

AN EVALUATIVE STUDY OF A HEALTH TEAM DEVELOPMENT INTERVENTION
IN A STATE TRAINING CENTER FOR THE MENTALLY RETARDED

by

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CHAPTER 1

INTRODUCTION

Background of the Problem

Interdisciplinary team practice in health care has been a response to rapid changes in the field. These have brought new knowledge, technology, specialization of labor, demands for more comprehensive services, and manpower shortages (Nagi, 1975).

The team approach to health care services delivery is based on the assumption that "an interdisciplinary team will bring together diverse skills and expertise to provide more effective, better coordinated, better quality services for clients" (Ducanis & Golin, 1979:1). Interdisciplinary teams "are established because workers and agencies believe that collaborative practice promised more efficient service to clients" (Horwitz, 1970:86).

Program accreditation standards, professional specialization, and legislative mandates for broadened services have all formalized the existence of the interdisciplinary team model. However, Lonsdale, Webb, and Briggs noted recently:

The reason why teamwork is an important topic for researchers and practitioners is precisely that it is widely seen to be desirable, that enthusiasm for it is often based on widely divergent and even conflicting expectations of what can or shall be achieved, and that models of desirable and effective teamwork are none too easy to discover (or assess) (1980:2).

Interdisciplinary (hereinafter referred to ID) team practice is increasingly crucial to the delivery of health and human services. However, few practitioners have received education or training in teamwork skills. A majority of psychiatrists, clinical psychologists, psychiatric nurses, social workers, special educators, and other allied health personnel engage in teamwork. Nevertheless, most of their

professional training has been within their own discipline's theory and practice. Only recently have attempts been made to identify what competencies practitioners need to perform effectively as members of interdisciplinary teams (Heilman, 1977).

A few university professional schools have begun to offer field experiences and seminars to prepare students for teamwork (Baldwin, Rowley, & Williams, 1980; Bassoff, 1976; Ducanis & Golin, 1979). However, among experienced practitioners there remains a widely recognized but unmet need for development of teamwork skills (Bloom & Parad, 1976). Furthermore, "few institutions in this country have had sufficient interest or opportunity to develop broad-based programs of research and evaluation on teams" (Baldwin, D., in Bachman, J., ed., 1982:205).

Federal and state legislative mandates for broadened health and human services coupled with budgetary constraints add to the imperative that health care delivery systems must find ways to maximize efficient and effective use of personnel. Most personnel engaged in health and human services do their work in ID teams. Accordingly, the need for knowledge about how teams can develop efficiency and effectiveness has become even more urgent.

The objectives of team development are to remove barriers to effective group functioning and to develop within a group the ability to manage group process more effectively to solve future problems (Beer, 1976:956). One of the basic issues in team development is when and with what groups it should be used (Dyer, 1977). However, the present body of knowledge about team development interventions and their effects leaves a great deal to be desired (Kaplan, 1979).

Woodman and Sherwood reviewed thirty studies on the role of team development in organizational effectiveness. They concluded that these fundamental questions about team development are still unanswered:

1. Can we expect meaningful performance improvements from team development and if so, under what conditions are these improvements likely to occur?
2. Which approaches or models of team development are most effective, and under what conditions?
3. With which types of work groups and for what kinds of tasks is team development likely to be more effective?
4. Under what conditions are work groups likely to elect not to attempt to improve performance following a team development experience? (1980:183)

Empirical research on team development has been limited by difficulties of conducting research to study the effects of planned change interventions in work organizations, by differing intervention approaches, and by weak research designs (Bowers & Franklin, 1977; Friedlander & Brown, 1974; Haas & Drabek, 1973; Margulies, Wright & Scholl, 1977; Morrison, 1978; Nicholas, 1979; Pate, Nielson & Bacon, 1977; and Porras & Patterson, 1979). These factors have precluded ready comparison of findings from one study to another and interfered with theory building on the effectiveness of team development interventions.

Virginia Department of Mental Health and Mental Retardation recognized the need for development of interdisciplinary teams early in the 1970's. Three projects were initiated to meet that need.

First, a training program was developed in 1973-74 to promote inter-agency collaboration in the treatment of drug and alcohol clients. Trainees were representatives of various community agencies such as welfare caseworkers, corrections workers, mental health practitioners, etc. It was expected that workers' better understanding of each other's roles, when combined with collabora-

tive skills, would facilitate the interagency referral process for clients. (Feine et. al., 1975).

Second, the state agency retained an outside consultant to design and conduct a three-day team development intervention in 1976-77 with representatives of mental hospitals, mental retardation training centers, and vocational rehabilitation counselors. Participants were workers responsible for joint planning for community placement of patients to be discharged from institutions. Over the year's period 242 Department of Mental Health and Mental Retardation employees from ten institutions and 80 Division of Vocational Rehabilitation counselors participated in the team development program. This number represented an estimated 20% of the total number of interdisciplinary team members employed in the agency's sixteen institutions.

That Joint Placement Team Project contained two components of significance here. First, planning was coordinated by the outside consultant and two internal consultants, one from each participating state agency. Several writers concerned with organizational change have noted the important role played by internal consultants in promoting innovative programs (Duncan, 1978; Fairweather, et. al., 1974; Rubin et. al., 1978).

A second important component was the on-site interviews conducted at each facility by the outside consultant six to eight weeks prior to the intervention. The "real" problems identified in those interviews were used in the third day team development activities at each facility. The consultant reported "most teams have had little or no training in teamwork and lack basic knowledge and skill in team dynamics" (Cushnie, 1977:13). Participants expressed needs for future team development with intact work groups.

In an attempt to meet increased demands for team development, the agency entered into a third project with an external consultant the next year. The objective of a train-the-trainer course in team building during 1978-79 was to develop team building skills among the agency's own personnel. Thirty-one individuals, who had been selected by fourteen institutional directors, completed a 45-hour training program in team-building strategies and skills. However, the agency still lacked a system for addressing team development needs on a consistent basis across the state (Cushnie, 1979).

It was clear that an unmet need for team development existed within the Virginia Department of Mental Health and Mental Retardation. It was also evident from literature reviewed for this study that no single ideal model of health team practice existed. Further, the literature revealed little theory about team development interventions and their effects upon intact work groups. Especially limited was research on team development interventions with health and human services ID teams.

Given the unmet practical and theoretical needs, the writer established the following criteria for a team development intervention that could be subjected to evaluation research:

1. The intervention should make use of existing trainer resources within the agency rather than depending upon the use of hired consultants.
2. The intervention should not require extensive blocks of release time from job duties for participant groups;
3. The intervention should be designed for use with intact work group teams in which all members of the team would participate;
4. The intervention activities should have face validity as perceived by busy mental health-mental retardation workers.

Improving the Coordination of Care: A Program for Health Team Development by Rubin, Plovnick, and Fry (1975) met these criteria. The program, hereinafter referred to as HTD, was an outgrowth of research-based, planned change efforts in health care organizations initiated in the early 1970's by the Sloan School of Management, Massachusetts Institute of Technology.

In their action research work with health care teams in primary health care centers, Rubin and Beckhard collected data, summarized it, and fed it back to the teams, which used that data for action planning and subsequent evaluation of their efforts. A key role for the consultant was to help the teams:

see the connection between what they were doing (their task) and how they were going about it (their internal group process). This expanded awareness helped to develop an attitude (norm) toward change, which legitimated managed, experimentation and learning (1972:331).

Several key assumptions underly the unique approach taken to health team development in the HTD program. The first assumption is that problems in teamwork are inherent in trying to accomplish a task requiring coordination of interdependent functions. Problems must be managed with attention to both tasks and group processes, if energy is not to be diverted from the team's task accomplishment, dysfunctionally. Initial testing of the HTD program indicated that when systematic attention to team's task-related processes is provided such symptoms often disappear and formerly diagnosed "personality problems" also disappear (Rubin, Fry, Plovnick, and Stearns, 1977).

The second assumption is that the HTD program is an educational intervention consisting of task-oriented, problem-solving activities based upon team-generated data about real problems the team faces. There are no simulations, exercises, or sensitivity-type laboratory experiences. Thus, the HTD

program is based on a belief that a team can best learn how to solve problems by doing so in an educational mode.

A third key assumption underlying the HTD program is that team development should be viewed as an ongoing process of preventive maintenance in order to direct maximum team energies toward effective task completion of i.e. service delivery to patients. HTD learning activities are focused upon techniques and skills that teams can use immediately to enable them to better manage the inevitable problems that arise due to the interdependent nature of the tasks the team must perform.

The HTD program content is team-specific by virtue of its reliance on team-generated data. Its process is structured in eight modules that deal sequentially with such issues as team goals, team roles, participation in decision-making, norms, leadership, and action planning. The program was originally designed for use with or without an outside consultant-facilitator in order to make team development available to health care teams which lacked the ability or funds to mobilize internal or external consultant-facilitator resources. However, a limitation is that team development without a facilitator does not lend itself readily to first-hand evaluation beyond the subjective views of participants.

A second difficulty inherent in a team's self-administration of the program is that a poorly functioning team may not be able on its own to assess its need for team development. That is, the same factors contributing to a team's ineffectiveness may interfere with its ability to make a wise decision concerning its needs to participate in the HTD program (personal communication with I. Rubin, 1980).

The authors of HTD assessed commonly experienced barriers to the implementation of the HTD program. Without exception, they found that those settings which did use the program had an inside sponsor or patron who perceived a need for

team development and who worked to overcome the barriers (Rubin, et. al., 1976). Virginia Department of Mental Health and Mental Retardation's prior efforts at team development also indicated the importance of an internal consultant who could promote and implement the program.

HTD authors reported initial field tests of the program in a variety of health care settings (Rubin, Cohen, Fry, & Plovnick, 1976; Rubin, Plovnick, & Fry, 1977). However, except for one related study with Navy management teams (Winsted, 1978), no studies were found which attempted to evaluate the effects of the HTD-TOTD program on interdisciplinary team functioning.

In summary, the present study grew out of the continued press of unmet needs for team development, the absence of a system in the agency for meeting those needs, and from the need for research on team development. Given the assumptions on which the HTD program rests, and the limited success of prior efforts by the agency to provide ID team development by an external consultant, the present study was designed around implementation of the HTD program by internal staff members serving as team facilitators.

Statement of the Problem

This study addressed the problem of what are the effects of a health team development intervention (HTD) on ID team processes in a state mental retardation training center. Specifically, the study was designed to address these research questions:

1. Before HTD, were Center Leaders' expectations for teamwork and for the intervention congruent with the variables targeted for change in HTD?
2. Did team members' perceptions of their team differ before and after the HTD intervention?

3. Did teams' meeting behaviors differ before and after the intervention?
4. After HTD, how did Center Leaders evaluate the HTD intervention's effectiveness and applicability for their own and similar organizations?

Purpose of the Study

The broad purpose of this study was to contribute to the integration of theory and practice of interdisciplinary team development in health and human services agencies. A practical purpose was to provide agency decision-makers and trainers in the Virginia Department of Mental Health and Mental Retardation with replicable, evaluative data on which to base programming decisions about needs, strategies, and expectations for team development. The theoretical purpose was to contribute to knowledge about how interdisciplinary (ID) team processes change as a result of their participation in a task-oriented, problem-solving team development program.

Limitations of the Study

The study involved the evaluation of a specific team development intervention conducted with intact work groups, interdisciplinary health care teams in a state-supported mental retardation training center. The researcher was unable to control salient variables in a dynamic, ongoing work organization whose primary mission was delivery of services to residents by a well-trained staff.

Several important factors affected the internal validity of the study. These were: 1) non-randomized selection of participant teams; 2) three different team facilitators who implemented team development activities with the three participant teams; 3) the lack of a previously established criterion level to which

observers could be training; and, 4) organizational history and maturation. Because the intervention and research project was carried out in a specific organizational setting at a particular time in its history, and it was not possible to control all salient variables, the reader is cautioned against inferring causality for the changes reported here. Further, the reader is cautioned about generalizing results of this study to other organizations, other teams, and other approaches to team development.

Targeted for change in this study were the team processes of the ID teams. No attempt was made to predict a direct relationship between salient team processes variables, and actual treatment outcomes for residents or patients. Research is certainly needed which would substantiate a relationship between team development interventions and subsequent improvement of teamwork outcomes (Woodman & Sherwood, 1980). However, it was decided to limit the scope of investigation in this study to team process variables that were generally targeted for change in team development interventions.

Significance of the Study

The study was intended to have both practical and theoretical significance. Its practical significance lay in the development and use of a data-based design for implementation and evaluation of a systematic approach to team development (HTD), that could be replicated by the staff trainers in other mental health-mental retardation agencies and institutions.

The theoretical significance of the study lay in its contributions to the development of knowledge about how change is produced and measured in intact workgroup processes by team development interventions with interdisciplinary health care teams.

Definition of Terms

The following definitions are used for key terms in this study. These terms are commonly defined in the literature and were used in this way in this study.

Team is "a group of individuals who must work interdependently in order to attain their individual and organizational objectives" (Karp, 1980:157).

Interdisciplinary Team is "a functioning unit composed of individuals with varied and specialized training, who coordinate their activities to provide services to a client or group of clients" (Ducanis & Golin, 1979:3). In the mental retardation center teams consist of members from the following disciplines who meet together regularly: medicine, social work, dentistry, nursing, psychology, speech pathology, physical therapy, education, recreation, rehabilitation services, and paraprofessional unit staff.

Team Development is "any planned activity or series of events designed to improve the team's ability to manage its goals, roles, procedures, intrapersonal factors, and the system or organizational environment in which the team operates" (Plovnick, 1982).

Group Process consists of "the individual or collective actions of the people who have been assigned a task . . . it includes all those intrapersonal and interpersonal actions by which people transform their resources into a product and all those nonproductive actions that are prompted by frustration, competing motivations, or inadequate understanding" (Steiner, 1972:8).

Task Process consists of "all the activities that make up the group problem-solving process, how the problem is defined, how the agenda is set, how information is gathered, how decisions are made; it is distinguished from interpersonal processes" (Schein, 1978:342).

Group Norms are "expectations that guide and influence the behavior of group members. Norms develop in the areas of feedback on performance, the expression of feelings about individuals and group performance; and nature and quality of interaction; the nature and degree of collaboration, participation in influence and leadership, and the resolution of conflict and difference. Norms, then, are a critical dimension which establishes and gives meaning to the character or culture of the group . . . Norms . . . are intimately related to the kinds of tasks that are required by the group, the nature and specifically of group goals, and the quality of leadership present in the group (Margulies & Wallace, 1973:101).

Organization Development (hereinafter referred to as OD), is "a process of planned change of an organization's culture from one which avoids an examination of social processes (especially decision-making, planning and communication) to one which institutionalizes and legitimizes this examination and from one which resists change to one which promotes the planning and use of procedures for adapting to needed changes on a day to day basis" (Burke & Hornstein, 1972:2).

Process Interventions are "especially created situations which allow the examination and change of ongoing relationships and interactions in the context of the actual task environment. While immediate problems are being worked on, organizational members are learning by doing. New behaviors, which emerge and are encouraged during the course of the intervention, can be the beginning of a learning cycle when these new behaviors successfully resolve work problems immediately and later" (Beer, 1976:954).

Summary

Chapter one discussed the inadequate state of knowledge about efficiency and effectiveness of health teams. It was established that a majority of ID team practitioners have not received education and training to provide them with teamwork skills. A study was proposed to assess and describe the effects of a particular health team development intervention HTD upon team processes of ID teams in a mental retardation training center in Virginia. Research questions were formulated, and key terms were defined as they were used in this study.

CHAPTER 2

REVIEW OF RELEVANT LITERATURE

The problem for this study was to identify what were the effects of a task-oriented, problem-solving team development intervention (HTD) on the meeting behaviors and perceptions of ID team members and managers in a state mental retardation training center.

Browne (1977) identified nine different theoretical perspectives that have contributed to an understanding of health teams. These were: 1) human relations theory and practice; 2) small groups theory; 3) interaction analysis in groups; 4) conflict theory; 5) theoretical perspectives on power; 6) sociology of the professions; 7) role theory; 8) sociology of work; and, 9) organization development. However, he went on to say that no one of these perspectives has captured the essence of the ID health team. The latter statement was reassuring, since an indepth review of each of these nine areas was beyond the scope of the present study. Instead, the literature was reviewed selectively.

Given the meager knowledge about teamwork and the descriptive nature of this study, a broad literature review was preferred over one that might have been done in greater depth but with less breadth. An attempt has been made to focus selectively on the integration of theory and practice from the interdisciplinary literature directly relevant to the problem under study.

For the sake of clarity, the review has been organized into these topic areas: 1) interdisciplinary team practice, 2) group processes and work group effectiveness, 3) selection of organization development interventions, 4) team development with intact work groups, and 5) evaluation of organization development interventions.

Interdisciplinary Team Practice

The team approach has "generated more rhetoric than research and an adequate theory of teams has yet to be formulated" (Ducanis & Golin, 1979:1). Others who have surveyed the literature on team practice in one or another of the health care fields are generally in agreement with that statement.

Wagner (1977), who reviewed rehabilitation team practice, observed that most studies were either normative prescriptions of how teams ought to function or descriptive case studies of how teams do function. Little effort was given in these studies to either evaluating or changing team practice.

Halstead reviewed the literature on team care in chronic illness for the period 1950-1975. He found only ten research studies that attempted to evaluate the effectiveness of teams. From those few he concluded:

(1) On the whole, coordinated team care appears to be more effective than the customary care currently received by most persons with long-term illnesses; (2) functional status is improved or maintained in most instances and does not appear to be adversely affected; (3) there is improved control or less deterioration in disease activity; (4) team care is usually associated with increased utilization of some health care services; (5) increased utilization of health services is associated with increased health costs; and (6) team care research, while presenting special problems, is in fact possible (1976:510).

Except for a few studies that compared team diagnoses and prognoses with those made by individual practitioners (e.g., Weiner & Rath, 1959; Wagner, 1977), little study has been made of the effectiveness of teams.

Typical of the descriptive-normative articles on ID teams was Stone's prescription for successful teamwork in a mental retardation setting:

(1) freedom of communications; (2) sharing of responsibility for decision-making and leadership; (3) respect for individual status and competence; (4) encouragement of both independent and interdependent functioning; (5) develop-

ment of congenial interpersonal feelings and role consensus among staff members; (6) continuous evaluation of clinical functioning in the light of shared reality (1970:837).

The interdisciplinary team has been defined in several ways. These definitions are inserted as illustrations of the concepts used in describing a team.

a functioning unit composed of individuals with varied and specialized training, who coordinate their activities to provide services to a client or group of clients (Ducanis & Golin, 1979:3);

a group of people each of whom possesses particular expertise, each of whom is responsible for making individual decisions; who together hold a common purpose; who meet together to communicate, collaborate, and consolidate knowledge, from which plans are made, actions determined, and future decisions influenced (Brill, 1976:22);

that combination of people whose coordinated inputs are necessary to accomplish a given task or set of tasks The team then is a mechanism for integrating the effects of several people; functions to accomplish some task (Plovnick, Fry, & Rubin, 1975:20).

From these typical definitions, it seems clear that collaboration, coordination, integration, and participatory decision-making are the hallmarks of ID teamwork in its idealized form. However, research on team practice suffers from a lack of operationalized definitions of the term 'team' (Schmitt in Bachman, (ed.), 1982:218). The meaning and implication for teamwork of these value-laden terms warrant further discussion.

The rationale for forming ID teams was to overcome the disadvantages of professional specialization by coordinating professional services. They were also intended to make the best use of a highly specialized division of labor in the health care field, according to Webb & Hobdell (cited in Lonsdale, et. al., 1980:101). Kane reviewed 229 articles on ID teams over the period of 1964-1973. She found that teams tended to function in either a "coordinate" or an "integrative" model (1975:58).

According to Kane, "the integrative team . . . adheres to shared decision-making, overlapping roles, shifting leadership focus, and attention to team group processes as a desirable way of operating" (1975:58). In the coordinate team each professional treats the patient in a highly specialized manner at a given time in their treatment, and the physician is usually the team leader who retains decision-making authority (1978:58).

Others, too, have distinguished between coordinated teams and integrated teams on the basis of differences between them on such variables as communication, decision-making, leadership style, role definitions, and norms for sharing feelings (Charns, 1976; Horwitz, 1970; Lewis, 1969). Coordinated teams may offer services to clients in sequential periods dependent upon client needs over time. They generally have a clearly defined system of hierarchical authority, and clearly defined roles that differentiate status within the hierarchy and boundaries for individual decision-making. On the other hand, an integrated team may engage in deliberate role-blurring (Adamson, 1969) in order to maximize efficiency and effectiveness in services to clients. Integrated teams also tend to make decisions by consensus, and the leader may serve chiefly as a meetings manager.

According to Charns (1976:59), the two greatest barriers to integration are the difficulties associated with exchange of needed information across professional disciplines or departments, and the management of conflict. A frequent source of conflict has to do with the role and authority of a designated team leader (Grieff & McDonald, 1973).

Charns emphasized the skills a team leader must have in order to serve an integrating function. "Skillful integrators are persons who have have orientations intermediate among the different groups working together, and influence resulting from others' perceptions of their competence in order to manage conflict among

team members, facilitate the needed exchange of information, and run meetings" (Charns, 1976:65). History and tradition have often dictated that physicians serve as team leaders. However, in his study to ascertain which disciplines exhibited an intermediate orientation and influence, Charns found that physicians, head nurses, and physical therapists were least likely candidates for serving an integrative function.

