	10-20% of time	20-40% of time	40-60% of time

APPENDIX F

Theories of Group Development and the HIM Category System

Theory	Phases of Group Development					
Thelan and Dickerman (1949)	Forming	Conflict	Harmony	Productivity		
Bennis and Shepard (1956)	Dependence Flight	Counterdependence Fight	Resolution Catharsis Enchantment Flight	Disenchantment Fight	Consensual Validation	
Tuckman (1965)	Forming	Storming	Norming	Performing		Termination
Bonney (1969)	Establishment	Experimentation	Operational	Creative		
Hill and Gruner (1973)	Orientation	Exploration		Production		
Fisher (1980)	Orientation	Conflict	Emergence	Reinforcement		
Kuypers, Davies and van der Vegt (1987)	Dependency	Counterdependency	Enchantment	Disenchantment	Consensual Validation	Termination
George and Dustin (1988)	Orientation	Transition	Action			
Tubbs (1988)	Orientation	Conflict	Emergence	Reinforcement		
HIM Quadrants	Quadrant 1	Quadrant 2	Quadrant 3	Quadrant 4		

APPENDIX G

HIM-G Scoring Key

Number	Cell	Quadrant	Type
1.	IVE	3	LP
2.	IIC	4	MF
3.	IVA		MF
4.	IVD	2	LM
5.	IIE	3	MP
6.	ID	3	MP
7.	IIIC	3	MP
8.	IIIE	1	LS
9.	IID	1	LS
10.	*		MS
11.	IC	3	MP
12.	IB	2	LM
13.	IIE	2	LM
14.	IIA		MP
15.	IIIC	4	MF
16	IVB	4	MF
17.	IB	4	MF
18.	IID	3	MP
19.	IIIA		MF
20.	IVD	4	MF
21.	IIIB	2	LM
22.	ID	1	LS
23.	IVC	1	LS
24.	IIC	3	MP
25.	IE	4	MF
26.	IVC	2	LM
27.	IIB	3	MP
28.	IIB	3	MP
29.	IIC	1	LS
30.	IA		MF
31.	IID	2	LM
32.	IC	4	MF
33.	IIE	4	MF
34.	IVD	3	MP
35.	IVB	2	LM
36.	IE	2	LM
37.	IIC	2	LM
38.	IE	3	MP
39.	IIIC	1	LS
40.	IIE	1	LS
41.	IIID	4	MF
42.	IVC	4	MF
43.	IIIE	3	MP
44.	IID	4	MF
45.	IIIB	1	LS

(table continues)

HIM-G Scoring Key, Continued.

Number	Cell	Quadrant	Type
46	IVE	2	LM
47	IVB	3	MP
48.	IIB	2	LM
49.	IIID	1	LS
50.	*		MS
51.	IVE	4	MF
52.	ID	2	LM
53.	IVC	3	MP
54.	IVE	1	LS
55.	IE	1	LS
56.	*		MS
57.	IIIC	2	LM
58.	IIIE	4	MF
59.	IIID	2	LM
60.	IIIB	4	MF
61.	IB	3	MP
62.	IC	2	LM
63.	IIB	1	LS
64.	@		MP
65.	IVB	1	LS
66.	IB	1	LS
67.	IIB	4	MF
68.	IIID	3	MP
69.	IC	1	LS
70.	IIIE	2	LM
71.	ID	4	MF
72.	IVD	1	LS

LS - leader sponsoring
LM - leader going along with
MP - members participating
MF - frequency of member participation
* - members of silence and resistance
@ - volume of leaders participation

APPENDIX H

HIM-G Scoring Form

	66 - LS	63 - LS	45 - LS	65 - LS	B	LS	Total	--
B	12 - LM	48 - LM	21 - LM	35 - LM	B	LM	Total	--
	61 - MP	27 - MP	28 - MP	47 - MP	B	MP	Total	--
	17 - MF	67 - MF	60 - MF	16 - MF	B	MF	Total	--
Total					B		Total	__
	69 - LS	29 - LS	39 - LS	23 - LS	C	LS	Total	--
C	62 - LM	37 - LM	57 - LM	26 - LM	C	LM	Total	--
	11 - MP	24 - MP	7 - MP	53 - MP	C	MP	Total	--
	32 - MF	2 - MF	15 - MF	42 - MF	C	MF	Total	--
Total					C		Total	__
	22 - LS	9 - LS	49 - LS	72 - LS	D	LS	Total	--
D	52 - LM	31 - LM	59 - LM	4 - LM	D	LM	Total	--
	6 - MP	18 - MP	68 - MP	34 - MP	D	MP	Total	--
	71 - MF	44 - MF	41 - MF	20 - MF	D	MF	Total	--
Total					D		Total	__
	55 - LS	40 - LS	8 - LS	54 - LS	E	LS	Total	--
E	36 - LM	13 - LM	70 - LM	46 - LM	E	LM	Total	--
	38 - MP	5 - MP	43 - MP	1 - MP	E	MP	Total	--
	25 - MF	33 - MF	58 - MF	51 - MF	E	MF	Total	--
Total					E		Total	__
	I - LS	II - LS	III- LS	IV - LS		LS	Total	--
	- LM	- LM	- LM	- LM		LM	Total	--
	- MP	- MP	- MP	- MP		MP	Total	--
	- MF	- MF	- MF	- MF		MF	Total	__
Total	I -	II -	III-	IV -	Overall		Total	__