Charns recommended structural changes as an avenue to achieve integration and collaboration among professional disciplines. He held that both departments and teams can exist in a matrix organization with individuals responsible to both. Ideally, power is balanced between teams and departments. However, he acknowledged the need for education and training of personnel in areas of management, interpersonal and group process skills, if improvements were to be seen in teamwork and in the leader's ability to perform an integrating function successfully.

According to Appley and Winder, collaboration involves the mutual sharing and commitment to the achievement of agreed-upon goals. Participative decision-making and the use of mutual support systems or social networks at work are skills that can and must be learned if collaboration is to occur (1977:287).

Although there is a widely agreed-upon, unmet need among health care practitioners for education and training in teamwork skills, nowhere has it been stated more vividly than as follows:

It is naive to bring together a highly diverse group of people and expect that, by calling them a team, they will in fact behave as a team. It is ironic indeed to realize that a football team spends forty hours a week practicing teamwork for the two hours on Sunday afternoon when their teamwork really counts. Teams in organizations seldom spend two hours per year practicing when their ability to function as a team counts forty hours per week (Wise, et. al., 1974:56).

Straker and Cummings (1978) identified four broad types of tasks performed by ID teams. These can be summarized as follows: 1) patient care and treatment functions; 2) consultative functions of individual team members to one another and outside the team; 3) administrative, operational, and team maintenance functions; and, 4) education, training, and research functions. Most health care professionals perform all four types of functions, each with differing role expectations. Such differentiation makes it hard to intervene into health care organizations to bring about greater integration (Charns, 1976; Weisbord, 1976).

Three studies were located in which intact ID health teams were studied with use of structured observation. In all three cases the researchers had developed their own systems for categorizing observed verbal behaviors. In none of these studies was any attempt made to study changes in team behaviors after a planned intervention.

Goldstein, Strickland, Turnbull, and Curry (1980) used structured observation techniques in a study of participatory decision-making in Individual Education Planning (IEP) conferences. They developed a coding system to record which team member spoke to whom about what topic in time intervals of two minutes. Findings indicated the need to train parents of handicapped children in the procedures and responsibilities of the IEP process, and to train professionals in how to involve parents in the decision-making process.

Feiger & Schmitt (1979) measured member participation among health teams composed of doctor, nurse, and dietician to yield an index of collegial interaction. They analyzed videotapes of team meetings. Findings indicated a positive correlation between collegial interaction among team members and treatment outcomes for diabetic patients.

Browne (1977) used a grounded theory approach to do a secondary analysis of process recordings made by observers in ID team meetings on a hospital ward. High decision meetings were those in which teams made decisions about 46-49% of the number of patients presented. In low decision meetings teams made decisions about 12-16% of the patients presented for discussion.

Ducanis & Golin (1979) developed an observational system for use in a seminar they taught to prepare allied health students for ID teamwork. Students at the University of Pittsburg had to observe, categorize, and report on ID team problem-solving discussions as part of their coursework. No research, except the present study, has been reported with the use of that system for observing ID team practice (personal communication with A. Golin, September, 1981).

Group Processes and Work Group Effectiveness

An extensive body of literature has developed over the past fifty years in researchers' attempts to identify variables associated with group effectiveness. Summaries of small groups research can be found elsewhere (Cartwright & Zander, 1968; Hare, 1976; McGrath & Altman, 1966). Rubin and Beckhard stated: "The effectiveness of any group in any setting is related to both its capabilities to do the work and its ability to manage itself as an interdependent group of people." (1972:317.) There is general agreement that groups must manage both task and process in order to perform effectively (Rubin & Beckhard, 1972; Schein, 1969; Steiner, 1972). However, it has not been clear just how a group's management of such processes as communications, decision-making and problem-solving procedures, and handling of conflicts, are related to its performance outcomes. Some, such as Likert (1961) and McGregor (1960), have demonstrated greater productivity in work organizations where employees participate actively in workgroup decision-

making. In spite of the thousands of studies of small group behavior, no general theory of work group effectiveness has emerged.

It has been suggested that groups go through several stages of development over time (summarized in Rosenfeld, 1973:39-62). However, the concept of developmental phases for groups has been subjected to little empirical study (Tuckman & Jensen, 1977). A review of group development theories is beyond the scope of the present review. However, Dobkin (1973) has presented a model showing how knowledge of a team's current stage of development together with knowledge of its task requirements enables one to determine the level of development to which that group should aspire in order to perform its tasks well.

Tasks required of ID teams are characterized by a high degree of interdependence and a high degree of uncertainty. Task interdependence refers to whether or not interaction among persons is required to get the work done. Clearly interaction is required in the care and treatment of chronic illness and developmental disabilities. The dimension of task certainty-uncertainty refers to the extent to which procedures and methods for performing the work must be re-evaluated and modified (Dobkin, 1973:19). Individualized patient care and treatment tasks require a high degree of interaction among workers and continuous assessment, re-evaluation, modification according to changing resources, technologies, and needs of patients. There exists, then, a strong need for ID teams to function with a high degree of mutual influence for decision-making and for mutual support (Dobkin, 1973:39-40).

There is an extensive body of literature dealing with group problem-solving effectiveness. However, several authors have expressed concern about its applicability to ongoing work groups (Bunker & Dalton cited in Lorsch & Lawrence, 1972; Friedlander, 1966; and Hoffman, 1979). Most of the research on group problem-

solving has been done with ad hoc groups which differ from intact work groups in several significant ways. First, ad hoc groups are short-lived, formed solely by experimenters for the purpose of solving a contrived problem. With temporary groups the goal is given to them by the experimenter: there is little need to establish group norms or to clarify roles. The maintenance needs of ad hoc groups are minimal because they are disbanded immediately after completion of the experiment. Also missing from the laboratory experimental group is the whole set of organizational context variables that confront work groups (Hoffman, 1979:382). Hoffman went on to postulate that the extent to which group variables such as size, diversity of membership, interpersonal relations among members, and heterogeneity of organizational rank among members, do affect the outcomes of group problem-solving depends on the quality of the group's processes (1979:380).

Steiner's discussion of the relationship between group process and group performance or productivity noted that three classes of variables influence how well an individual or group performs a task: the task demands, the resources available to perform the task, and process (1972:6). According to Steiner:

Process consists of the actual steps taken by an individual or group when confronted by a task. It includes all those intrapersonal and interpersonal actions by which people transform their resources into a product, and all those nonproductive actions that are prompted by frustration, competing motivations, or inadequate understanding. In short, process consists of the individual or collective actions of the people who have been assigned a task. In a productive group, these actions will include the intellectual and communicative behaviors by which members evaluate, pool, and assemble their resources; decide who shall do what, when; assign differential weights to one another's contributions; an extoll one another to participate fully in the group's task-oriented activities (1972:8).

For Schein (1978) process refers to the ways in which problems are defined, worked on, and ultimately solved. He made a further distinction between task process and interpersonal process that is relevant for the problem under study here.

According to Schein:

task process means how the problem is defined, how the agenda is set, how information is gathered, how decisions are made, all the activities that make up the problem-solving process (1978:342).

In contrast to task process, "interpersonal process refers to such phenomena as conflict, communication, emotional outbursts, leadership struggles and the like" (1978:342). In Schein's model of process consultation, interpersonal process events are only dealt with "if and when the client indicates a genuine readiness to deal with them and if there is clear evidence that the interpersonal events are getting in the way of effective problem-solving" (1978:342).

Margulies and Wallace argued that task and process must be dealt with in an integrated manner. They noted:

Task and process are viewed as being present together in any team, much like a gestalt configuration, so that the task and process elements must be dealt with separately as each becomes the figure and or foreground. Energy is wasted in organizations and teams when the task or process elements are the figure (foreground) and the team insists on pursuing those elements (either task or process) which are in the background (1973:107).

Similarly, Beckhard (1974) has maintained that insufficient attention to group maintenance or process needs will ultimately be costly to the group's effectiveness, since unmet maintenance needs cause team energy to be drained from the task toward coping with those unmet process issues.

More recent research has indicated that group processes may be related to outcome measures of group effectiveness only indirectly. Smith and King (1975) did an extensive multivariate study of mental hospital effectiveness, taking into

account the interactional effects of structural and interpersonal process variables and the mediating effects that those variables had on treatment outcomes. They concluded that the crucial factor in hospital effectiveness was Ward Environment which included supervisory styles, job satisfaction and team interaction. Additionally, their study found that high priorities placed by top hospital administration on treatment, research, and training goals correlated positively with staff morale, quality of patient care, and organizational flexibility. Low levels of conflict were associated with higher staff morale, a therapeutic milieu, and organizational flexibility. However, this latter cluster of factors seemed to have little relationship to the measures of treatment outcomes.

Hackman and Morris (in Berkowitz, 1978) suggested that it is probably unrealistic to seek a general theory of group effectiveness. They maintain that several complex sets of variables operate upon the group's process and upon three summary variables, which in turn affect performance effectiveness. Their model is reproduced in Figure 1. Briefly their model and subsequent work by Herold (1978 and 1979), suggests that a group's process is affected by the nature of the group's tasks and by its norms. Group norms are those unwritten expectations of member behaviors. Group interaction processes then affect the level and coordination of members' efforts to work on the tasks, the strategies the group chooses to use to tackle its tasks. Interaction processes also influence members' skills and knowledge available to the group by influencing the weight and acceptance given to members' contributions.

Given the Hackman and Morris model, it is not surprising that studies have failed to demonstrate a direct effect of educational interventions into work group processes upon the group's subsequent performance outcomes. However, the model does suggest that a group's task performance strategies can be changed through

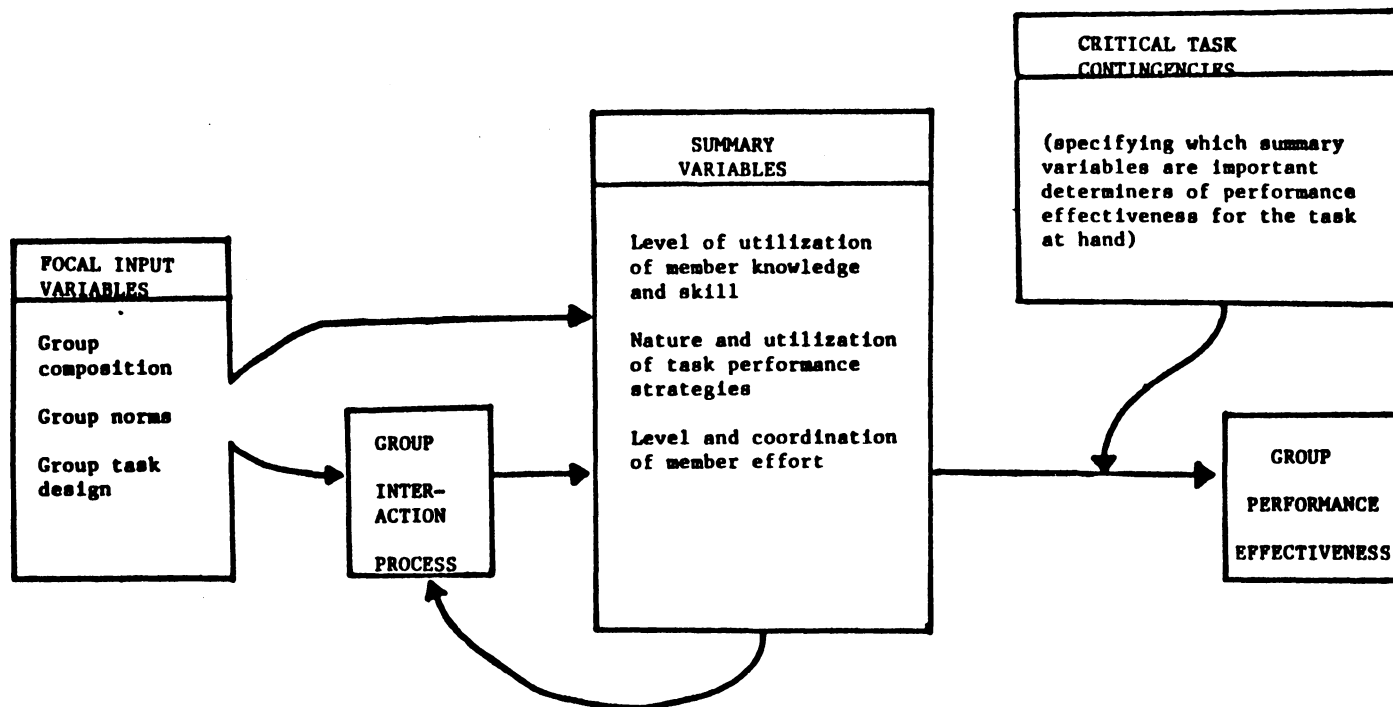


FIGURE 1. Model Showing Relations Between Group Processes and Effectiveness.

Note. From "Group tasks, group interaction process, and group performance effectiveness: A review and proposed integration" by J.R. Hackman and C.G. Morris. In Berkowitz, L., Group Processes. New York: Academic Press, 1978:44.

educational interventions aimed at changing the group's norms and usual patterns of working together. In the Hackman and Morris model team development is classified as a normative intervention.

Herold (1978) analyzed studies of interventions into intact work groups. He found that process interventions improved a group's performance only when they brought the group's processes into closer congruence with the technical and social demands of the group's tasks. That is, to the extent that a work group's tasks require a high level of complex interaction among members, then normative interventions into the group's processes should be expected to have a positive, although indirect, influence upon the group's eventual performance effectiveness. However, due to the complex and indirect influences of process upon performance effectiveness, it may be unrealistic to expect that one can attribute changes in performance outcome directly to a team development program.

Selection of Organization Development Interventions

The classic Hawthorne studies of the 1920's and early 1930's were the first instance of planned behavioral science interventions into work organizations. They indicated the important influences of work group processes upon productivity (Roethlisberger & Dickson, 1939). Those studies, together with social concerns about the management of technological change and post-World War II beliefs in the humanistic values of democratic participation, led to a proliferation of research and theory building to explain how groups and organizations function and change. By the 1960's a new discipline was emerging whose domain was the theory and practice of organization development (OD) and change.

It is beyond the scope of this chapter to review the major theorists whose work has influenced the theory and practice of OD. Excellent reviews of the OD field are presented in such sources as Huse (1975) and Margulies & Raia (1978). The latter authors define OD as follows:

OD is a value based process of self assessment and planned change involving specific strategies and technology aimed at improving the overall effectiveness of an organizational system (1978:24).

French and Bell (1973) emphasized learning and problem-solving with work teams in their definition. Burke and Hornstein's definition emphasized the target for change in OD as "change of an organization's culture from one which avoids an examination of social processes (especially decision-making, planning, and communication) to one which institutionalized and legitimizes this examination . . ." (1972:xi). Other definitions might be offered, but they all have in common a focus on the planned management of change in organizations.

A number of authors have presented schemes for classifying OD interventions. Among them are French & Bell, (1978); Friedlander & Brown, (1974); Hellreigel & Slocum, (1980); and Porras & Berg, (1978). According to French and Bell, OD interventions are:

sets of structured activities in which selected organizational units (target groups or individuals) engage with a task or sequence of tasks where the task goals are related directly or indirectly to organizational improvement (1978:99).

Interventions can be differentiated on the basis of whether they target for change technostructural variables or human process variables (Friedlander & Brown, 1974). For example, interventions that developed out of the human relations movement generally target for change, the human processes as in laboratory training or T-groups (Schein & Bennis, 1965). Other interventions may aim for change in the

work itself, as in job redesign (Porter, Lawler, & Hackman, 1977). Sociotechnical systems interventions have as their objective, according to Pasmore and Sherwood, "the joint optimization of the social or human system and technology used by the organization to produce output" (1977:3).

Regardless of the organizational variables targeted for change, variations of Lewin's basic three step model of change (unfreezing, movement, and refreezing) are used (Lewin, 1951). He suggested that group and organizational behavior is caused by dynamic equilibrium between two sets of opposing forces within the social field at any given point in time. Change may be brought about by increasing the forces impelling toward the change or by decreasing the forces resisting the change. According to Hellreigel and Slocum, people represent the major force either pressing for or resisting change (1980:39). Then, if one follows Lewin's theory, interventions should be directed toward changing human processes.

As OD interventions have proliferated, the question has arisen as to what criteria should be used to select an OD intervention. Not only must the intervention be based on an accurate diagnosis of the problem (Dyer, 1981), but it must be congruent with existing organizational structures, norms, and values (Bowers, Franklin, & Pecorella in Hackman, Lawler, & Porter, 1977:461; Rubin et. al., 1974).

Further considerations in the selection of an intervention are the demands of the tasks to be performed by the group or the organization. Herold (1978) developed a model that enables one to evaluate the simplicity-complexity dimension of tasks in relation to their technology demands and their social demands. He hypothesized that process interventions improve group performance only when they bring group processes into closer congruence with the technical and social demands of the group's tasks. His secondary analysis of OD evaluation

studies showed that interventions that were incongruent with the group's task demands affected their performance adversely or not at all. Herold suggested that where technological demands and social demands are both highly complex, then interventions should be directed toward increasing participatory decision-making and problem-solving skills (Herold, cited in Kerr (Ed.), 1979). ID team tasks require both highly complex technology and highly complex social interaction among team members, especially where desired outcomes are socialized patients/residents.

Margulies and Raia cited the importance of selecting an intervention strategy that is congruent with existing management philosophy and practice (1978:144). The experience of Plovnick et. al. suggested that educational interventions may be well-received by health professionals as initial strategies in organizational change, because education has credibility among such groups. Further, education may serve an "unfreezing purpose" as well as providing opportunity for professionals to communicate with one another about their "ideal images" that can form the basis for desired changes (1978:350).

Attention has been given elsewhere to the influence of consultants' values and skills upon the selection of OD interventions, the variables targeted for change, and therefore, upon the outcomes (Friedlander, 1968; Lipshitz & Sherwood, 1978; Slocum, 1978; and, Tichy, 1975). Fairweather et. al., (1974) and Plovnick et. al., (1976) cited the necessity of internal and external consultants working together to produce change in health organizations.

In a national study of consultation outcomes in mental health agencies Larsen and Norris found "the single most critical determinant of consultation outcome may be agency attitudes and expectations, . . . consultant techniques and behaviors may be secondary" (1977:27). Friedlander (1968) found that differences

in consultant styles had far less influence upon outcomes of a team development intervention than did the group's assessed readiness for change.

Schein's model of process consultation emphasizes that the consultant must be skilled in "knowing what questions to ask, what to look for, how to stimulate alternative ways of thinking about problems, how to separate facts from feelings, how to involve others in thinking things through for themselves " (1978:342). Schein operates from the premise that the client knows best what will work in their situation, and that if the client participates in problem diagnosis and problem-solving, they will not only be helped with the immediate problem, but will have learned problem-solving skills they can apply in the future. The HTD intervention rests upon a process consultation model.

Team Development with Intact Workgroups

Models for team development suggest that they are OD interventions which focus on changing either the efficiency (internal structure and/or processes) or the effectiveness (outcomes) of work groups. Beer (cited in Dunnette, 1976) identified four approaches to team-building: 1) a goal-setting model; 2) a role model; 3) an interpersonal model; and 4) a grid model that is used with the Blake and Mouton management grid. However, Beer pointed out that the four models are rarely used as isolated OD strategies. In fact, they are most often used in conjunction with other OD interventions.

Unlike laboratory groups formed solely for the purpose of conducting research into group problem-solving, or personal growth groups, intact workgroups in organizations have an ongoing life that centers around their collective needs to get the work done. It has been suggested that the nature of the group's task demands (social and technical) as well as the stages of the group's development

affects its interaction process and its effectiveness (Dobkin, 1973; Hackman & Morris, 1978; Herold, 1978).

Francis and Young describe a team as "an energetic group of people who are committed to achieving common objectives, who work well together and enjoy doing so, and who produce high quality results" (1979:8). To arrive at such an ideal state of functioning, all teams have to struggle together to address seven basic questions:

1. What are we here to do? (goals)
2. How shall we organize ourselves? (clarification of roles)
3. Who is in charge? (leadership, authority, and accountability)
4. Who cares about our success? (relations with other groups and organizations and individuals)
5. How do we work through problems? (make decisions, communicate information and needs, manage conflicts)
6. How do we fit in with other groups? (turf issues)
7. What benefits do team members need from the team? (1979:8).

Most approaches to team development organize learning activities around one or more of Francis and Young's seven basic questions depending upon results of some type of assessment of the team's developmental needs. The task-oriented, problem-solving approach to team development taken by Rubin, Plovnick, and Fry (1975) emphasizes a hierarchical order in which a team's developmental issues should be addressed. That is, they believe that goals should be addressed first, since agreement upon a team's goals must logically precede the defining and negotiation of roles and responsibilities for team members. When roles have been negotiated, and conflicts within and between roles worked out, then decision-making responsibilities can be differentiated among members and the leader.

Through structured group activities, teams learn problem-solving skills and the ability to critique their own norms and processes. When consultants help teams

to see the connection between their tasks and their processes (how they work together as a group), this expanded awareness allows them to legitimate a norm that sanctions change and group learning through experimentation with new methods of solving problems (Rubin & Beckhard, 1972:331). Norms that sanction experimentation, learning, and change are vital to a group's ability to renew and revitalize itself, and for it to make needed adaptations to changing environmental demands.

Winsted (1978) compared the Rubin, Plovnick, & Fry program (1977) with other unspecified team development activities in a study he conducted with Navy work teams. Questionnaire measures showed increased participation and influence among team members following the intervention. However, no statistically significant differences were found between participant groups and the comparison groups that experienced other team development approaches and activities. Winsted concluded that the major advantage of the program by Rubin, Plovnick, and Fry over other approaches to team development was its programmed materials. These, he thought, resulted in significantly less dependence by the teams in his study upon consultant-facilitator expertise and time. However, he noted implementation and data collection difficulties due to problems of release time and rapid turnover in Navy units. He recommended the combining of modules and revision of language to fit the jargon, roles, norms, and other characteristics of Navy organizational life.

Earlier reviews of the literature indicated that few studies of team development interventions have been conducted with health and human services ID teams (Friedlander & Brown, 1974; Kane, 1975; Margulies et. al., 1977; Woodman & Sherwood, 1980b). Two studies were found that described planned interventions with intact ID teams. Both descriptive case studies are reported here.

Crisler and Settles (1979) described an intervention with a newly established rehabilitation team that involved nine days of training carried out over a period of six months. Details of the intervention were sketchy. It seemed to focus upon structured agendas for problem-solving team discussions that focused upon treatment planning with hard-core rehabilitation clients, who were also members of the team and participated in the training. Unique in their project was the deliberately planned exclusion of physicians from the team. That strategy was used to minimize inhibition around hierarchical issues and to encourage participation from other team members. The trained team was compared with a comparable group of untrained staff members on a questionnaire measure immediately after the training. A follow-up questionnaire nine months later indicated positive changes in ward climate. Particularly impressive was the unanticipated outcome data that showed the number of cases rehabilitated had doubled for the trained team in the year after training. Salient factors in the intervention design were the planned exclusion of physicians, inclusion of the client as an active participant in setting his own treatment and rehabilitation goals, and the norms for problem-solving made explicit to the group. The latter included a clear list of "Do's and Don'ts" for team members regarding group discussion processes. For instance, the team was instructed to emphasize in their discussions client strengths rather than their weaknesses. Leadership, however, was not discussed in this study.

In the other case study, Lacks, Landsbaum, and Stern (1970) used self-report questionnaires to assess the impact of a problem-solving workshop aimed toward improvement of communications among members of a psychiatric team. The intervention strategy focused on real problems and was task-oriented. Neither didactic nor experiential personal growth methods were used. Results suggested

that a team development intervention to foster communication may serve as a precursor to stimulate changes in team membership and size. Such changes did occur with the case study team.

Two studies discussed below were not studies of team development interventions but they are considered relevant because of the types of problems confronted by teams in the study. Both were conducted with ID teams responsible for developing Individual Education Plans (IEP's) for mentally retarded residents under Public Law, 94-142 (Federal Register, 1977).

In the first study, Fenton et al. (1977a) adapted requirements of the IEP process to a multi-step, problem-solving model. They sampled a large number of persons serving on educational placement teams across the state to assess whether the IEP process was viewed as consistent with a group decision-making, problem-solving model. Results indicated that team members did not view themselves or others on the teams as participating in all phases of the decision-making process. Predictable differences occurred along hierarchical lines and laterally across professional disciplines.

In a follow-up study Fenton et al. (1977b) found that lower status team members, who most often perceived themselves as most restricted in their decision-making participation, were also less satisfied than other members with the group's decisions. They were the team members most responsible for implementing team decisions. The study indicated needs for inservice training with role clarification techniques to increase placement team members' understanding of the roles of others, their participation in decision-making, and their commitment to implementation of team decisions.

Heilman (1975) asked a panel of twenty national experts to use a Q-sort method for ranking the importance of teamwork skills needed by ID health team

members. Highest were: 1) need for a recognized leader selected by the group to handle the task at hand; 2) ability of team members to handle conflicting personalities and divergent ideas; 3) security and confidence in one's own professional role; 4) an understanding of the roles and the expertise of other team members; 5) skills in collaborative problem-solving; and 6) use of decision-making procedures. These rankings were remarkably similar to the teamwork variables that were targeted for intervention and evaluation in this study.

To summarize, the need for team development with intact ID health teams has been established. It arises out of the highly complex social and technological demands of the tasks facing health and human services professionals who must work interdependently. However, few studies have been reported which attempt to study the effects of team development interventions upon team processes.

Evaluation of OD Interventions

As is often the case with newly emerging disciplines, research and theory-building have lagged behind practice in organization development (Friedlander & Brown, 1974; Margulies, Wright, & Scholl, 1977). However, the past five years have seen a growing number of articles devoted to evaluative research on the effects of OD interventions. Briefly, the problems associated with evaluation of OD interventions are threefold: 1) those having to do with the applicability of experimental research methods to field settings, specifically, work organizations; 2) those that stem from difficulties operationalizing and measuring constructs; and 3) questions of generalizability of results across organization settings and groups. Obviously, a thorough treatment of these issues is beyond the scope of this review. However, studies and reviews pertinent to the design and methods used in this study are discussed.

Morrison (1978) evaluated twenty-six OD studies against Campbell and Stanley's twelve criteria for validity (1963). Studies were included in her assessment on the basis of whether their authors purported to be evaluating their intervention. Friedlander's study (1967) that assessed a laboratory training group intervention with the Group Behavior Inventory questionnaire was one of only three that met all twelve validity criteria. Only three of the twenty-six studies she reviewed had been carried out in health organizations. Of those three, the two conducted in mental hospitals dealt with role and climate variables (Colarelli & Siegel, 1966; Moos, 1973). Morrison criticized the two studies done in mental hospitals on the grounds that controls were so lacking that validity was highly questionable (1978:58-59). From her review, Morrison recommended that multiple measures be used to evaluate OD interventions' effects. Similar recommendations have been made by others (Denzin, 1970; Friedlander & Brown, 1974; and Nicholas, 1979).

Morrison and Sturges (1980) used multiple questionnaire and interview measures to assess the effects of team development, role negotiation, communication, and leadership development interventions in a two day off-site program for managers of a large public organization. They found mild improvements in collaboration, communication, and role clarity as measured by the self-report questionnaires and interviews. As an explanation for the merely "mild" improvement, they noted that groups had reported relatively high functioning scores on the pretest measures.

Biases present in self-report measures are well-known to researchers. Golembiewski and Munzenrider (1975) suggested that the social desirability factor may bias pretest results. Subjects may be inclined to answer questionnaire items in such a way as to make their group appear more adequate than it really is at the

time of the pre-test. Where that occurs, the social desirability factor may obscure the magnitude of OD effects.

Subjects' reactivity to being singled out for participation in research in work organizations has also been discussed (Dimock, 1978; Friedlander & Brown, 1974). Both suggest that instead of attempting to alleviate reactivity through experimental or statistical controls, it is appropriate to build research data-gathering activities into an OD intervention plan, as long as consultant-researcher role strains are minimized and benefits to the organization are maximized. This seems entirely congruent with the fact that data-collection activities are normally associated with most OD interventions. OD interventions are aimed toward producing change in process variables, structural variables, or both. Therefore, subjects' understanding, acceptance, and involvement in OD interventions are just as critical to the outcomes as any other factor in the change effort, though they may be difficult to measure.

Porras and Berg analyzed OD impact studies that they found in the literature from 1959-1975. They originally located 160 such assessments of planned organizational change projects. Only 35, however, could be construed as meeting their simple criteria for inclusion in the analysis. They used the following criteria: "Planned change projects were defined as OD activities; were done in reasonably representative samples of real-life organizations; measured at a minimum organizationally relevant process variables; and used empirical techniques" (1978b:251). In the 35 studies they identified 308 different variables. Measures of group performance involved number and length of meetings, quality of meetings, or global, unspecified measures of group performance.

Results of the Porras and Berg analysis may be subject to debate. Their article did not make clear how the variables were defined. Further they presented data in percentages even when the number of studies in a given category was fewer than five. However, their attempts to develop a taxonomy raised the issues of how replication and comparison of findings from one study to another can be carried out, when the stated meanings of variables are inconsistent across studies. Mohr (1982) has also indicated that the failure to specify variables which have "durability" across settings and time has interfered with theory-building on organizational behavior. A further difficulty occurs because standardized measuring instruments were rarely used in assessing processes or outcomes in OD studies (Porras & Berg, 1978b).

Among the issues in the conduct of research in work organizations is the fact that organizations are concerned more about the value of the OD intervention to their members than about supporting valid research designs (Margulies, et al., 1977). The fact that most OD interventions are designed to be organization-specific interferes with the generalizability of their results, and usually limits the number of individuals and groups that can be involved.

Summary

The following points have been emphasized in this broad review of the literature. First, the practice of interdisciplinary teamwork in health and human services organizations has not been subjected to empirical study to verify its effectiveness. There is no single ideal model for ID teamwork. Conflicting expectations for both team processes and outcomes of teamwork may contribute to the needs for intervention.

Second, it is generally agreed that process problems interfere with group effectiveness. However, research has not so far demonstrated that process interventions, of which team development is one, will result in improved group effectiveness (ie. outcome changes) (Kaplan, 1979). Nevertheless, a theoretical framework by Hackman & Morris (in Berkowitz, 1978) was discussed that seems to be useful in explaining the relations between group processes and group effectiveness.

Third, most of the research on small groups that has occurred in the past forty years is probably inapplicable to the study of intact work groups in work organizations for a variety of reasons previously discussed.

Fourth, the emerging discipline of organization development has begun to systematize intervention approaches to bring about improved efficiency and/or effectiveness in work organizations and with work groups in them. The importance of selecting an organizational development intervention suited to the needs of the organization was emphasized.

Fifth, the problems inherent in attempting to carry out evaluative research to assess the effects of OD interventions were identified. These have important implications for the design and methods used in this study.

Finally, selected studies on health team development intervention were reviewed and needed teamwork competencies were identified as they related to the independent and dependent variables in this study.

CHAPTER 3

METHODOLOGY

The purpose of this study was to investigate whether a particular health team development intervention¹ would result in identifiable changes in team processes. The study was conducted in a state mental retardation training center by internal team facilitators with intact interdisciplinary teams. Specifically the study was designed to address these research questions:

1. Before HTD, were Center leaders' expectations for teamwork and for the intervention congruent with the variables targeted for change in HTD?
2. Did team members' perceptions of their team differ before and after the HTD intervention?
3. Did teams' meeting behaviors differ before and after the intervention?
4. After HTD, how did Center leaders evaluate the HTD intervention effectiveness and applicability for their own and similar organizations?

Chapter 3 is divided into these sections. First, an overview is presented of the design and methods used in the study. Then the demographic characteristics and procedures for selecting teams are described. The HTD intervention activities are summarized briefly as they were implemented in this study, including the selection and preparation of team facilitators. The instrumentation section describes separately each of the four measuring instruments: Group Behavior Inventory questionnaire; Team Observation Protocol instrument; Diagnostic

¹The educational intervention was IMPROVING THE COORDINATION OF CARE: A PROGRAM FOR HEALTH TEAM DEVELOPMENT, Rubin, I., Plovnick, M., and Fry, R., Cambridge, Mass.: Ballinger, 1975. Copies were purchased for each participant and team facilitator.

Interview Schedule; and Follow-up Interview Schedule. Data collection procedures and data analysis procedures are also discussed.

Design and Methods

This study was a quasi-experimental field study that used repeated measures in a one sample design replicated with three groups simultaneously. Group, as used in this study, referred to intact work groups known as interdisciplinary (ID) teams in a state training center for the mentally retarded. Each team included among its members employees from a variety of occupational classifications typically involved with the care and treatment of the developmentally disabled in an institutional setting.

The independent variable in this study was the health team development intervention. Dependent variables were changes in team members' perceptions of their team as measured by nine factors on the Group Behavior Inventory questionnaire; changes in observed frequencies of group problem-solving behaviors measured on seven categories of the Team Observation Protocol instrument; and, Center leaders' follow-up interview assessments of HTD's effects and its applicability for future use with ID teams in the state agency.

Instruments, data sources, and methods of analysis are summarized in Table 3.1. However, a chronological summary of main intervention and research activities, which spanned a period of about ten months, is presented in Figure 2. Because leaders' and team facilitators' expectations were considered to be important variables likely to mediate the effects of team development, their expectations were assessed in individual diagnostic interviews conducted by the researcher in the Fall of 1981.

Table 3.1. Summary of Data Collection and Analysis Methods

Instrument	Respondent Sources	Method of Analysis
Group Behavior Inventory questionnaire ^a	27 members of 3 teams Before HTD	t-tests for dependent means to test for significance of differences between Before and After Factor Means ^b
demographic items, plus	and	
55 items that yield 9 Factor scores	23 members of 3 teams After HTD	
Team Observation Protocol ^c	2 nonparticipant observers code data from meetings of 3 teams at	Dunn-Bonferroni technique for making multiple planned comparisons of proportions and arcsine transformations ^d using z tests
structured observation system for ID teams	Times 1 & 2 (Before)	
yields frequency data on members' verbal statements in 7 categories	and Times 3 & 4 (After)	
Interview Schedules designed to provide data about Center leaders' expectations for HTD and their perceptions about its effectiveness	semi-structured Diagnostic Interviews and Follow up Interviews with Center leaders	content analysis of themes reported by Center leaders in interviews

^aFriedlander, F., 1966^bSAS Users Guide, 1979^cDucanis, A., & Golin, A., 1979^dMarascuilo, L., & McSweeney, M., 1977

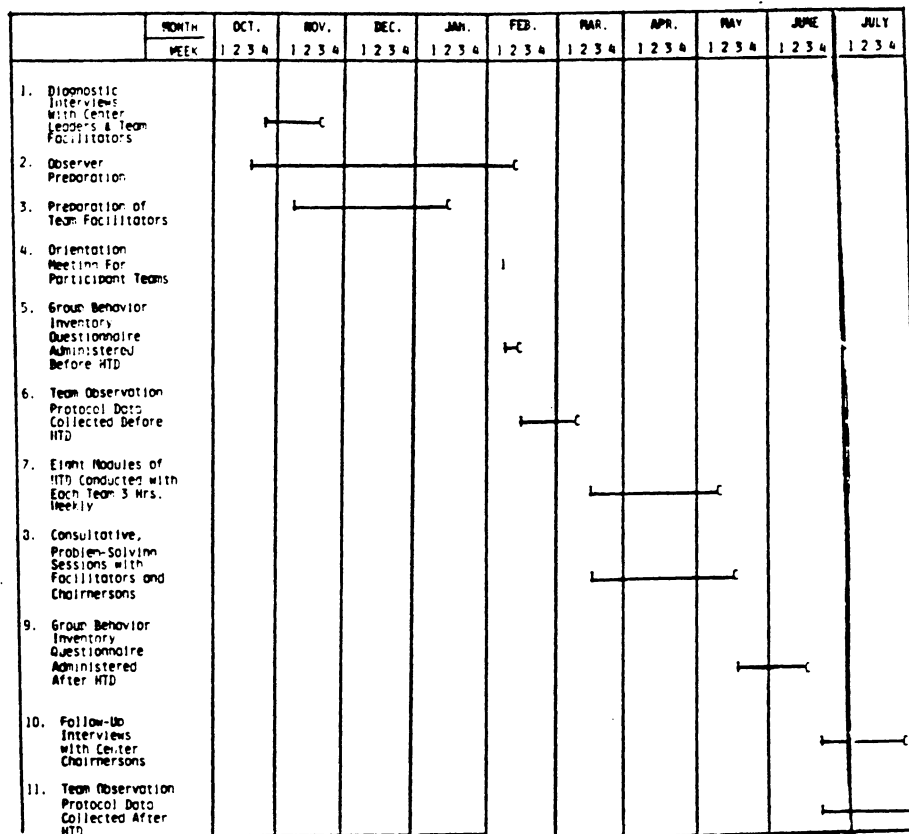


FIGURE 2. SEQUENCE OF INTERVENTION AND RESEARCH ACTIVITIES

NOTE: I = initiation of activity; C = completion of activity.

Four half-day planning sessions were conducted by the researcher with the three internal staff members who had been selected to be team facilitators. A three hour orientation-to-team-development session was conducted for the members of all three participant teams. At that time the pre-intervention questionnaire was completed and teams each met with their chairperson and facilitator to prepare for their first HTD activity. Next, structured observation data was collected by the researcher and two non-participant observers at two meetings for each team prior to HTD.

Each of the eight HTD weekly modules was scheduled by each team for a three-hour block of time. Each module required 15-30 minutes advance preparation time by individual members of the teams. Members were urged to meet this requirement in order to make the best use of team activities. To help teams become more aware of their perceptions of group behaviors each module was ended with a critique of how members thought and felt about the team's functioning during that meeting.

During the eight-week HTD intervention period, on site, problem-solving sessions were conducted by the researcher with the three team facilitators after HTD modules 1, 3, 5, and 8 respectively. Chairpersons were invited to join those sessions for information and leadership-sharing purposes. After the intervention was completed, questionnaires were re-administered to 23 members of three participant teams by their facilitators and chairpersons. Observers repeated collection of the structured observation data from two team meetings for each team, and follow-up interviews were conducted with ten Center leaders and team chairpersons.

Selection and Demography of Participant Teams

The population from which the three sample teams were drawn for this study consisted of interdisciplinary team member employees in a state training center for the mentally retarded. The Center is a state-federal-locally funded residential training center that can accommodate about 285 mentally retarded residents. Its mission is to develop among its residents the skills necessary to enable them to return to their families and communities wherever possible, or to alternative placements such as independent living, supervised community living, a nursing home or other specialized facility.

The Center is organized into professional departments and eleven residential units. Each unit has an ID team² whose members are responsible for the housing, care, and treatment of about twenty-five residents. Residents' treatment plans are developed, implemented, and evaluated on each unit by the interdisciplinary team in accord with accreditation standards set forth by the Accreditation Council on Mental Retardation and Developmental Disabilities (ACMRDD, 1980). Figure 3 shows the distribution of professional and paraprofessional staff who serve on ID teams in relation to the multiple lines of supervisory authority that set policy under which the ID teams are expected to operate. Under policy established at the Center in May, 1981, members of the social work staff were designated to serve in the role of chairpersons of the ID teams.

It was neither desirable nor feasible to carry out the HTD intervention with all eleven ID teams at the Center. Therefore, criteria had to be set for the selection of teams that would participate in the study. The process of

²Team numbers have been changed to protect the confidentiality of teams and their members.

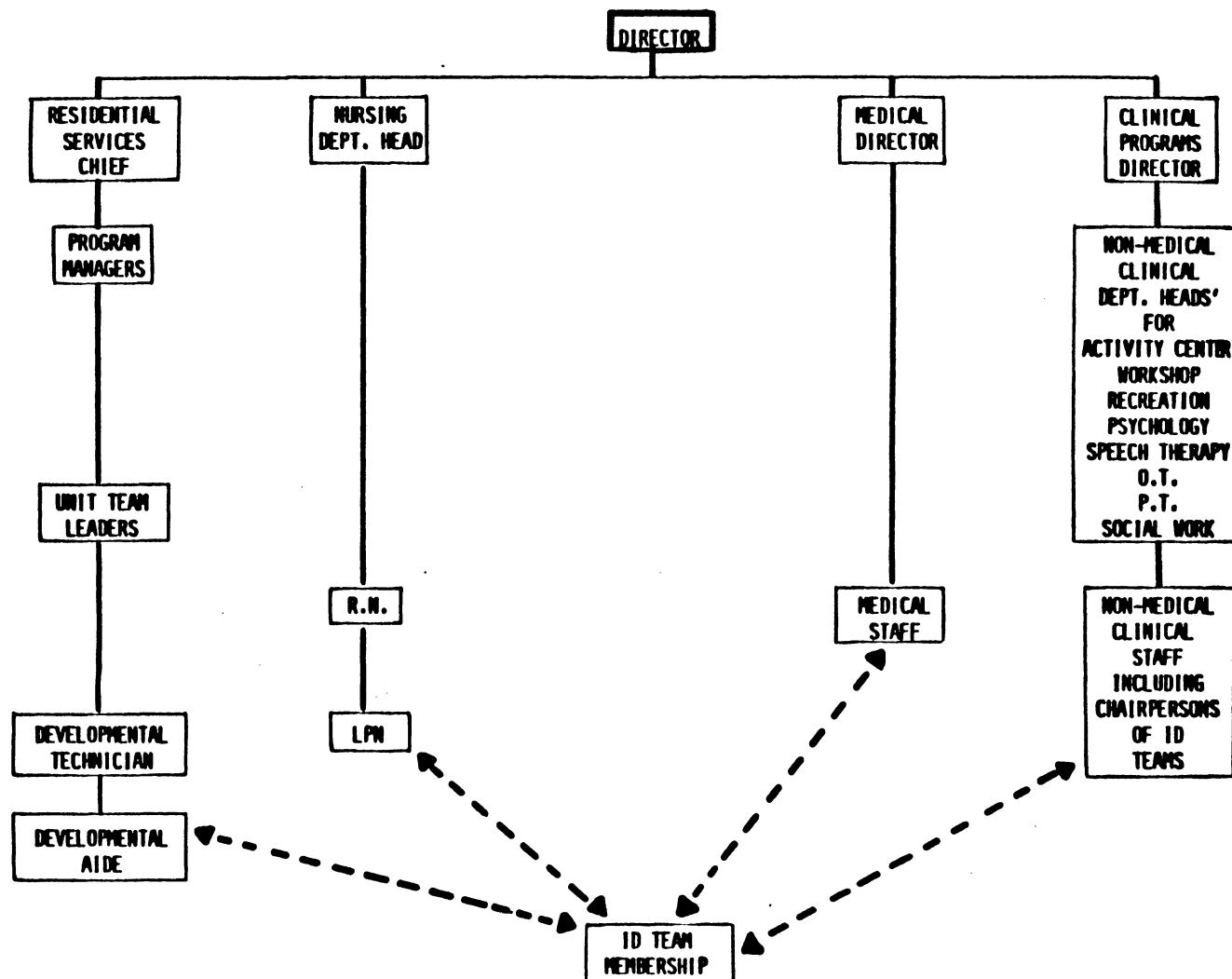


FIGURE 3. ORGANIZATIONAL RELATIONSHIPS: LINE MANAGEMENT AND ID TEAMS

establishing criteria consisted of informal negotiation between the Clinical Programs Director, Residential Services Chief, and the researcher. Negotiations focused upon the Center management's desires to have as many staff members as possible participate in the intervention, while not requiring any individual staff member to participate in HTD activities with more than one ID team simultaneously.

The fact that staff in all professional disciplines did serve on multiple ID teams precluded the use of on-site control groups uncontaminated by the effects of HTD. Consideration was given to the available numbers of professional staff in disciplines whose participation in teamwork was vital, and to the question of how many internal facilitators the Center could provide. These variables led to the collaborative decision that a maximum of three teams could be included in the study. Managers then selected three teams from among the total population of eleven teams according to the single criterion, to gain the widest participation of staff members from different residential units, buildings, and occupations. The distribution of participating staff by occupation and by team assignment is shown in Table 3.2 in relation to the total number of positions in that occupation at the Center.

In spite of management's efforts to promote and support participation in HTD as an educational program, members of the four disciplines shown in Table 3.3 did not participate, albeit for different reasons. Physicians chose not to participate citing the press of their workloads. They were the only professional discipline whose members were allowed to choose whether or not they would participate. Nevertheless, one of the team's physicians was consistently present at the observed team meetings and took an active role in the discussion of

Table 3.2. Team Development Participants

Occupation	No. Positions at Center for all teams ^a	HTD Participants by Team Assignment		
		1	2	3
Team				
Social Worker/Chairperson	7	X	X	X
Psychologist	3	X	X	X
Nurse (R.N.)	13	X	X	X
Unit Team Leader	14	XX	X	X
Recreation Therapist	3	X	X	X
Speech Therapist	4	X	X	X
Dental Hygienist	1		X	
Occupational Therapist	2 ^b			X
Physical Therapist	3 ^b		X	
Activities Center	1	X		
Rehabilitation Workshop	3 ^b			X
Developmental Technicians	39		XX	XX
Totals	<u>93</u>	<u>8</u>	<u>10</u>	<u>10</u>

^aPositions assigned to cover staffing needs for eleven units and teams.

^bPersonnel vacancies accounted for discrepancies between number of positions and participants.

Table 3.3. Members in Occupations Not Represented in Team Development

Occupation	No. Positions at Center
Physicians	3
Licensed Practical Nurses	5
Developmental Aides	186
Educators	on-site employees of local public school division

Note. Positions assigned to cover staffing needs for eleven units and teams.

medically-related problems. On the other two participant teams, no physician was seen at the observed meetings. Nor was their absence a subject for discussion during those meetings.

Educators, who teach residents on-campus in daily programs, were not Center staff members, but were employed by the local public school system. Although they attended annual staffing conferences to produce Individual Educational Plans for individual residents, they did not routinely attend problem-solving 'clinical' team meetings of the teams, which were the subject under study here.

Licensed Practical Nurses and Developmental Aides taken together were among the largest group of on-unit implementers of treatment programs planned by the team for individual residents and groups of residents. Yet, typically those staff did not attend team meetings.

As Tables 3.2 and 3.3 indicate, sixteen different occupational groups contribute directly to the care and treatment of the Center's residents. Representatives from twelve of those occupational groups participated in team development.

Demographic information about HTD participants was obtained from their responses to fifteen items which accompanied the Group Behavior Inventory Questionnaire as it was administered Before HTD. Of the 27 respondents, 3 held doctorates in psychology, and 11 held master's degrees in an allied health profession, education, or public administration. Two respondents were performing specialist's work in occupations that traditionally do not require a bachelor's or advanced degree. The remainder held bachelor's degrees in related fields. In spite of their formal education, however, only 5 of the 27 reported having participated previously in any kind of team development. Four of the five were

members of Team 2, and one was a member of Team 3. A majority of HTD participants reported they had 3 to 5 years experience working on teams in any setting. However, more than half (15 of 27) reported that the length of time in their current team assignment was three months or less. A significant organizational change over which the researcher had no control accounted for the short duration of team assignments.

The Center's clinical management team planned and carried out a major reorganization to serve better their residents during the period October, 1981 to March, 1982. That reorganization involved a change in the basis for residents' assignments to living units from level of self-care to level of socialization. Of importance here was the fact that it also required the reassignment of large numbers of unit staff and a few reassignments of clinical professional staff members who normally serve teams on multiple units.

As the result of the reorganization Team 1 in this study experienced practically no change in membership and little change in the residents they served. However, Teams 2 and 3 were essentially newly constituted groups whose members had not worked together on the same team previously.

The Health Team Development Intervention

As it was carried out in this study, the HTD program consisted of eight modules of task-oriented, problem-solving activities based on team-generated data about real problems the team were facing. The activities in the HTD program are not simulations, exercises, nor are they intended to be personal growth laboratories. Sequencing of the HTD modules provides for team goals to be established before member's roles are clarified. Roles are negotiated before procedural issues of decision-making and communication are taken up. In the

HTD approach to team development, interpersonal issues are dealt with only to the extent that they interfere with the team's ability to resolve problems in the areas of goals, roles, and procedures.

The HTD program reading materials, and activities for participants are found in the published work, Improving the Coordination of Care: A Program for Health Team Development by Rubin, Plovnick, & Fry published by Ballinger, 1975. In 1977 McGraw-Hill published another version of this program under the title, Task-Oriented Team Development. Language and case examples in the TOTD are more suitable for management teams in business and industry than for healthcare professionals. However, the TOTD facilitator's guide was used, as were the team-generated document formats. Permission was received from Situation Management Systems, Inc., copyright holders of the program to reproduce and use copies of the team-generated documents from the TOTD version for the sake of clarity. Copies of those forms can be found in Appendix B. Otherwise, the 1975 HTD version was used in this study. Copies were purchased for each participant and each team facilitator.

In this study the HTD program was conducted in three hour sessions in eight consecutive weeks. Each of the three teams decided with its Chairperson and facilitator on their weekly HTD day and time. HTD Sessions were held in usual meeting rooms at separate times from normal team meetings. A description of the HTD activities is summarized in Table 3.4.

Selection and Preparation of Team Facilitators

The researcher and top management at the Center decided that team facilitators should be individuals with prior experiences in staff training, and those whose normal work duties involved them in no supervisory authority

Table 3.4. Activities in the Health Team Development Intervention

Module 1 "How are we doing as a team?" involves individuals and the team as a whole in assessment of the team's strengths and weaknesses on a nine-item Team Effectiveness Diagnostic instrument. Survey-feedback techniques are employed so team members can identify areas of perceived need for development.

Modules 2 and 3 "A team trying to do what?" consists of activities through which the team members arrive at consensus regarding their core mission(s). Then they identify performance indicators that they consider acceptable evidence of goal attainment. Goals and indicators are then prioritized in order to help the team focus its energies toward goal attainment and assess its successes. Organization and unit mission statements and operating documents are used as aids in these activities.

Modules 4 and 5 address the question **"Who does what around here?"** through the sending and receiving of written role messages that clarify what each team member expects of others to aid them in getting the team's work done. The role negotiation technique is practiced as a tool that team members can use in the future whenever contracts between team members.

Module 6 "How do things get done around here?" involves the team in decision-charting activities, that are based on a five-step problem-solving model. The leader and all members have an opportunity to differentiate their "involvements" in the various kinds of decisions that are made as team tasks are performed. Appropriate problem-solving processes are learned as the team works through a specific problem of its own choosing.

Module 7 enables the team to address the question **"What does it feel like to work around here?"** Those who have used the Health Team Development Program before suggest that by the time teams have worked through their goal issues, negotiated roles, and clarified decision-making procedures, many problems that were formerly considered to be "personality conflicts" and unchangeable, have been resolved. This module provides activities for the team to re-assess the group norms, behavioral expectations for working together as a group and managing its meetings.

Module 8 "Where do we go from here?" concludes the program with a force field analysis by the team through which members examine the forces favoring and forces impeding their ability to attain performance goals. They examine these forces from the standpoint of individuals within the team, the team as a whole, and the organizational forces. The final activity involves the team in making plans for its further development toward performance goals (task accomplishment) and its maintenance as an effectively work group (processes).

Note. Adapted from Rubin, I., Fry, R., Plovnick, M., & Stearns, N. Improving the coordination of care: An educational program. Hospital and Health Services Administration, Spring, 1977: 62-63.

relationship with members of the ID team whose development they were expected to facilitate. Because of the previously discussed structural relations between line management and the ID teams, it also seemed important that team facilitators' normal work duties at the Center ordinarily brought them into regular contact with all three lines of supervisory authority depicted in Figure 3. Three female staff members met these criteria: the center's training coordinator; its director of educational and community programs; and a program manager who could facilitate a team in a building over which she had no line authority. The three were engaged in advanced graduate study in counseling, educational administration, and social work, respectively. None of the three had had formal training or education in group facilitation or in consulting, although Center managers believed they had demonstrated ability to apply interpersonal and group leadership skills in their normal job duties.

Facilitators agreed among themselves which team they would work with throughout the intervention. They also assisted in the collection of questionnaire data, in orientation of their respective teams to the project, and in maintenance of attendance records during the HTD weeks.

Four half-day working sessions were scheduled by the researcher with the facilitators in order to aid them in preparing for facilitation of HTD activities. The Facilitator's Guide for Task-Oriented Team Development from McGraw-Hill was useful in identifying anticipated team member reactions to the session tasks and materials. The working sessions involved step-by-step review of session activities for the HTD modules by means of oral presentations, verbal critiques, and group problem-solving discussions. Reading and handout materials were prepared to aid these facilitators in expanding their knowledge and skills.

During the eight-weeks of HTD the researcher kept in contact with the facilitators through telephone consultation as they requested, and in four scheduled group problem-solving sessions. The first was held jointly with the three team chairpersons in an effort to strengthen teamwork between facilitators and chairpersons and to gain Chairpersons' support and commitment to HTD. That session consisted of sharing and group interpretation of data from the Team Effectiveness Diagnostic Instrument carried out in week 1. Chairpersons were then encouraged to join later problem-solving sessions, as they felt the need.

Additional problem-solving sessions were held after modules 3, 5, and 8. These were conducted in a loosely structured, facilitative manner stimulated by the facilitators' verbal expressions of concern, needs, successes, their observations of their team's developmental processes, and their critiques of the HTD sessions.

Instrumentation

This section on instrumentation is subdivided into three parts, each of which describes one of the four measuring instruments used in this study. The first part describes the Group Behavior Inventory questionnaire which was used to measure changes in team members' perceptions about their team before and after HTD. The second part discusses the Team Observation Protocol instrument according to which non-participant observers coded verbal interaction among team members during team meetings before and after HTD.

The third part of this section describes the Interview Schedules designed for use in this study. Diagnostic Interviews measured Center leaders' expectations for teamwork and the intervention prior to HTD. The Follow-up Interview

schedule was used to assess leaders' opinions about HTD effectiveness and applicability after the intervention.

Group Behavior Inventory

The Group Behavior Inventory (GBI) was developed by Friedlander (1966, 1967; 1968;) to measure changes in workgroup effectiveness following a laboratory training program for intact work groups in a large civilian research and development organization. It was refined to a 55 item questionnaire with loadings on nine factors. Friedlander's definitions of those factors are presented in Table 3.5.

The GBI was used in this study with 55 items, which loaded on the nine Factor Scores in Friedlander's original work. Reliability coefficients for 91 subjects had been found acceptable (Friedlander, 1966) on Kuder-Richardson formula 20 (range from .71 to .91) for Factors I - VI. Factors VII - IX were included in this study for research purposes only.

Friedlander's instructions to GBI users indicated that on Factors I through VI a high score is toward the "good" end of the continuum. On Factors VII, VIII, and IX a high score indicates "submission," "leader control," and "conformity," respectively. For the 44 five-point Likert scale items Friedlander's scoring instructions were simply followed by subtracting the obtained score value from 6 when it was necessary to transform negative statements to positives. However, items 45-51 were scored on a seven-point semantic differential scale, where values ranged from 2 to 8. Items 52 to 55 were fill-in-the-blank items, where the range of obtained scores differed for each item. Therefore, the decision was made to derive standardization coefficients that would be empirically appropriate to the sample in this study. Table 3.6 contains the Standard Coefficients for

Table 3.5. Factor Definitions for the Group Behavior Inventory

Factor I, **Group Effectiveness**, accounts for the greatest proportion of variance on the scale. It is considered to be a measure of the group's ability to solve problems and formulate policies through creative, realistic team efforts.

Factor II, **Leader Approachability**, refers to members' perceptions that their leader is approachable and they can establish a comfortable relationship with him. Groups low on this dimension withdraw from the leader, do not behave according to their feelings, do not push their ideas, and seem intent on passive catering to the leader at the possible sacrifice of group output.

Factor III, **Mutual Influence**, describes the extent to which group members mutually influence each other and the leader and assume responsibility for setting group goals.

Factor IV, **Personal Involvement and Participation**, is descriptive of groups in which members want, expect, and achieve active participation in group meetings.

Factor V, **Intragroup Trust Versus Intragroup Competitiveness**, represents a bipolar dimension ranging from a high degree of trust and confidence among group members to a group that can be characterized more as a collection of individuals who are reluctant to sacrifice their individual personal opinions and ideas for the sake of a working consensus. This reluctance occurs in an environment of destructive competition where conflict is merely submerged.

Factor VI, **Worth of Group Meetings**, is a generalized measure of feelings about the meetings of one's group as good, valuable, strong, and pleasant, or as bad, worthless, weak, unpleasant, and so on, as indicated by responses to semantic differential items.

Factor VII, **Submission to Versus Rebellion Against Leader**, indicate that groups scoring low in this dimension tend to be rebellious, while groups scoring high on this dimension tend to submit to the leader when disagreements arise.

Factor VIII, **Leader Control**, describes the extent to which the leader initiates and controls the group process, mainly through domination of communications in a one-way direction. Such groups with higher leader control express tension and a desire not to have an expert on hand.

Factor IX, **Role and Idea Conformity**, expresses pressure within the group toward conformity to a set of member-perceived expectations for both role behavior and ideation within the group.

Note. Friedlander, F., 1966.

Table 3.6. Standard Coefficients Used in Scoring Certain GBI Items

Item	Score Range	Mean	Variance	Coefficients	
				a	b
45.	2 - 8	5.778	2.795	.7954	.4952
46.	2 - 8	5.593	2.866	.9217	.4890
47.	2 - 8	5.852	3.670	1.1281	.4321
48.	2 - 8	5.889	3.026	.8541	.4759
49.	2 - 8	5.222	2.256	.7783	.5512
50.	2 - 8	6.037	3.191	.8591	.4634
51.	2 - 8	6.037	2.883	.7131	.4876
52	0 - 7	1.259	3.969	.3527	.5473
53.	1 - 100	35.500	1140.660	2.7870	.0245
54.	5 - 75	43.654	361.115	1.7534	.0436
55.	0 - 50	14.444	174.256	2.7411	.0627

Note. Coefficients were derived for use in transforming obtained scores to a 5 point scale for purposes of equalizing item contribution to GBI Factor Scores.

For items 1-44, which were on a 5 point scale, $M = 3.6567$ and $s^2 = .6853$.

For items 45, 47, 49, 50, and 51 transformed scores = $a+b (1+x)$.

For items 46 and 48 transformed scores = $a+b (9-x)$.

For items 52, 53, 54, and 55 transformed scores = $a+b (x)$.

Items 45-55 used to calculate GBI Factor Scores on which statistical analysis was then performed.

Two other procedural difficulties affected the scoring and subsequent analysis of GBI data. First, six items (36, 37, 38; 41, 42, and 43) were found to be not applicable for respondents designated as formal leaders of the team (in this study, Chairpersons). Those items asked the respondent to answer questions about how they respond to the designated leader. In those cases where the designated leader and the questionnaire respondent were the same person, the items were clearly lacking in face validity.

Factors II, III, and VII each contained one or more of those six items deemed not applicable for the three Chairpersons participating in the study. Therefore, Factor Scores were calculated for those three cases by deleting the items in question, and prorating each relevant Factor Score by the reduced number of items. Scoring Instructions are located in Appendix A along with a copy of the questionnaire, demographic survey questions, and instructions to subjects before and after HTD.

Team Observation Protocol

This study was the first known attempt to use the Team Observation Protocol (TOP) in research. No reports of prior attempts to establish validity and reliability of the TOP instrument were known. Therefore, no expected frequencies for the seven TOP categories were available with which to compare the obtained frequencies for accuracy and stability. Nor was there any previously established acceptable criterion level to which observers could be trained. Ducanis & Golin's original category definitions in Table 3.7 were unchanged, although the order in which they are listed has been changed for the sake of

Table 3.7. Team Observation Protocol Categories

1. Questions	All statements asking for information, suggestions, or opinions, or requesting reports.
2. Information	All statements giving information, dealing with what is observed, without interpretation.
3. Interpretation	All statements which give an opinion or interpretation, going beyond empirical data to make inferences about what has been observed.
4. Alternatives	All statements which suggest alternatives, explore or compare possible courses of action.
5. Decisions	All statements which deal directly with the final decision-expressing, clarifying, or elaborating the decision reached.
6. Client	All affective statements (+ or -) regarding the client. Neutral statements about the client are coded in categories 1-5; category 6 includes only statements revealing an emotional reaction to the client, such as hostile or joking, laughing, or hostile remarks.
7. Team	All affective statements (+ or -) about the team or a team member. Neutral statements about the team would be coded in categories 1-5; category 7 includes emotional reactions to the team itself or to another team member. It includes joking, laughing, or hostile reports.

Note. From Ducanis and Golin, 1979, p.97 with changes made only in category numbers for ease of recording. Reprinted by permission.

recording ease. Minor changes in the original rules for recording data were made. Sex of team members was deleted because it was considered an irrelevant variable in this study. Data were coded by frequency rather than by sequence.

TOP categories 1 through 5 are labelled Question, Information, Interpretation, Alternatives, and Decisions, respectively. These categories represent the problem-solving statements made by team members. Categories 6 and 7 are for coding affective statements about Client and Team, respectively. Recording rules for the TOP are presented in Table 3.8. From TOP category definitions, one would not expect to find frequencies normally distributed across the seven categories. Indeed, such was the case when initial practice data were inspected. The incidence of low cell frequencies and zeroes mainly in TOP categories 4 through 7 indicated that chi-square tests would not be applicable to the data. Therefore, the TOP data were analyzed by means of multiple planned comparisons performed according to the Dunn-Bonferroni technique (Marascuilo & McSweeney, 1977). The analysis procedures are explained in greater detail later. However, preliminary analysis was necessary to establish reliability for the TOP instrument in this study by measuring agreement between observers.

Two senior clinical-administrative persons at the Center agreed to serve as observers. They were the Clinical Programs Director and the Residential Services Chief, both of whom had been ID team members in previous positions. They observed team interaction and coded verbal statements on a TOP Recording Data Form for two meetings before HTD and for two meeting after HTD for each of the three participant teams. A total of twelve team meetings were observed. The researcher observed and recorded anecdotal data and information about meeting characteristics that supplemented TOP data.

Table 3.8. Recording Rules for the Team Observation Protocol

-
-
1. Each participant was identified by occupation and given a code number.
 2. Only verbal statements are recorded.
 3. Statements were recorded by frequency only.
 4. Each statement was recorded by category and participant.
 5. Each response was recorded only once regardless of length, unless there was a change in response category.
 6. Each change in category was recorded as a new response.
 7. Each change of respondent was recorded as a new response.
-

Note. Adapted from Ducanis and Golin, 1979, p.96. Reprinted by permission.

No. Minutes D.I.C. Lasted: _____
 Observer's Initials _____ Unit Team No. _____ Date: _____
 Initials of Resident Discussed: _____

Team Members by		OBSERVATION CATEGORIES					
	#1	#2	#3	#4	#5	#6	#7
DISCIPLINE	QUESTION	INFORMATION	INTERPRETATION	ALTERNATIVES	DECISION	CLIENT	TEAM
S.W. CHAPIN.							
PSYCHOLOGIST							
THLDR							
NURSE							
DEV. TECH.							
O.T.							
P.T.							
R.T.							
SPEECH							
WORKSHOP							
ACTIV. CTR.							
N.D.							

FIGURE 4. TEAM OBSERVATION PROTOCOL DATA FORM

The following procedures were used to train observers. TOP categories, recording rules, and recording data form were reviewed with the two observers. They were instructed to practice coding a videotaped team meeting where team members and their occupational roles were necessarily unknown to them.

Next, the observers held a practice session with a non-participant live team where they coded verbal statements in TOP categories sequentially. Observers reported that they could not maintain accuracy when they were confronted with the simultaneous tasks of deciding in which category the statement should be coded, identifying the person making the statement by occupation/profession, and remembering the next sequential number to be used. The decision was made to code TOP verbal statements by frequencies rather than by sequence for this study. Observation time per meeting was limited to a maximum continuous recording period of 50 minutes or the end of the team's clinical meeting, whichever came first. Discussions among the observers were held periodically to clarify category definitions and uncertainties around recording rules as these arose.

Table 3.9 shows results of pairwise contrasts performed on TOP data from observers A and B on all teams combined at Observation time #1, before HTD. As table 3.9 indicates, the critical z value for significant differences between observers was exceeded only in Category 6, affective statements about Client. The number of observations in that category was so small as to represent proportions of .006 and .001, respectively, for the two observers. Since n was so small, the category was considered not a critical element in team problem-solving. Therefore, observer agreement was considered acceptable for purposes of this study. Subsequent TOP data analyses were based on mean frequencies found by averaging between Observers A and B.

TABLE 3.9. PAIRWISE CONTRASTS BETWEEN OBSERVERS FOR TOP CATEGORIES AT TIME #1 FOR ALL TEAMS COMBINED

TOP CATEGORY	OBSERVER A			OBSERVER B		
	FREQUENCY	PROPORTION	PHI ^a	FREQUENCY	PROPORTION	PHI ^a
1.	231	.285	-	207	.258	-
2.	465	.573	-	479	.598	-
3.	100	.123	.7075	106	.132	.7377
4.	5	.006	.1551	4	.005	.1415
5.	4	.005	.1415	4	.005	.1415
6.	5	.006	.1551	1	.001	.0633
7.	1	.001	.0633	0	0	0
SUM	811			801		

COMPARISONS

TOP CATEGORY	Psi ^b	S.E. Psi	Z ^c
1.	-	-	2.43
2.	-	-	-2.03
3.	-.0302	.0249	-1.21
4.	.0136	.0249	.55
5.	-0-	.0249	-0-
6.	.0918	.0249	3.69*
7.	-	-	-

NOTE. STATISTICAL SOURCE WAS MARASCUILO, L., & MCSWEENEY, M., 1977: 147-151; 483; 499.

^aPhi = ARCSINE TRANSFORMATION VALUES COMPARED WHEN PROPORTIONS WERE < .25 OR > .75.

^bPsi = PHI BEFORE MINUS PHI AFTER

^cCRITICAL VALUE OF Z = ± 2.69 for 7 planned comparisons with alpha = .05.

*SIGNIFICANT @ .0071 LEVEL.

Diagnostic and Follow-up Interviews

The objectives of the Diagnostic Interviews with Managers and team facilitators were to clarify what changes in teamwork respondents would expect as a result of the HTD intervention, and to assess whether their expectations were congruent with the HTD intervention targets of goals, roles, and procedures. The objective of the Follow-up interviews was to address program evaluation questions for management decision-making. Two different Interview schedules were developed for use in this study. Copies of the two Interview Schedules can be found in Tables 3.10 and 3.11 respectively. Before HTD interview respondents were: Director, Clinical Programs Director, Residential Services Chief, three Program Managers, the Director of Social Work to whom all Team Chairpersons reported, and the three team facilitators. Because team assignments had not been completed at the time of the Diagnostic interviews, chairpersons of participant teams were not included. Participant Team Chairpersons were included in the Follow-up interviews. Team facilitators were deleted from Follow-up interviews because their assessments of HTD effectiveness had been recorded in the problem-solving sessions held after HTD modules, 1, 3, 5, and 8.

The same general procedures were followed for both the Diagnostic and Follow-up interviews. Interviews were scheduled by appointment and conducted by the researcher, who was experienced in conducting open interviews. Interviewee responses were noted during the interviews then dictated and transcribed immediately afterward. Appointments were scheduled in advance by phone. The evaluative research purpose for the interview was explained to each respondent at the time the appointment was made. It was reviewed again with them at the beginning of the interview. Participants were told to expect that an

Table 3.10. Diagnostic Interview Schedule with Center Managers and Team Facilitators

-
-
1. What are the teams' primary tasks here at the Center, as you view them?
 2. What, if anything, should teams be doing differently than they are now?
 3. What obstacles, barriers, conditions get in the way of teams' performing the way you think they ought to perform?
 4. What changes in team behaviors do you hope to see resulting from the teams' participation in the HTD program?
 5. What might be some indicators that will tell you whether the HTD participant teams are doing things differently during and after the program?
 6. What do you expect will be the impact of this training and research project on the organization as a whole, as opposed to its impact on teams or on individuals?
-

Table 3.11. Follow-up Interview Schedule With Center Managers and Team Chairpersons

-
-
1. Have you noticed any changes in the ways that the team(s) get their work done now, as contrasted with BEFORE HTD?
 - Please describe examples, incidents, or illustrations that indicate change or absence of change.
 2. Have your expectations for HTD been met?
 - If yes, please describe examples, incidents, or illustrations.
 - If no, please describe obstacles that, in your opinion, are most likely to account for the failure of HTD to meet your expectations for changing specific areas of team functioning.
 3. Has the HTD program affected your work in any way? If yes, please tell how?
 4. From your perspective what features or elements of the team development project were most valuable?
 5. If your counterpart in another state institution called to ask your advice about implementing HTD in their facility, what would you advise them about:
 - a- the selection and preparation of participant teams?
 - b- the selection, preparation, and use of facilitators?
 - c- materials and session activities?
 - d- the time investment required to implement HTD?
 - f- other advice?
 6. What follow-up actions to HTD do you think should be taken by/at the Center?
-

interview would take about 45 minutes of their time and that their replies would be kept confidential.

Each interview was always begun with question 1, but the ordering of items was kept flexible, as long as all question areas had been covered before the interview was concluded.

Data Analysis

Factor Difference scores on the GBI questionnaire were subjected to computerized analysis (Helwig, J., & Council, K., eds., SAS Institute, 1979), following the scoring instructions described in Appendix A. Nine pairs of Factor means were compared. To avoid the inflated probability of making a Type I error (falsely rejecting a true null hypothesis), alpha level of .05 was split among the nine comparisons according to Bonferroni's inequality (Marascuilo & McSweeney, 1977: 27-31). This resulted in an effective alpha level of .00555 for each of the nine Factor comparisons. Exact probabilities were computed for each pairwise comparison. These were the exact probabilities that a Student's *t* of that magnitude would occur if the experiment were replicated with a large enough *N*. The theoretical rationale for making multiple planned comparisons among dependent means was first presented by Dunn (1961).

The TOP instrument yielded frequency data in seven categories coded at four observation times for each of three teams by two independent observers. Because of low frequencies and zeroes in some of the TOP categories, chi-square tests were not applicable to this data. Also, the two observers differed in total number of observations. Therefore, frequencies were transformed to proportions for each of the seven non-independent scoring categories on the TOP. Then multiple planned comparisons were made using the Dunn-Bonferroni technique.

Where proportions were at least .25 and not more than .75 proportions were compared directly. Where the obtained proportions were outside the range of .25 to .75, arcsine transformation values were used for comparison purposes (Marascuilo & McSweeney, 1977:499).

For the TOP data, too, an alpha level of .05 was considered an acceptable probability of making Type I errors. Dunn's table indicates that when an alpha level of .05 is equalized among seven sets of pairwise comparisons and an infinite number of degrees of freedom, the critical value of z must be at least = to or greater than ± 2.69 to be considered statistically significant (Marascuilo & McSweeney, 1977:483).

Both the GBI questionnaire and the TOP observational instruments were used to compare before and after data collected with the same instruments. However, analysis of change was not the primary focus of either the before or the after HTD interview schedules. Consequently each set of interview data was treated differently, although both were subjected to content analysis.

Diagnostic HTD interview data supplied by nine respondents were analyzed by classifying the responses into categories of the three HTD intervention targets of goals, roles, and procedures. This was a grounded theory approach to the data which had been collected to address research question three of what Center leaders' expectations were for teamwork and how congruent their expectations were with the proposed HTD intervention.

The Follow-up HTD interviews were designed to address this research question: how did Center leaders evaluate the effectiveness and applicability of HTD for their own and similar organizations. Categories were devised that would allow a meaningful content analysis of the data. First the data from each

question were analyzed for content themes. Then the response categories were derived for the various questions from a review of content themes.

Leaders' responses to questions #1 and #2 were categorized together. Then they were analyzed by comparing leaders' reported observations of changes in teamwork after HTD to the goals, roles, and procedural changes that they had indicated before HTD should occur to meet their expectations for teamwork.

Questions #3 was included as a method of gaining information about the relative involvement of leaders of varying levels, positions, and roles in the HTD intervention processes. Therefore, responses to this question were analyzed with reference to the interviewees' leadership position and role in relation to the participant teams. Categories were Yes, No, and Unsure with elaborative comments.

Questions #5 and #6 represented a shift in focus from direct evaluation of the intervention activities already completed to the future applicability of HTD. Question #5 sought to obtain evaluative data relevant for managerial decision-making about future replications of HTD with other ID teams in training centers. Data were categorized according to the types of decisions that would have to be made: a) methods of selecting participant teams; b) selection and preparation of third-party facilitators; and c) HTD materials and the release time required for participant teams to engage in HTD activities.

Leaders' responses to Question #6 were analyzed according to the following categories: 1) follow-up needed to deal with relations between ID teams and the policy-setting senior management group; 2) ideas for making the HTD intervention accessible and acceptable to other ID teams; and 3) strategies by which HTD participant teams could maintain their process gains. Table 3.12

summarizes the content analysis categories for the after HTD interviews with Center leaders.

Summary

Chapter 3 has described the methods used in conducting this study. The organizational structure and demographics of three participant teams were described first. Then procedures were outlined for implementation of the Health Team Development intervention, as were the methods of selecting and preparing internal staff as team facilitators. The measuring instruments were described along with procedures for scoring the protocols. Data analysis procedures were described that permitted statistical comparisons of change in members' perceptions of their team and in observers' ratings of team meeting behaviors. Content analysis procedures and categories for the interview schedules were also defined.

Table 3.12 Content Analysis Categories for Follow-Up Interview Data

Question	Topic Area	Categories for Analysis
#1 & 2	changes reported and changes expected	changes in goals changes in roles changes in procedures
#3	HTD impact on leaders' work	If Yes, tell how work was affected If No, describe reasons for lack of impact
#4	HTD modules rated most valuable	Team Diagnosis Goals-Setting Role Clarification and Negotiation Decision- Charting Norms Action Planning
#5	recommendations for replicating HTD, generally	selecting teams selecting facilitators materials, and release time for activities
#6	recommendations for needed follow-up at Center	relations between teams and & top management ideas for making HTD accessible and acceptable to other teams strategies for maintaining team process gains after HTD

CHAPTER 4

RESULTS

The purpose of the study was to investigate whether the HTD intervention would result in identifiable changes in ID team processes. Four research questions had been formulated. Instruments used to collect the data were described in the previous chapter.

Results have been organized for presentation in the following order: 1) Managerial Diagnostic Interview findings, which describe Center leaders' expectations for teamwork and for the intervention; 2) Team Effectiveness Diagnostic Instrument ratings by teams at the beginning of the HTD intervention; 3) Group Behavior Inventory questionnaire results, which measured changes in team members' perceptions of their team before and after HTD; 4) findings from structured observations of team meetings on the Team Observation Protocol instrument; and 5) Follow-up Interview data from Center leaders about the effectiveness and applicability of the HTD intervention.

Managerial Diagnostic Interviews

The purpose of the diagnostic interviews with managers and team facilitators was twofold: 1) to assess their expectations about teamwork and HTD, and 2) to assess the congruence of these expectations with the HTD intervention targets of goals, roles, and procedures.

All nine interview respondents were agreed that the teams' main task was the treatment planning and evaluation of individual resident's progress. Leaders' descriptions of this task included such terms as coordinate, integrate, synchronize, and mesh together. These were taken to be indicators of their

awareness of teams' needs to link members' specialized work efforts in ways that maximize benefits to residents.

Only three of the nine leaders even mentioned team members' tasks of communicating with and supporting one another. This finding indicated less awareness among Center leaders that teams need to consciously plan ways of addressing group maintenance needs as well as their main task. Only two of the nine leaders mentioned teams' educational task of expanding the knowledge and skills available to the entire team.

To assess leaders' views of needed changes in teamwork, they had been asked what teams should be doing differently. Leaders responded that they wanted to see a shift in team goals to address needs for unit activities and programs for groups of residents. Such a shift would expand the team's main task from an exclusive focus on programming goals for individual residents to include goals for groups of residents. It was this kind of shift in programming that leaders wanted to see occur, when they re-organized residents' assignments to living units and made staffing reassignments just prior to HTD. Their responses indicated leaders' awareness that the role, authority, and leadership competencies of team chairpersons would be pivotal forces, if teams were to achieve these changes in accord with their superiors' and facilitators' expectations. Leaders also said they wanted to see more widespread participation and involvement across professional lines as the teams engaged in group problem-solving efforts. Needed changes in teamwork are summarized in Table 4.1.

Less frequently mentioned among leaders' expectations were improvements of management of meetings and a desire to see teams engage in proactive decision-making rather than crisis problem-solving. A few leaders also said they

Table 4.1. Needed Changes in Teamwork Expressed by Center Leaders and Team Facilitators BEFORE HTD

GOAL AREAS

- expand team goals to include unit level group activities
- set priorities among multiple goals
- continue moving toward an integrated model of teamwork

ROLE AREAS

- clarify chairperson's role, authority, and identify acceptable leadership competencies
- delineate leader and member responsibilities for improving meeting management, including advance preparation and follow-up
- negotiate roles of unit staff and clinicians in specific problem areas as they experience conflicts

PROCEDURAL AREAS

- make decisions and solve problems proactively
 - increase participation and involvement in problem-solving across disciplinary lines
 - improve interpersonal skills in groups such as managing conflict productively and in legitimizing and addressing member needs for inclusion, recognition, and feeling valued
 - communicate with absent members to meet their needs and to promote achievement of team goals
 - orient new members to team, unit, and department procedures
-

wanted to assure that teams were making feasible decisions that could be implemented at the unit level.

Leaders expressed no clear consensus about barriers to teamwork efficiency and effectiveness. However, three main types of barriers emerged. Each of them involved several distinct problems. First, five of the nine interviewees mentioned the well-known problem of professional territoriality and status issues (Kane, 1975; Horowitz, 1970). However, a related conflict emerged between unit staff and professional clinicians. Conflict between unit staff and professional clinicians surfaced several times from several data sources in this study. However, it was first mentioned as a problem in these diagnostic interviews with leaders.

A second barrier to teamwork was reported to be time constraints, mainly those which affected staff's abilities to prepare sufficiently in advance of meetings. For clinicians who serve several teams simultaneously, the time problem involved difficulty getting written reports into the record in time for other members to read them prior to the team meeting. (One complaint heard later was that members read their reports in meetings). For unit staff, who must observe and collect frequency data on residents' progress in behavioral management and other priority treatment programs, the problem was expressed as role conflict. On the one hand they needed to intervene with the resident directly. On the other hand they needed to observe and collect data in order for data-based treatment decisions to be made at the team meeting.

A third set of barriers had to do with staff's applications of interpersonal skills in groups. Within that set three distinct attitudinal and skill barriers were identified. One, staff were viewed as having difficulty differentiating, understanding, and accepting the fact that various types and sources of

disagreement or conflict arise in any workgroup. Two, staff were thought to avoid use of confrontation, negotiation, and related interpersonal skills needed to manage conflict productively. Three, teams were seen as needing to address members' legitimate needs to feel informed, included, and valued by team-mates.

Leaders' responses to question five, (indicators of change) and to question six, (probable impact of the HTD) were far less specific than responses had been to the other questions. There was the expectation that HTD would help the teams accommodate to reorganization by a broadening of team goals. Also mentioned were difficult-to-measure changes such as "excitement and renewal comes from learning; more honest communication between clinical and unit staff, between departments and teams, and increased awareness of how teams should function."

In summary, Center leaders' views of "ideal teamwork" emphasized the desirability of change from a "coordinated" to an "integrated" model of teamwork (Kane, 1975). The integrated teams would be characterized by participatory decision-making, a leader whose chief responsibility was to manage the meetings effectively, and by blurring-role among the members. Leaders viewed the HTD intervention as a means of helping to solve problems they thought existed in teamwork at the Center. Their interview responses emphasized barriers to team effectiveness that occur at individual and within team levels, rather than any at an organizational system level or an inter-team level.

Changes leaders expected to find in teamwork after HTD did focus upon goals, roles, and procedural categories of decision-making, communications, and participation. Therefore, Center leaders' expectations were considered congruent with the approach to team development taken by the HTD intervention.

Team Effectiveness Diagnostic Instrument Data

Although teams did not have the choice of whether to participate in HTD, they did have the opportunity of engaging in their own group diagnosis. That data is summarized in Table 4.2, which used the nine items from the Team Effectiveness Diagnostic Instrument as participants completed it in module one of HTD.

The sole criterion used to define a problem area for Table 4.2 was that at least half of the team's respondents marked the item in a neutral or negative direction. Goal clarity was a problem for just one team, and so was role conflict. But conflict management was identified as a problem area by a majority of members on two of the participant teams, indicating a strong congruence between team members' perceptions and the views of Center leaders expressed in Diagnostic interviews. Participation and involvement were the other two areas identified as problem areas by at least half the members of two teams. These were also congruent with Needed Changes in Teamwork presented in Table 4.1 from interviews with Center leaders.

Group Behavior Inventory Questionnaire Results

Table 4.3 shows respondents on whom Mean Factor Difference Scores were compared. About four months elapsed between measurements. During that time four cases were lost due to employee turnover. Table 4.4 shows results of multiple planned comparisons performed on Mean Factor Difference Scores from the Group Behavior Inventory questionnaire. When members' responses before and after the intervention were compared, statistically significant differences were found for Factor I, Group Effectiveness; Factor II, Leader Approachability; and for Factor VI, Worth of Group Meetings. Results indicated that team members

Table 4.2 Number of Team Members Rating Items on Team Diagnostic Instrument in Neutral or Negative Direction

Item	TEAMS		
	1	2	3
1. Goal Clarity and Conflict		(5 of 8)	
2. Role Clarity			
3. Role Conflict	(3 of 8)		
4. Participation/Influence		(4 of 8)	(5 of 9)
5. Meeting Effectiveness/Follow-up			
6. Conflict Management		(7 of 8)	(7 of 9)
7. Recognition/Involvement		(4 of 8)	(4 of 9)
8. Support/Cohesiveness			
9. Energy			
Total Problem Areas Identified	possibly 1	4	2, possibly 3

Note. Criterion used to define a problem area was arbitrarily set at half of the members rating the item in a neutral or negative direction on a five point scale.

**Table 4.3. Group Behavior Inventory Questionnaire
Respondents BEFORE and AFTER Team Development**

Team	Before	After	Pairs^a
#1	8	6	6
#2	9	8	8
#3	10	9	9
Total	27	23	23

^aCases for which **BEFORE** - **AFTER** comparisons were made on basis of Mean Factor Difference Scores.

Table 4.4. Results of t-Tests on Mean Factor Difference Scores From the Group Behavior Inventory

FACTOR	MEAN STD. DEV.	BEFORE	AFTER	MEAN DIFFERENCE SCORES	t	p
I Group Effectiveness	X s	3.57487 .55318	3.93719 .36055	.36232	3.20*	0.0041
II Leader Approachability	X s	3.84057 .32320	4.15459 .45288	3.1401	3.53*	0.0019
III Mutual Influence	X s	3.70217 .38509	3.74948 .75608	.04130	0.33	0.7481
IV Personal Involvement & Participation	X s	3.82965 .43252	3.74982 .38486	.07984	0.76	0.4556
V Intragroup Trust Versus Competitiveness	X s	3.54782 .68812	3.99130 .29835	.44348	2.93	0.0078
VI Worth of Group Meetings	X s	3.66657 .51190	4.14142 .31820	.47485	4.95*	0.0001
VII Submission to Versus Rebellion Against Leader	X s	3.13457 .46296	3.22074 .45372	.08618	1.05	0.3070
VIII Leader Control	X s	3.42774 .44974	3.46229 .40879	.03455	0.28	0.7831
IX Role and Idea Conformity	X s	3.34782 .49851	3.45652 .47465	.10870	1.48	0.1530

N = 23

Note. When alpha level of .05 is split among 9 Factors, p must = .00555 to achieve significance.

* = Significance at .00555 level or better.

rated their teams as more effective, their leaders as more approachable, and the value of their meetings more highly after the HTD intervention than they had before HTD.

Observation of Team Meetings

Table 4.5 shows statistically significant differences recorded on the Team Observation Protocol instrument, when comparisons were made of structured observation data before and after the HTD intervention. Category 1, Question Asked, and Category 2, Information Given, both showed significant decreases after HTD. On the other hand, Category 3, Interpretations; Category 4, Alternatives; and Category 5, Decisions; all showed significant increases after HTD. No changes were observed in Categories 6 and 7, affective statements about Client and Team, respectively.

Table 4.6 shows variations among the three teams over the four times at which observational data were collected. Differences occurred with respect to the number of members present at meetings. The length of meetings varied, as did the numbers and kinds of agenda topics and the number of verbal statements. Average numbers of decisions recorded also differed.

Follow-up Interview Data from Leaders

Follow-up interviews were conducted with senior managers and chairpersons from the three participant teams to answer this research question: How did they evaluate HTD's effectiveness and its future applicability? Leaders interviewed were the Director, Clinical Programs Director, Residential Services Chief, Director of Social Work, three Program Managers, and the three team Chairpersons. Their interview responses tended to vary along the following lines: 1) differences in their familiarity with the HTD program aims and activities; 2)

TABLE 4.5 PAIRWISE CONTRASTS BEFORE AND AFTER HTD ON TOP CATEGORIES FOR ALL TEAMS COMBINED

CATEGORY NO.	BEFORE			AFTER		
	FREQUENCY AVERAGED BETWEEN OBSERVERS	PROPORTION	PHI ^a	FREQUENCY	PROPORTION	PHI ^a
1.	405	.2925	1.1374	159	.2465	1.0472
2.	822	.5937	1.7518	288	.4465	1.4706
3.	135	.0974	.6435	125	.1938	.9021
4.	10	.0072	.1675	46	.0713	.5355
5.	6	.0043	.1266	23	.0357	.3818
6.	5	.0042	.1266	3	.0046	.1415
7.	1	.0007	.0633	1	.0016	.0895
SUM	1384	1.0000		645	1.0000	

COMPARISONS

CATEGORY	psi ^b	S.E. psi	z ^c
1.	.0902	.0222	4.06*
2.	.2812	.0222	12.67*
3.	-.2586	.0222	-11.65*
4.	-.0368	.0222	-16.58*
5.	-.2552	.0222	-11.50*
6.	-.0149	.0222	- 0.67
7.	-.0262	.0222	- 1.18

NOTE. STATISTICAL SOURCE WAS MARASCUILO, L., & MCSWENEY, M., 1977: 147-151: 483: 499.

^aPHI = ARCSINE TRANSFORMATION VALUES

^bPSI = PHI BEFORE MINUS PHI AFTER

^cCRITICAL VALUE OF Z = + 2.69 FOR 7 PLANNED COMPARISONS WITH alpha = .05.

*FOR EACH COMPARISON alpha = .0071

Table 4.6. Observed Variations Among Meetings at Different Observation Times for Three Teams Combined

OBSERVATION TIMES		BEFORE HTD		AFTER HTD	
		1	2	3	4
Members Present		24	27	24	26
Minutes of Observation		145	150	109	126
Agenda Topics	individual residents	11	5	17	18
	unit groups	2	3	3	1
Verbal Statements ^a		806	576	355	290
Decisions ^a		4	2	12.5	10

^aNumbers represent averages between two observers.

differences in the extent to which interviewees' normal work duties brought them into frequent direct contact with teams at or around meetings; 3) differences in managerial ID teams; and, 5) differences in the way interviewees had perceived barriers to effective teamwork before HTD.

Generally, the interview questions were found to be most appropriate for the four leaders who had been most directly involved with the HTD intervention (three Chairpersons; one Program Manager who had been a facilitator). Unfamiliarity with HTD materials, activities, and with participants' evaluation of the intervention contributed to some leaders' relative inaccessibility to information sought in some of the questions. The Follow-up interview data was subjected to content analysis, results of which are summarized in Table 4.7.

Question 1. Four leaders, who did not routinely attend team meetings, indicated they had not had an opportunity to observe whether any changes had occurred in teamwork since HTD. One of the three chairpersons reported no change in her team, a response which she qualified by stating that she thought her team had been functioning well before HTD. However, positive changes were reported by the other five Center leaders. For example, one leader noted that minutes from team meetings were indicating that team decisions were clearer, and more problems were getting solved than before HTD. More work was said to be getting accomplished between team members outside the formal meetings of the entire team. Two chairpersons emphasized the value of team members' knowing one another better, feeling more comfortable making requests of one another, and understanding better what members and chairpersons can expect of each other. One chairperson mentioned that all HTD participants knew how team decisions

get made, and that more members were contributing their ideas about solving problems since HTD.

Question #2 asked whether the HTD program had met leaders' expectations. The five leaders who had been least familiar with HTD were not able to respond to the question. Stronger team leadership and better decisions reflected in the solving of resident's problems, greater efficiency and follow-up from meetings were all cited as ways in which HTD had met the expectations of three leaders directly involved in HTD as participants, facilitators, or observers. However, two of the interviewees expressed concern that team decisions were still not being implemented fully. For those two, their prior expectation was not met that HTD would result in fuller implementation of team decisions.

Question #3 asked whether HTD had affected the Center leaders' work. The five interviewees least involved with HTD indicated that it had not. Two chairpersons said they were more aware of team members' expectations of them, and they were clearer about their expectations of members as well. They were more comfortable making requests of members and in their role of directing team meetings. Observer-managers viewed positively the opportunity to attend team meetings without the expectation that they would engage in authoritative decision-making while they were there. A further advantage they expected to occur in the future was that their presence at meetings of HTD participant teams would likely be less threatening and more readily acceptable to team members, than if the HTD intervention and observational research had not occurred. A facilitator reported having used HTD learned tools in other group situation.

Question 4. Role Clarification and Role Negotiation modules (4 and 5) were rated by six of the interviewees as most valuable elements in HTD. Additionally, three mentioned that Performance Goal-Setting (modules 2 and 3) were most valuable,

and one cited Decision Charting (module 6). Chairpersons were generally appreciative of HTD's legitimizing the team activity of reflecting non-critically on team processes. They also liked the opportunity to work with members while not having to "conduct business as usual" during the eight session.

Question #5 required interviewees to think about variables in the implementation of HTD that were subject to manipulation and control. Their responses to the manner of selecting participant teams are presented first. Then interviewee opinions are presented about the selection, preparation, and use of third-party team facilitators. Finally, their evaluation and recommendations about the HTD materials, activities, and release time requirements are presented collectively.

Of the interviewees who had participated most directly in the HTD intervention, two felt strongly that the decision to participate or not in team development should be a voluntary decision made by each team. Both recommended that a proposal to offer team development should be made early in an organizational planning process that engages Chairpersons directly in addition to senior management.

Managers who were less directly involved with HTD took the position that all staff needed to have teamwork skills, so the most efficient way to see that everyone was exposed to learning those skills was to assign teams to "team training." The view of HTD as an educational program rather than as a consultative intervention targeting systems change influenced the process of selecting teams. Although teams were not given a choice about participating in HTD, chairpersons were expected to support senior management's decision to role conflict around handling their own and team members' reactions to make that assignment. All three Chairpersons indicated that they experienced role conflict around this and other management decisions that affected teamwork directly.

Leaders were unanimous in their endorsement of third-party facilitators for the HTD process. All three chairpersons indicated importance of a facilitator's presence because it enabled them to participate fully in the HTD process by temporarily splitting task and process leadership roles between the chairperson and the team facilitator. However, there was considerable discussion about whether facilitators should be internal or external consultants.

Disadvantages of using internal facilitators were reported as follows: The organization's investment of resources in HTD is increased to prepare internal facilitators, and time is needed for them to work out roles and responsibilities with chairpersons. Also, teams might not feel as comfortable discussing their problems and their feelings about HTD with an internal facilitator who was obviously committed to HTD. Finally, an internal facilitator might be viewed by teams as not having as much authority, expertise or credibility as an outsider.

On the other hand, an outside facilitator might command more authority; people might feel it was safer to raise controversial issues with an outsider with whom they would not have to work after HTD was done. However, an outsider would be handicapped by a lack of familiarity with the organization and its problems. Facilitators indicated that advance preparation sessions with an external consultant were definitely needed, as were the debriefing sessions after modules 1, 3, 5, and 8.

Among the comments about materials, activities and time required for HTD were these: two leaders who had used the materials thought that examples and language in the HTD workbook were too medically-oriented. However, others didn't mention it. One chairperson emphasized how helpful it was to her team

that the HTD activities forced them to focus the group's attention on writing out goals, tasks, and role expectations specifically for all to share.

Leaders expressed concerns about release time for HTD. One leader suggested that the diagnostic module should be done first. The remainder of the HTD activities should then be negotiated with the team to include only activities that focused on identified problem areas. Several leaders felt that three hour sessions were too long. However, all three team chairpersons indicated that most sessions could be completed in about two and half hours, except the two modules on role clarification and role negotiation.

Question #6. Recommendations for Center follow-up to HTD were categorized into three areas that require management decision-making: 1) relations between ID teams and the policy-setting senior management group at the Center; 2) ideas for making the HTD program accessible to other teams inside and outside the Center; and 3) strategies for participant teams to maintain the process gains arising out of HTD activities.

Two significant findings emerged in the area of relations between ID teams and the senior management group which sets policy affecting teams. First, the interviews indicated clearly a lack of consensus and divergent perceptions by leaders in various positions at differing organizational levels about the authority and role of Team Chairperson. Second, organizational structure placed the chairmanship of ID teams with social workers who reported to their departmental director. She reported to the Clinical Programs Director, who reported to the Director. No other mechanism or group existed for communications and problem-solving around this and any other problems associated with teamwork at the team level or at the organization level.

In the second area that requires decision-making (ideas for making HTD accessible to other teams) the responses varied with the leaders' familiarity with the intervention activities. Two leaders, unfamiliar with HTD activities, thought that HTD learnings could be shared with other staff in an informal seminar format rather than an intact team's having to work through the HTD program. Alternative scheduling formats were suggested, which ranged from one hour sessions twice weekly to a week-end retreat where the entire HTD program might be done with a team. In short, the responses indicated that leaders' concerns were with the 'how to's' of making HTD most readily available to teams in a manner that would reflect the most efficient use of staff time and resources.

At least two participant teams had made plans to follow-up their own performance goals and action plans within a specified time. Their facilitators had assignments to carry out in those plans, as did the chairpersons and team members. The suggestion was also made by one leader that teams and other groups should work on the problem areas identified by this HTD process, and that the Center could re-evaluate team functioning in three to six months. No centerwide action plans were elaborated in the interviews for any of these recommendations.

TABLE 4.7 CONTENT ANALYSIS SUMMARY OF FOLLOW-UP INTERVIEW DATA.

TOPIC AREA	CATEGORIES	DATA REPORTED
CHANGES REPORTED VIS A VIS CHANGES EXPECTED BY LEADERS	GOALS, ROLES, AND PROCEDURES	NO OPPORTUNITY TO OBSERVE (4) NO CHANGE TO REPORT (1) CLEARER DECISIONS CLEARER EXPECTATIONS BETWEEN CHAIRPERSONS AND MEMBERS MORE WORK BEING DONE OUTSIDE MEETING TIMES MORE PROBLEMS GETTING SOLVED BY THE TEAMS MORE TEAM MEMBERS CONTRIBUTING IDEAS ABOUT SOLVING PROBLEMS. DECISIONS STILL NOT BEING FULLY IMPLEMENTED (2)
HTD IMPACT ON LEADER'S WORK	IF YES, TELL HOW IF NO, DESCRIBE REASONS	HTD DID NOT IMPACT WORK (5) CHAIRPERSONS CLEARER ABOUT MEMBERS' EXPECTATIONS OF THEM VICE VERSA; FELT MORE COMFORTABLE ASKING MEMBERS TO PERFORM SPECIFIC TASKS (2) LIKED OPPORTUNITY TO OBSERVE TEAMS AT WORK OUTSIDE THEIR MANAGERIAL PROBLEM-SOLVING AUTHORITY RULE (1) USED HTD TOOLS IN OTHER GROUPS WITH POSITIVE RESULTS (2)
HTD MODULES RATED MOST VALUABLE	TEAM DIAGNOSIS GOALS-SETTING ROLE CLARIFICATION & NEGOTIATION DECISION-CHARTING NORMS ACTION PLANNING	GOAL-SETTING (3) ROLES (6) DECISION-CHARTING (1) WRITING OUT GOALS TASKS AND ROLE'S WAS HELPFUL.

TABLE 4.7 (CONTINUED)

TOPIC AREA	CATEGORIES	DATA REPORTED
RECOMMENDATIONS FOR REPLICATING HTD, GENERALLY	SELECTING TEAMS, FACILITATORS, AND MATERIALS; RELEASE TIME	TEAM PARTICIPATION SHOULD BE VOLUNTARY DECISION BY TEAM(2) TEAMS SHOULD BE ASSIGNED BY MANAGEMENT TO PARTICIPATE (3) THIRD PARTY FACILITATORS SHOULD BE USED IN HTD (10); HOWEVER PROS AND CONS OF INTERNAL VERSUS EXTERNAL FACILITATOR SHOULD BE CAREFULLY CONSIDERED CONTROVERSIAL ISSUES ARE MORE SAFE TO DISCUSS WITH EXTERNAL FACILITATORS, WHO ALSO CARRY 'EXPERT' POWER OF AUTHORITY USE OF INTERNAL FACILITATORS ALSO TAKES MORE ORGANIZATIONAL RESOURCES AND REQUIRES PREPARATION WITH EXTERNAL CONSULTANT RELEASE TIME IS A PROBLEM; RETREAT FORMAT WAS SUGGESTED AS WAS 1 HR SESSIONS MORE OFTEN THAN ONCE WEEKLY MODULES EXCEPT THE TWO DEALING WITH ROLES CAN BE DONE IN ABOUT 2 1/2 HRS DIAGNOSIS SHOULD BE DONE WITH TEAM AND REMAINDER OF HTD NEGOTIATED WITH THEM TO FOCUS ONLY ON IDENTIFIED PROBLEMS
RECOMMENDATIONS FOR NEEDED FOLLOW-UP AT CENTER	RELATIONS BETWEEN TEAMS & MANAGEMENT IDEAS FOR MAKING HTD ACCESSIBLE TO OTHER TEAMS STRATEGIES FOR MAINTAINING PROCESS GAINS AFTER HTD	LACK OF CONSENSUS ABOUT ROLE AND AUTHORITY OF CHAIRPERSON LACK OF SPECIFIED ORGANIZATIONAL COMMUNICATION MECHANISM TO ADDRESS TEAMWORK PROBLEMS ALTERNATIVE HTD SCHEDULING FORMATS SUGGESTED ACTION PLANS FOR FOLLOW-UP HAD BEEN MADE BY 2 TEAMS, BUT NO ORGANIZATIONAL PLAN WAS MADE.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter is divided into four sections. The first section consists of a summary of the study. In section two, Implementing ID Team Development: Conclusions, the study's practical significance is addressed. Conclusions are drawn there about how the organizational setting and the processes of implementing the study contributed to its outcomes. Recommendations are made for practitioners' future implementation and evaluation of the HTD program in Virginia Department of Mental Health and Mental Retardation.

In the third section, ID Team Research: Recommendations, the attempt is made to place results from this study within the broad context of existing knowledge about ID teams, their effectiveness, and their development. Future research in several areas is recommended. In the fourth and final section recommendations are made for the improvement of ID teamwork at the Center.

Summary of the Study

The needs for research on interdisciplinary teamwork are well documented (Ducanis & Golin, 1979; Kane, 1975; Lonsdale, Webb, and Briggs, 1980). Many ID team members in health and human services organizations have not participated in systematic educational interventions aimed at solving problems in teamwork. Team development interventions "seek to build competent, collaborative, and creative work teams by removing the barriers to effective group functioning, and by helping participants better understand and use the group processes associated with effective group behavior" (Boss & McConkie, 1981:45).

Prior research had suggested that normative interventions such as team development do not necessarily result in increased performance effectiveness.

However, dysfunctional group processes impede a group's effectiveness by diverting members' energies from productive task-related efforts (Beckhard, 1972; Hackman & Morris in Berkowitz, 1978; Kaplan, 1979).

Prior efforts to improve team functioning had been made by the state mental health and mental retardation agency. However, these had focused on inter-agency collaboration (Feine et al., 1975), interprofessional collaboration workshops conducted by an external consultant with non-intact teams (Cushnie, 1977), and training in team-building skills and strategies for manager-nominated individuals in the state's system. Nevertheless, the state agency lacked a system for addressing team development needs on a consistent basis across the state (Cushnie, 1979).

Given the unmet practical and theoretical needs, this study was designed around implementation by internal staff trainers of a health team development intervention, Improving the Coordination of Care: A Program for Health Team Development, (Rubin, Plovnick, & Fry, 1975). In spite of the ready availability of this program from its publisher, few efforts had been made to evaluate its effectiveness in the context of a research design. This study was designed to answer the following research questions:

1. Before team development (HTD), were Center leaders' expectations for teamwork and for the intervention congruent with the goals, roles, and procedures variables targeted for change in HTD?
2. Did team members' perceptions of their team differ before and after the HTD intervention?
3. Did teams' meeting behaviors differ before and after the intervention?
4. After HTD, how did Center leaders evaluate the intervention's effectiveness and its applicability for their own and similar organizations?

The study was conducted with three intact ID teams in a state training center for the mentally retarded, where the Director and top managers agreed to participate in the research and intervention activities. The three participant teams were designated by top management to participate in HTD. A single criterion was used in their selection: to gain the widest participation possible by staff from different units, buildings and occupations at the Center. Sixteen different occupational groups contribute directly to the care and treatment of the Center's 285 residents. Representatives from twelve of those occupational groups participated in HTD for a total of 27 subjects divided among the three ID teams. Only five of the 27 had reported ever having participated previously in any kind of team development activities. Social workers were the designated leaders or Chairpersons for the ID teams in this institution.

The HTD program was carried out by each team with its internal staff facilitator in eight consecutive weekly session of three hours each. Facilitators had been selected according to these criteria: they were individuals with prior experience in the delivery of staff training; their normal work duties involved them in no supervisory authority relations with members of the ID team whose development they were expected to facilitate; and Center managers believed they had demonstrated ability to apply interpersonal and group leadership skills. Facilitators underwent preparatory study and discussion to familiarize themselves with the HTD approach, the materials, and to aid them in planning and anticipating teams' responses to HTD tasks. Debriefing, problem-solving sessions were carried out with facilitators after weeks 1, 3, 5, and 8 of HTD. An orientation session was conducted for teams. Chairpersons and facilitators were encouraged to plan jointly and to share task and process leadership roles during HTD meetings.

The study can be classified as a quasi-experimental field study that used repeated measures in a one sample design. Participant questionnaires, structured interviews with Center leaders, and nonparticipant observations of team meetings were the measures used to answer the research questions which had been formulated. In regard to research question one, qualitative findings from the Diagnostic Interviews indicated that top managers' and team facilitators' expectations for changes in team work were indeed congruent with the goals, roles, and procedural variables targeted for change by the HTD activities.

To answer research question two, did team members' perceptions of their team change?, the Group Behavior Inventory questionnaire was administered to participants before and after the intervention. Results of multiple planned comparisons performed on Mean Factor Difference Scores showed statistically significant increases in Factor I, Group Effectiveness; Factor II, Leader Approachability; and Factor VI, Worth of Group Meetings. No changes occurred on the other six questionnaire factors including that of members' involvement and participation.

In answer to research question three, did teams' meeting behaviors change?, a previously unresearched instrument was used to measure team members' verbal problem-solving interaction. No reports of prior attempts to establish validity and reliability of the Team Observation Protocol were known. Therefore, no expected frequencies for the seven TOP categories were available, nor was there a standard to which observers could be trained. Nevertheless, inter-observer agreement was established for six of the seven TOP categories. Therefore, TOP data analysis was based on mean frequencies found by averaging frequencies between the two observers.

TOP results showed statistically significant differences when multiple comparisons were made of the structured observation data across all three teams before and after the intervention. Both Category 1, Questions asked, and Category 2, Information given, showed significant decreases. On the other hand, Categories 3, 4, and 5, Interpretations, Alternatives, and Decisions all showed significant increases after HTD. No changes were found in Categories 6 and 7, Affective statements about Client and Team, respectively.

Because of the small number of teams in this study, no statistical analyses were warranted to assess inter-team differences. However, the observation data on meetings indicated that teams differed in number and kinds of topics discussed at their meetings, number of members present, length of the meetings, and in number of decisions made in proportion to the number of agenda topics.

Follow-up interviews were conducted with top management and team chairpersons from the participant teams to address research question four: How did they evaluate HTD's effectiveness and its future applicability for their own and similar organizations? Areas of general agreement among the ten interviewees were as follows: 1) role clarification and role negotiation were considered the most valuable of the HTD activities; 2) a third-party facilitator was definitely felt to be needed to assure that the team's designated leader could participate fully in HTD activities with the group. However, interviewees differed in their opinions about whether the internal or an external facilitator could be most helpful to teams participating in HTD. Most of those interviewed expressed concern about the amount of release time needed for HTD (24 hours over eight weeks in this study). In short, responses focused upon how to make team development activities, especially team diagnostic assessments, role

negotiations and decision making, available to team while minimizing the necessary release time. Interviewees suggested a variety of scheduling formats to deal with release time constraints based on their greater and lesser familiarity with HTD program activities.

The Follow-up interviews indicated leaders expressed conflicting opinions in the following areas: 1) whether teams' participation in HTD should be voluntary on their part or mandated by top management; 2) the role and authority of team chairpersons and ID teams; and 3) what follow-up actions to HTD ought to occur at the Center. Two of the three participating teams had already made their own plans to evaluate their teams' attainment of goals they set during HTD.

In summary, after participation in a team development program conducted by internal staff facilitators, positive changes were measured in ID team members' perceptions of their teams's general effectiveness, their leader's approachability, and the value of their meetings. No changes were found in member participation and influence. Structured observation data from team meetings showed increases in number of interpretive statements, frequency of alternatives suggested, and number of decisions made during teams' meetings after the completion of HTD. Decreased asking of questions and giving of information was also observed. Pre-intervention Diagnostic interviews with managers and team facilitators had indicated that their expectations were congruent with the areas of team functioning targeted for change by HTD. However, Follow-up interviews revealed the presence of conflicting opinions between top management leaders and team chairpersons in areas related to teamwork and team development. These are discussed in the next section.

Implementing ID Team Development: Conclusions

This study was intended to have practical significance as well as theoretical significance. The intention was to produce a replicable, data-based design and methods for the implementation and evaluation of team development with ID teams. The design and methods used in this study were considered replicable in similar organizations where ID teams practice the delivery of health care and human services. However, Nicholas (1979) has suggested that an understanding of the organizational setting wherein it occurs is necessary, if one is to evaluate the effectiveness of an intervention. Similarly, Scheirer (1981) has pointed out that before one can evaluate the outcomes of a program, one must study the implementation processes by which results were achieved. She identified variables at the organizational system level, team or workgroup level, and at the individual worker level all of which interact to facilitate or impede progress in the implementation of new programs.

Salient features in the organizational setting, where this study was conducted, are discussed here in relation to conclusions about their influences on the team development intervention and research study. For the sake of clarity, the analysis and conclusions are presented in the following topical order: 1) Management's Perspective, Policies, and Decision-Making; 2) Conflict Around Team Leadership; 3) Team Membership and Participation; and 4) Criterion-referenced Applicability of HTD.

Management's Perspective, Policies, and Decision-Making Practices

In May, 1981, senior management at the Center had established a policy under which all social workers were designated chairpersons for the ID teams on which they served. That policy was implemented by a set of procedures to guide

team decision-making in cases where disagreements occurred within the team. However, no changes were made in the organizational structure of departmental reporting relationships to support the change in team leadership.

Intervention and research activities occurred over a ten month period, October, 1981 through July, 1982. During that time a number of senior management decisions were made which affected both the work of the teams and the study. First, senior management decided to adopt the team development intervention and research study without direct involvement by team chairpersons.

Additionally, the Diagnostic Interview data suggest that senior managers viewed the project chiefly as an educational intervention. Managers' tended to define barriers to teamwork at the Center as mainly individual and workgroup problems for which additional knowledge and skills were considered an appropriate solution.

Senior management's decision to announce an impending reorganization in late September, 1981, caused a delay in the implementation of HTD. The reorganization plan, which changed the basis for assignments of residents to living units and some staff assignments to ID teams, was not completed until January, 1982. As a result, Diagnostic interviews carried out in October and November, 1981, did not include the chairpersons of HTD participant teams. Only later, in problem-solving meetings during HTD and in the Follow-Up interviews did the full extent of conflict emerge between senior management's and the teams' views of barriers to teamwork. Teams, especially the chairpersons, were found to view barriers to teamwork in terms of problems related to policies, authority and autonomy of the teams, lack of rewards for team leadership, and similar organizational system level issues. These discrepant perspectives on teamwork

problem etiology and solutions suggest that other interventions may have been needed at the the Center prior to implementation of HTD with any ID teams.

It can be concluded that senior management at the Center was committed to having several ID teams participate in what came to be known there as "the team training." It can also be concluded that the study's experimental design and management's decision-making practices reduced the flexibility of the intervention plan, its subsequent acceptance by participants, and ultimately, its effectiveness as perceived within the organization.

Conflict Around Team Leadership

The divergent perceptions of teamwork problems by leaders in varying positions at different organizational levels extended to their opinions about the role, authority, and competencies expected of team chairpersons. The three chairpersons expressed the opinion that they had responsibility and administrative liability withoiut clear authority. On the other hand, top management expressed the beliefs that they had delegated sufficient authority to chairpersons, who were, therefore, either unwilling or unable to exercise that authority appropriately.

One chairperson had been most positive in her initial expectations that team development would aid her learning to manage meetings and to lead her group better. She stated most emphatically after HTD, that the chairperson's attitude was a critical variable affecting HTD's acceptance by team members. Another chairperson said she and members of her team hadn't thought that they had any particular problems in their team's functioning prior to HTD, so she hadn't had any particular expectations for change. Differences in chairpersons' attitudes may have contributed to some members descriptions' of HTD activities as "nice

training exercises" rather than as problem-solving tools that could be used by the teams as needed.

The fact that the full extent of conflict between senior management and team chairpersons' views of problems around teamwork did not emerge until late in the intervention process contributed to its not being resolved. The HTD program activities focused chiefly on within-team problems. Although the book contains an optional module dealing with team-organization relations, none of the teams in this study elected to use it.

Facilitators expressed considerable discomfort relative to the teams' negative affect toward senior management's decisions affecting their tasks. Teams were especially unhappy that physicians were allowed to opt out of HTD participation. Facilitators' discomfort may have been due in part to their inexperience in the role of process consultant, and to a feeling of being "caught in the middle" between senior management, the teams, and the researcher's needs. Their inexperience in the role of process consultant, the newness of HTD to them, and the fact that they knew they were participating in a research study, may all have served to reduce the flexibility with which the HTD intervention was carried out. These factors, too, may have contributed to some participants' discounting of some HTD activities as "training exercises".

The positive effects on leader-member relations of role clarification and role negotiation activities may have been reflected in the increased leader approachability finding on the GBI questionnaire. Two of the three participant teams were relatively new groups, formed by the Center's reorganization within a couple of months prior to HTD. The meetings spent by those team members interacting on HTD activities probably provided for them a systematic process for clarifying their expectations of one another, which contributed to the

perceived increase in leader approachability after HTD. The presence of a third-party facilitator may have contributed to this result, too, since it permitted the chairpersons to engage fully in the HTD activities without specific meeting management responsibilities during those eight sessions.

Center leaders who participated in the study as interviewees, observers, facilitators, and a majority of the team members themselves, were supportive, interested, and cooperative in the collection of research data. Nonetheless, there was no single organizational member designated by senior management to coordinate with the researcher all aspects of the project's activities. Nor did organizational leaders seem to see a need for the researcher to receive timely notice of organizational communications about policies, decisions, and changes that affected the work of the teams. Those were often received after the fact, through the facilitators' problem-solving sessions, in informal discussions with observers, and finally, in the interviews conducted with individual leaders.

The foregoing discussion suggests the presence of system level problems in team leadership. Yet another example supports the hypothesis that the Center, like many health and human services institutions with multiple ID teams, had system level problems related to team leadership and functioning.

The participant teams each generated several documents arising from their work on the HTD activities. These documents included the following information: 1) team performance goals prioritized by members; 2) role contracts negotiated between members; 3) decision charts showing which members have what responsibilities for the various decisions that the teams have to make; and 4) action plans for teams to assess their goals attainment. No provision was made to share those documents with senior management. Nor were they mentioned by any of the leaders in the Follow-Up interviews. In short, no systematic plan was made

by organizational leaders with the researcher, the teams, or the facilitators to address team-related problems or products that arose in the HTD intervention.

The findings from this study clearly support the need for an adequate organizational diagnosis prior to the selection and implementation of an intervention (Dyer, 1977; Francis & Young, 1979). They also support the point made in the OD literature that commitment of the team's leader is vital to the effectiveness of a team development intervention (Baker, 1979; Boss, 1979; and Dimock, 1978). Diagnostic processes and commitment-seeking must involve leaders at the team level as well as leaders at the organizational system level. Where their definitions of the problem varies, their expectations for its solution are likely to differ too. Under such conditions, interventions other than team development at the work group level may be needed before ID team development is attempted (Boss & McConkie, 1981).

Team Membership and Participation

One of the realities of doing research studies in work organizations is that one cannot always carry out neatly designed experiments with control or comparison groups. The fact that staff members in all professional disciplines at the Center did serve on multiple ID teams had several practical consequences for the design of this study and its implementation. First, it precluded the use of comparison teams which did not receive the HTD 'treatment.' Second, it restricted the total number of ID teams that could be included in the study.

Kane's review of the ID team literature (1975) suggested that persons in a profession generally view their role more broadly than do those outside the profession. Heilman (1975) noted that members of ID teams need to know about the knowledge, skills, and contributions of team members in disciplines other than

their own. Most participants in this study had had little exposure to interdisciplinary education in their professional training, and no prior team development experiences. Those demographic facts probably contributed to the finding that role clarification and role negotiation were generally viewed as the most valuable of HTD activities.

Turf issues are widely known to be a frequent source of problems in interprofessional collaboration required by ID team tasks. However, such problems were less in evidence in this study than was conflict between paraprofessional unit workers and professional clinicians.

One chairperson said she viewed her role partly as one of mediator among the multiple demands placed on unit staff resources by various external groups. Professional clinicians' expected unit staff to implement treatment programs that were considered by unit staff as 'not feasible' given their shortage of personnel resources.

However, observational data suggested that few paraprofessional unit staff were present at team meetings. They would leave the room frequently to attend to residents needs. Among those unit staff present at meetings, few except the unit leaders raised questions, challenged, or suggested alternatives to the treatment plans proposed by the professional clinicians. The Post-HTD observational data showed an increased, but still infrequent use of the categories, Alternatives and Decisions.

No changes in member participation and influence were found on the GBI questionnaire in this study. That finding needs to be interpreted in light of the literature on ID teams and research. However, the fact that this study limited itself to observation of team members' verbal interaction in scheduled problem-solving meetings probably meant that opportunities were missed to observe

members' participation in team tasks that go on outside the scheduled meetings. According to one leader, management's concurrent restriction on the length of team meetings (implemented during the last week of HTD) resulted in more frequent informal meetings of small groups of members for the purpose of to working out a problem solutions for later presentation to the entire team in meeting. That being the case, it may be that the purpose of the team meeting is chiefly to share information. Clarity of expectations among organizational members for team meetings is certainly needed on this and other issues relative to members' participation in team problem-solving and decision-making. It receives further attention in the recommended actions for improvement of ID teamwork presented in the final section of this Chapter.

Criterion-Referenced Applicability of HTD

The writer had established four criteria for a team development intervention in the Virginia Department of Mental Health and Mental Retardation. The practical significance of the study is now discussed in regard to each of the four criteria.

The first criterion was that the team development intervention should make use of internal staff as team facilitators, rather than relying on costly time and expertise of external consultants. The research reliability might have been enhanced if only one facilitator had worked with all three participant teams. However, that was not an option in the eyes of organizational members. No one facilitator could spare the release time from other duties to work with more than a single team in one three hour session weekly for eight weeks. The three facilitators compared experiences and provided support for one another, which they found helpful. They also agreed that they found useful the written materials

used in the four HTD preparation sessions. The problem-solving sessions held after weeks 1, 3, 5, and 8 allowed for sharing, reflection, and feedback on how they handled activities, member reactions, and problems. They considered these sessions useful in focusing their planning efforts for upcoming HTD activities.

Organizational leaders' views of the pros and cons associated with use of internal staff members as HTD facilitators were presented in Chapter 4. In addition to those, the writer observed that in their simultaneous efforts to please management, the teams, and the researcher, facilitators encountered considerable role stress. They were conscious of having been selected by management for the role. At the same time, they were understandably anxious to gain acceptance and the confidence of teams with whom they were working. In the facilitators' concerns for teams' confidentiality, they exhibited some understandable reluctance to challenge, to confront, to raise questions and to share information about team-produced documents and controversial issues with management and the researcher. This reticence probably interfered with the attainment of the maximal problem-solving values of HTD as perceived by the organization.

Based on results of this study, it is evident that carefully selected and prepared agency employees can serve as HTD facilitators. However, inherent in the role of internal team consultant are potential conflicts that may be difficult for inexperienced process consultants to handle when they must work harmoniously with peers and superiors after HTD. In situations where conflicts occur between senior management and the teams, as in this study, facilitators are placed in a difficult position. Therefore, two recommendations are made for future HTD applications. 1) Agency employees should serve as team facilitators in institutions or programs other than their own; and 2) an agency employee who is experienced with HTD could serve as a third party facilitator in their own

institution to assist a single team that is actively seeking help. In that case, the facilitator would be expected to negotiate a contract for HTD processes and outcomes with the team and its leader directly, subject only to general approval at the organization level.

The second criterion for the team development intervention was that it should not require extensive blocks of release time for participants. To a work organization with a service delivery mission, release time for employees to participate in training represents a reallocation of human resources away from their primary tasks. Organizational leaders in this study tended to rate the release time required for HTD as excessive. That is, in comparison to the inservice training programs typically held at the Center, weekly three-hour meetings were considered too long. On the other hand, citing of release time requirement may have been a convenient way for Center managers to convey tactfully the point that HTD had not been of sufficient organizational impact for them to regard its value highly. Interestingly, it was the leaders who were least familiar with HTD activities and products who also demonstrated the least understanding and acceptance of the release time requirement. Winsted (1978) found similar release time concerns among leaders in his evaluative study of the TOTD program in the U.S. Navy. His recommendation was that the program activities should be condensed and collapsed into four longer sessions.

It is concluded here that management's reticence about release time for team development can be attributed in part to their lack of involvement with HTD activities, products, and the lack of an organizational mechanism for problem-solving around teamwork issues, generally. Research has not so far demonstrated a direct, casual relationship between process interventions like HTD and group performance improvement. In future applications of HTD these

difficulties should be clearly understood early in the process of negotiating with senior managers and team leaders, relative to the specific outcomes expected from HTD. Commitment should be obtained to share team-generated documents and system-related concerns jointly between team leaders and with senior managers for the purpose of action planning before and after HTD.

The third criterion for a team development intervention was that it should be implemented with intact ID teams rather than with representatives from many ID teams. This criterion was only partially met in this study. For reasons beyond the researcher's control, physicians, educators, licensed practical nurses, and a majority of developmental aides at the center did not participate in HTD. The reasons for and effects of their non-participation had to be interpreted differentially for each discipline. These were described in Chapter 3. Most non-participants were not regular attendees at ID team meetings in the Center, anyway.

In a study of professionals' participation in ID team meetings in a general hospital ward, Browne (1977) found that the presence of "accountable" professionals at team meetings resulted in a higher rate of decision-making about patient care plans. In order to assess the "accountability" of a certain professional group in reference to the decision-making of a particular type of ID team, one has to consider the nature of patient problems which the team is required to solve. For example, in a mental retardation training center not all residents have chronic or acute medical problems. Therefore, the absence of the physician "accountable" for specialized medical problem-solving should not be expected to have the same effect on team decision-making as would their absence from psychiatric hospital or a general hospital's ID teams. In long term care settings, like the Center, resident turnover is low. Because residents' progress is generally

slow, treatment planning has to be updated less often. Therefore, there is probably less need for frequent meetings of an entire extended team representing all disciplines than in acute care settings with a short length of patient stay.

For the above reasons, it is concluded that HTD should be implemented with intact teams, but the definition of 'intact' should be judiciously negotiated according to needs of the setting and the nature of the patient population. In this study, it was preferential treatment shown by management to physicians in allowing them to opt out of HTD to which team members reacted negatively, not to the absence of physicians per se.

In future applications of HTD it is recommended that the selection of teams for participation in team development be preceded by a clear contract with senior management and the team leaders for a multi-level diagnostic assessment of strengths and weaknesses in ID teamwork in the agency or institution. Data sources should include a sampling of individual team members, all designated ID team leaders, and senior management's policy-setting group. Measuring instruments such as those used in this study could be used in the diagnostic assessment. The contract for diagnostic assessment should stipulate that data would be analyzed and reported to management, team leaders and to the teams before any collective decisions were made to proceed further. The reader will recognize this process as a survey-feedback approach in an action research framework, wherein results of the first step, diagnosis, form the basis of the next action step. Selection of teams to participate in team development should be a joint decision, based on results of the diagnostic survey-feedback process. When teams or individuals perceive no particular needs to change a team's operating behaviors, or when diagnosis indicates the presence of structural problems, then team development with ID teams is probably not the intervention of choice.

The fourth criterion was that the team development intervention should be perceived by busy mental health-mental retardation workers as having face validity. That is, the reading materials and team activities should be viewed as helpful to participants in solving real problems associated with getting their team tasks accomplished. This criterion was only partially met.

HTD materials were developed from organization development consultants' experiences working with primary health care teams (Wise et al., 1974). The case examples in HTD workbook reflect the strong bias toward medical definitions of patient problems. They also reflect the typical primary health care team of which the physician is usually designated leader. To many health professionals trained in medical settings, that bias would not present a problem. However, to educators and others whose professional orientation follows a psychosocial or habilitative model rather than a medical model, the bias in the written materials reportedly interfered with credibility and acceptance. Winsted (1978) also found that the construction industry case examples and jargon interfered with Navy personnel's acceptance of TOTD. Such are the limitations often found in pre-packaged training programs. Part of the facilitator's responsibility in using a pre-packaged materials and activities is to help participants make necessary translations, interpolations, and applications to suit their work setting and tasks. Future applications of HTD should take this into account in facilitator preparation.

The problem-solving credibility of the HTD activities was less than expected. Some leaders reported that they were seen by participants as "nice training exercises." Possible factors contributing to such discounts have been discussed in foregoing sections of this chapter. Not the least of these may have been team members' negative reactions to having been assigned to "team

training," and facilitators' difficulties shifting from a well-accepted and understood "training" role to a less well-understood and accepted process consultant role.

The remaining paragraphs of this section emphasize the major conclusions of practical significance to practitioners interested in implementing and evaluating HTD. It can be inferred that increases in problem-solving efficiency were associated with a team development intervention in this study. At least team members perceived their teams as more effective and they valued their teams' meetings more highly after the intervention than before. Observational data corroborated this conclusion, as did reports from some managers that teams were making more decisions after the intervention. However, the quality of patient care and treatment decisions made by the teams was not assessed in this study. Nor was the extent to which team decisions actually were implemented outside team meetings studied. Team decision-making outside formal meetings was not studied either.

More recently HTD authors (Fry, Rubin, and Plovnick 1981), have emphasized the impact of the policy-setting group behaviors upon the behaviors of middle management groups. Plovnick (personal communication January 1982), suggested that a thorough system diagnosis is necessary to determine whether teams can benefit from team development.

Kaplan (1979) recommended process consultation as a strategy for dealing with conflict. Certainly, in this study, conflict was present between leaders at the team level and the system or organizational level. Whether that conflict could have been diagnosed early on and resolved through intervention with team leaders and senior management can only be speculated upon at this time. However, one of the hallmarks of process consultation is the voluntary nature of

the helping relationship between consultant and the group or organization. In this study the relationship was voluntary at the organizational system level but for the teams it was not. Thus, it can also be concluded that there was incongruence between the process consultation model on which HTD was based, by which team facilitators were prepared, and the mandatory assignments of teams to participate in HTD.

Results of the study indicate that team development is best undertaken when and where it is needed. That is, the selection of a team development intervention should be based on a thorough diagnostic assessment and recommendations made by a consultant who has contracted with senior management to perform problem-diagnostic, data-gathering activities before the intervention is selected.

Consideration might be given to a top-down strategy that involves a senior management group in team development first. Then leaders of ID teams might engage in goal-setting and role negotiation activities with senior management to assure that leaders at all levels of the organization share a common set of expectations and desired outcomes from HTD. Approaches such as this enable a practitioner to build research data collection activities into consultation processes to assure that interventions like team development are selected and used in a manner that is appropriate to the problem felt in the organization. Findings from the present study and those from Winsted's study with TOTD in the Navy indicate that even with a comprehensive pre-packaged set of materials, adaptation and tailoring are needed to suit diagnosed needs of the particular teams and work organization.

ID Team Research: Recommendations

Conclusions were drawn in the previous section about the implementation of team development. Now implications of the study are discussed in light of the research questions asked, the design and methods used, the results, and the literature reviewed. Based on the discussion, directions are recommended for future research.

It is premature to draw definitive conclusions about the effectiveness of team development interventions with ID teams for several reasons. First, team development interventions are means to an end: they are not ends in and of themselves. The significance of this statement is best expressed with reference to the Hackman and Morris theory of relations among variables that contribute to group performance effectiveness. (It was discussed previously in chapter two. The model was reproduced on page 25). Team development is designed to intervene in group norms.

Second, to the extent that group norms do influence group processes, team development interventions can be expected to demonstrate some effects on those processes. However, the characteristics of members, including the skills that they bring to the group, and the nature of the group's tasks are two additional sets of input variables that critically affect the group's processes and ultimately, its performance effectiveness.

Third, in the case of health and human services ID teams, neither tasks, nor member skills and characteristics, nor indicators of performance effectiveness have been well-delineated in practice or in theory. Therefore, continued attempts to study the effects of team development interventions on team processes are thought to be of limited value for research and theory-building on the efficacy of ID team delivery of health and human services.

Because of the known influences of tasks upon team processes and performance no general theory of ID team effectiveness seems plausible, any more than a general theory of effectiveness is applicable to all work groups. Kane (1981) is among those who urge the differentiation of ID team tasks if theory is to be developed regarding ID team effectiveness.

Team tasks can and should be differentiated empirically on the basis of patient population characteristics and treatment approaches. Differing treatment approaches probably require differing team and organizational structures and differing participation patterns among team members based on professional task and role specializations. Browne's grounded theory approach to observational data from team meetings represents an important beginning to address the need for operationalized definitions of the variables relating problem-solving processes with treatment decisions. Until these immediate outcomes of teamwork can be defined there is little hope of establishing meaningful relationships between teamwork and its outcomes in patients' responses to treatment.

Given the fact that so few research studies have been conducted with ID teams, replicable, studies are needed that describe and report relationships among observable, measurable team meeting variables. These are needed to contribute ultimately to an empirically-based theory of ID team effectiveness.

The Team Observation Protocol instrument appears to offer promise as a tool to measure ID team problem-solving processes and members' quantity of participation in those processes. However, further work is required to establish its accuracy and stability across observers, teams and times. Detailed study of problem-solving processes would require the collection and analysis of sequential data rather than frequency data as was used in this study. Issues in sequential observation research and alternative procedures for establishing reliability and

analyzing such data are discussed by Hollenbeck (in Sackett (ed.), 1978). Observational studies of ID team meetings would be especially useful in testing various components of Hackman and Morris' proposed theory of group effectiveness.

Much has been written about professional roles on ID teams, especially the role of the team leader. On the surface, social workers might be considered a likely choice for the leadership of teams in settings where patient problems get defined as psychosocial, habilitative, or as resource needs. However, present knowledge (Heilman, 1975) about leadership competencies does not suggest that members of any single professional discipline are inherently better trained or better qualified to perform the ID team leadership role than those in other disciplines. The dearth of interdisciplinary education to prepare people to work in ID teams in healthcare organizations has already been cited. Results from this study corroborate it. The study also supports the contention that leaders' attitudes are critical to the success of OD interventions.

Belbin's longitudinal research (1981) related management team performance effectiveness to balance among team-role behaviors by leaders and members. It offers intriguing possibilities for the study of relations between individual characteristics that serve as group input variables, group roles, and subsequent group performance effectiveness. From his observational studies of the teams' problem-solving Belbin developed a typology of eight team-roles that were assumed by members. From psychometric measures of individuals' intelligence and personality characteristics, he was able to successfully predict what team role(s) they would perform within their group. Subsequent success or failure by the teams was attributed largely to the extent to which all needed team-roles were fulfilled in the group's completion of the management simulation task. His

work included further studies of what special leader behaviors were associated with highly successful groups and with those which clearly failed to perform the task acceptably.

Similar approaches might be fruitful with ID teams. Ultimately, an empirically-based theory could lead to valid selection criteria for ID team leaders and members. These criteria would have important implications for education and training in teamwork skills and knowledge.

The failure of health and human services disciplines and organizations to specify ID team performance effectiveness criteria remains a barrier to valid and generalizable research and theory. Such a barrier can more readily be overcome in carefully designed evaluative studies undertaken for practical purposes.

Woodman and Sherwood's review (1980b) concluded that much team development research suffers from problems in internal and external validity. The present study was no exception. Problems in conducting research in work organizations, problems in measurement of dependent variables, and problems in generalizability were all encountered in this study. Consultative interventions such as team development do not lend themselves well to traditional experimental research designs. They are conducted within a specific organizational context at a particular time. Therefore, generalizability of results is probably of less importance than is an understanding of the variables that have been associated with its implementation processes and its outcomes. In other words, to ask how it happened that we obtained the results we did, is probably a more useful approach to research in organizations, than is the question of how large the differences have to be to reach statistical significance. Newer models for the design of program evaluations (Chronbach, 1982) and process theory approaches to the study

of variables in organizations (Mohr, 1982) appear to offer viable alternatives to experimentation for the study of workgroup effectiveness in organizations.

Integration: Recommendations for Improved Teamwork at the Center

In a final effort to integrate results of the study with known theory and practice of team development, recommendations are offered to the Center for structural changes that support ID teamwork.

1. Establish a vehicle for direct face-to-face communication and problem-solving between senior management group and the entire group of team chairpersons.

2. Teams should be held accountable for specifying regular meeting times and agenda topics for planning and evaluation of unit level group activities.

3. Provide inservice training in group leadership and group problem-solving to all present and prospective ID team leaders, based on establishment of competency requirements and evaluation procedures.

4. The establishment and documentation of competency requirements for the ID team leaders' role, along with evaluation criteria and procedures, would allow for the design of inservice training and consultative activities with present and prospective team leaders. Such a program would assure the organization a supply of trained group leaders. Leaders skilled in both task and process dimensions could be expected to exert positive but indirect effects on member participation. Skilled group leaders in task and process dimensions together with structural changes and a rewards system, could be instrumental in improving the productivity and accountability of standing committees and task forces as well as ID teams.

5. Strengthen the role of designated team chairpersons by involving them in the planning and implementation of programmatic changes and problem-solving at organizational level.

6. Establish goal-setting by all teams on an annual basis. Use those goals as basis for negotiating with chairpersons and establishing team accountability as in #2 above.

7. Continue to maintain and use internal facilitators' team-building skills with individual teams or other workgroups when and where the leader or the team expresses a desire for assistance.

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APPENDIX A

Group Behavior Inventory Materials

Instructions to subjects
Demographic Data Sheet
Questionnaire
Scoring Instructions
Derivation of Standard Coefficients

Group Behavior Inventory

February, 1982

Team & Member Code #: _____

Dear Team Member,

You are being asked to complete the attached questionnaire as part of the team development research and training project, in which the Center is participating. This team is one of several ID teams that will soon be participating in a team development program that will last 8 weeks. This questionnaire information will be used later with other data to evaluate the effectiveness of the team development program.

All of your answers will be kept confidential. Only I will have access to your individual questionnaire responses. I have assigned to you and your team a code number in order that we may compare before and after responses by the same individual. Your responses will not be compared with those of any other person. It is important that your responses do express your candid and honest opinions about your team's functioning. It is also important that I receive a completed questionnaire from every single team member. The questionnaire should take only about 20 minutes of your time now. Please complete the items without consultation from any of your team members or others. Should you need clarification on an item please ask your team's facilitator.

When you have completed the questionnaire, put your team and member code number on the outside of the attached envelope. Place the completed questionnaire in the envelope and return to your team facilitator who will turn it over to me.

Thank you for your cooperation.

Sincerely yours,

Carole Ewart, M.S.
Director of Staff Development
and Training
VA Dept. of Mental Health/
Mental Retardation

May, 1982

Instructions to Team Members 3C, 5A, and 7C:

Many of you responded to this questionnaire first in February, before your team participated in the team development activities. We are asking you to respond now, in terms of your present opinion about your team's present functioning.

Members who answered the questionnaire previously should be sure that your form is identified with the same team and member code number that you had previously. (Your team's facilitator has been supplied with a list of the code numbers in case you forgot yours). You may omit items 4 through 15 on the Demographic Information Sheet, but please respond to all 56 items on the Group Behavior Inventory.

If you did not complete the questionnaire in February, please be sure to complete every item on the Demographic Information Sheet and all 56 items on the Group Behavior Inventory.

Place your completed questionnaire in the attached brown envelope, and write your team and member code number on the outside.

All questionnaires should be turned in to the Training Coordinator by May 31st.

Your Team Facilitators have been instructed to poll all team members to ask how many different ID teams each of you serves, and how long each of you has been employed in your present position, as of May 16, 1982.

If you wish to make any comments to me, please write them on the back of these sheets, or call me at SCATS 786-6133. Rest assured that your responses will be kept confidential.

The Center will receive a report of the research after all data have been collected and analyzed.

You have my appreciation and gratitude for your participation and involvement in this project.

Carole Ewart, Director
Staff Development & Training
Virginia Dept. of Mental Health/
Mental Retardation

pj

Team & Member Code # _____

Date _____

GROUP BEHAVIOR INVENTORY

Think of the recent meetings (staffings and clinicals) of this team which you have attended. The following questions apply to either the meetings or the group which attended these meetings. Please indicate your agreement or disagreement with each statement as follows:

SA - strongly agree
 A - agree
 N - neutral
 D - disagree
 SD - strongly disagree

	<u>SA</u>	<u>A</u>	<u>N</u>	<u>D</u>	<u>SD</u>	
Most material covered in meetings is introduced by the chairperson.	—	—	—	—	—	1.
There is a destructive competitiveness among members of the team.	—	—	—	—	—	2.
Meetings do not come to grips with the real problems.	—	—	—	—	—	3.
The chairperson is oriented toward a "human relations" approach.	—	—	—	—	—	4.
Meetings are primarily a means of information dissemination.	—	—	—	—	—	5.
There is trust and confidence in each other among members of the team.	—	—	—	—	—	6.
Team meetings should be discontinued.	—	—	—	—	—	7.
Team meetings result in creative solutions to problems.	—	—	—	—	—	8.
There is open examination of issues and problems at team meetings.	—	—	—	—	—	9.
The group is an effective problem solving team.	—	—	—	—	—	10.
Divergent ideas are discouraged at team meetings.	—	—	—	—	—	11.
I expect decisions on important matters to be made at team meetings.	—	—	—	—	—	12.

	<u>SA</u>	<u>A</u>	<u>N</u>	<u>D</u>	<u>SD</u>	
The chairperson is oriented toward production and efficiency.	—	—	—	—	—	13.
Meetings do not formulate future policy.	—	—	—	—	—	14.
Members are more intent on satisfying the chairperson than in optimizing the potential output of the group.	—	—	—	—	—	15.
The team should have an "expert" on hand to settle certain questions.	—	—	—	—	—	16.
Meetings are not effective in discussing mutual problems.	—	—	—	—	—	17.
There are too many personal opinions raised at meetings, as opposed to the team's point of view.	—	—	—	—	—	18.
Conflict within the team is submerged, rather than used constructively.	—	—	—	—	—	19.
I expect little from team meetings.	—	—	—	—	—	20.
The chairperson offers new approaches to problems at meetings.	—	—	—	—	—	21.
Team meetings should be continued.	—	—	—	—	—	22.
The policies under which the team works are clear cut.	—	—	—	—	—	23.

Using the same agreement-disagreement scale, mark the following statements as you would describe other members at team meetings.

	<u>SA</u>	<u>A</u>	<u>N</u>	<u>D</u>	<u>SD</u>	
Others assume responsibility for setting group goals.	—	—	—	—	—	24.
Others submit to the chairperson when disagreements arise.	—	—	—	—	—	25.
Others are reluctant to sacrifice ideas so that team may agree.	—	—	—	—	—	26.
Others act the role that is expected of them.	—	—	—	—	—	27.
Others feel at ease when talking with the chairperson.	—	—	—	—	—	28.
Others behavior does not reflect their true feelings.	—	—	—	—	—	29.
Others are reluctant in pushing their ideas.	—	—	—	—	—	30.
Others can approach the chairperson with ease.	—	—	—	—	—	31.
Others have influence with the chairperson.	—	—	—	—	—	32.
Others withdraw from involvement with the chairperson when disagreements arise.	—	—	—	—	—	33.
Others accept influence from other team members.	—	—	—	—	—	34.

Using the same agreement-disagreement scale, mark the following statements as you would describe your own role at the team meetings.

	<u>SA</u>	<u>A</u>	<u>N</u>	<u>D</u>	<u>SD</u>	
I assume responsibility for setting team goals.	—	—	—	—	—	35.
I submit to the chairperson when disagreements arise.	—	—	—	—	—	36.
I feel at ease when talking with the chairperson.	—	—	—	—	—	37.
I rebel against the chairperson when disagreements arise.	—	—	—	—	—	38.
I am reluctant in pushing my ideas.	—	—	—	—	—	39.
I want to actively participate in meetings.	—	—	—	—	—	40.
I can approach the chairperson with ease.	—	—	—	—	—	41.
I have influence with the chairperson.	—	—	—	—	—	42.
I withdraw from involvement with chairperson when disagreements arise.	—	—	—	—	—	43.
I accept influence from other team members.	—	—	—	—	—	44.

In the next section, you are asked to judge the meaning of the concept "Team Meeting" as it relates to the meetings of your team in terms of each of the seven scales beneath it. Check only one blank for each of the seven scales so that it best describes the meaning of the concept: "My Team's Meetings."

MY TEAM MEETINGS

good	— : — : — : — : — : — : —	bad	45.
weak	— : — : — : — : — : — : —	strong	46.
active	— : — : — : — : — : — : —	passive	47.
unpleasant	— : — : — : — : — : — : —	pleasant	48.
deep	— : — : — : — : — : — : —	shallow	49.
relaxed	— : — : — : — : — : — : —	tense	50.
valuable	— : — : — : — : — : — : —	worthless	51.

Please fill in the blanks below:

I submitted ____ topics for the agenda for the last meeting of this team that I attended. 52.

I have attended approximately ____ meetings of this team during the past 12 months. 53.

I estimate that the chairperson talked about ____% of the time during the last meeting of this team I attended. 54.

I estimate that I talked about ____% of the time during the last meeting of this team. 55.

The problem areas which need discussion at the next meeting of this team are: 56.

a.

b.

c.

c. don't know

I completed this questionnaire in February, 1982 before this team participated in team development (check one) ____ Yes ____ No

pj

Carole Ewart, Director
Staff Development & Training
VA Dept. of Mental Health/
Mental Retardation

GROUP BEHAVIOR INVENTORY SCORING INSTRUCTIONS

Factor I. Group Effectiveness

- | | |
|-------------------------------------|--------|
| 3. Meetings do not come... | (6-x)= |
| 8. Group meetings result in... | x= |
| 9. There is open examination... | x= |
| 10. The group is an effective... | x= |
| 14. Meetings do not formulate... | (6-x)= |
| 17. Meetings are not effective... | (6-x)= |
| 20. I expect little from team... | (6-x)= |
| 21. The Chairpersons offers new... | x= |
| 24. Others assume responsibility... | x= |

Sum divided by 9 items =
Factor I score for every
respondent

Factor II. Approach Versus Withdrawal from Leader

- | | |
|------------------------------------|--------|
| 15. Members are more intent on... | (6-x)= |
| 28. Others feel at ease... | x= |
| 29. Others' behavior does not... | (6-x)= |
| 30. Others are reluctant in... | (6-x)= |
| 31. Others can approach the... | x= |
| 33. Others withdraw from... | (6-x)= |
| 37. I feel at ease when... | x= |
| 41. I can approach the chairman... | x= |
| 43. I withdraw from involvement... | (6-x)= |

Sum divided by 9 items =
Factor II score (except for
designated leaders for
whom Factor II deletes
items 37, 41, & 43 and
divides by 6).

Factor III. Mutual Influence

- | | |
|--------------------------------------|----|
| 32. Others have influence with... | x= |
| 34. Others accept influence from... | x= |
| 35. I assume responsibility for... | x= |
| 42. I have influence with the... | x= |
| 44. I accept influence from other... | x= |

Sum divided by 5 items =
Factor III Score (except for
designated leaders for
whom Factor III deletes
item 42 and divides by 4).

Factor IV. Personal Involvement and Participation

- | | | |
|---------------------------------------|-------|--------|
| 7. Group meetings should be... | | (6-x)= |
| 12. I expect decisions on... | | x = |
| 22. Group meetings should be... | | x = |
| 40. I want to actively participate... | | x = |
| 52. (No. of topics submitted).. | a + b | (x)= |
| 53. (No. of meetings attended... | a + b | (x)= |
| 55. % of time I talked... | a + b | (x)= |
| 39. I am reluctant in pushing... | | x = |

$\overline{\text{Sum}}$ divided by 8 items =
Factor IV score

Factor V. Intragroup Trust Versus Intragroup Competitiveness

- | | |
|--|--------|
| 2. There is a destructive competitiveness... | (6-x)= |
| 6. There is trust and confidence in... | x = |
| 18. There are too many personal opinions... | (6-x)= |
| 19. Conflict within the group is submerged... | (6-x)= |
| 26. Others are reluctant to sacrifice ideas... | (6-x)= |

$\overline{\text{Sum}}$ divided by 5 = Factor
V score

Factor VI. General Evaluation of Group Meetings

- | | | |
|----------------------------|-------|--------|
| 45. good.....bad | a + b | (1+X)= |
| 46. weak.....strong | a + b | (9-X)= |
| 47. active.....passive | a + b | (1+X)= |
| 48. unpleasant...pleasant | a + b | (9-X)= |
| 49. deep.....shallow | a + b | (1+X)= |
| 51. valuable.....worthless | a + b | (1+X)= |

$\overline{\text{Sum}}$ divided by 6 = Factor
VI score

Factor VII. Submission to Versus Rebellion Against Leader

- | | |
|--|---------------|
| 23. The policies under which the team... | x = |
| 25. Others submit to the chairman... | x = |
| 36. I submit to the chairman when... | x = |
| 38. I rebel against the chairman... | (6-x) = |
| 50. relaxed.....tense | a + b (1+X) = |

$\overline{\text{Sum}}$ divided by 5 = Factor
VII score (except for
designated leaders for
whom Factor VII deletes
items 36 and 38 and divides
by 3).

Factor VIII. Leader Control

- | | |
|---|--------|
| 1. Most material covered in meeting is... | x= |
| 5. Meetings are primarily a means of... | x= |
| 16. The team should have an expert... | (6-x)= |
| 50. relaxed.....tense | (1+X)= |
| 54. % of time leader talked... | x= |

$\overline{\text{Sum}}$ divided by 5 = Factor VIII score

Factor IX. Role and Idea Conformity

- | | |
|---|----|
| 4. The chairman is mentioned toward... | x= |
| 11. Divergent ideas are discouraged at... | x= |
| 13. The chairman is oriented toward... | x= |
| 27. Others act the role that is expected... | x= |

$\overline{\text{Sum}}$ divided by 4 = Factor IX score

Note. See "Performance and Interactional Dimensions of Organizational Work Groups," by Frank Friedlander, *Journal of Applied Psychology*, 1966, 50, 257-265.

*These items required linear transformation for which standard coefficients were derived. Obtained values of a and b are presented in Table 3.6, attached. Formulae as used in calculating the coefficients are attached, too.

Steps in Linear Transformations of Certain GBI Scores

Steps and formulas used in derivation of coefficients (a and b values) listed in Table 3.6 for Group Behavior Inventory questionnaire.

1. Sum item means for items 1-44 (the 5 point scale items) for N subjects.
2. Find mean of items means. This is the standard mean.
(In this study, standard mean = 3.6567).
3. Sum item variances for items 1-44 for N subjects.
4. Find mean of item variances for items 1-44. This is the standard variance. In this study, standard variance = .6853).
5. Calculate b^2 . $b^2 = \frac{\text{standard variance}}{\text{item variance}}$
6. $b = \text{square root of } b^2$.
7. Calculate a. $a = \text{standard mean minus } b \text{ (times item mean)}$
In this study $a = 3.6567 - \text{obtained } b \text{ from step \#6 (item mean)}$

then $Y = \text{the transformed score}$. $Y = a + bx$, where $x = \text{the algebraic item score}$ as reported in the data set.

Note. Before any statistical computations were done with the data, the algebraic item scores were reported on a data set sheet. Algebraic item scores are those which follow Friedlander's instructions to use x as is for items worded in a positive direction and to subtract x from an integer if the item has been worded in a negative direction. This step merely changes all items to a positive direction.

APPENDIX B

SAMPLES OF TEAM-GENERATED DOCUMENTS

Nine Item Team Diagnostic Effectiveness Instrument
Team Data Summary Sheet
Performance Goals Monitoring Responsibility Chart
Sample Contract Form
Sample Decision Chart

Note. Forms are reproduced here by permission of the Copyright holder, Situation Management Systems, Inc.

"Why We are Here"**Scale 1**

Statement I: I often wonder what the basic reason is for being here. It seems to me that there are people on the team (maybe even myself) who spend a lot of time and expend a lot of energy doing things that are not consistent with what I think is our main purpose. They downplay or overlook important parts of our total objective or they direct their efforts at things I think aren't very important.

- a. Just like I
- b. More like I than II
- c. In between I and II (circle one)
- d. More like II than I
- e. Just like II

Statement II: The team's basic overall objectives are very clear to me. All of my and everyone else's effort seems directly related to getting these key goals accomplished. Whenever a question arises over what things need to get done, we are able to set priorities by referring back to our basic objectives.

Example(s): In the space below describe one or more examples of team situations that illustrate your response on Scale 1.

"My Job"**Scale 2**

Statement I: Often situations arise on the job where I'm not certain what I'm supposed to do. Frequently I'm not even sure if a situation is my responsibility or someone else's. We never get together to discuss what each individual thinks he or she and the others on the job can or should do to work together to do the best job.

- a. Just like I
- b. More like I than II
- c. In between I and II (circle one)
- d. More like II than I
- e. Just like II

Statement II: In almost every situation I am very sure about what responsibilities I have and about what others on the job are supposed to be doing. These job responsibilities are often discussed by members of the team, particularly when someone has a question about what he or she or someone else should be doing.

Example(s):

Scale 3

Statement I: Different people on the job are always asking me to do different things at the same time. Often these tasks get in the way of each other or there just isn't enough time to meet everyone's demands. My job makes me feel like a juggler with too many balls in the air.

- a. Just like I
- b. More like I than II
- c. In between I and II (circle one)
- d. More like II than I
- e. Just like II

Statement II: I have no trouble doing the different things that the job and other people on the team require of me. I understand why I'm supposed to do the things I do and it all seems to fit together. If I feel as though the demands people on the team make of me are getting too heavy or don't make sense, I resolve the problem by discussing it with them.

Example(s):

"How Things Get Done Around Here"

Scale 4

Statement I: When some people try to participate in a discussion of job issues, they often get cut off or their suggestions seem to die. People only pay attention to some team members and not to others. Some people do most of the talking while others don't participate very much.

- a. Just like I
- b. More like I than II
- c. In between I and II (circle one)
- d. More like II than I
- e. Just like II

Statement II: Everyone gets a chance to express him- or herself and to influence the group in discussions about the job. We listen to every person's contributions and try to discuss the strong points of each. No one is ignored. Everyone is drawn into the discussion.

Example(s):

Scale 5

Statement I: When we sit down to discuss something I usually walk away wondering what we just did and what is supposed to happen next. It often seems as though we never really get anything done. If, as a result of a discussion, I am assigned to do something, I often do not agree with the tasks assigned me. It seems like the same problems keep coming up for discussion even though we thought we had worked them through already.

- a. Just like I
- b. More like I than II
- c. In between I and II (circle one)
- d. More like II than I
- e. Just like II

Statement II: When we have a problem to discuss, I usually understand exactly what the issue is. By the end of the discussion, I usually understand what we have decided to do about it, and what my responsibilities are. Decisions made by this team are carried out effectively by the team members. We seem to get the task done whenever we meet.

Example(s):

Scale 6

Directions: This scale is different from the previous ones. Read all the statements and circle the letter next to the one statement that most closely describes the situation in your team.

When a disagreement arises in the team:

- a. We assume it's probably best not to let it get personal, so we let it pass hoping it will blow over and eventually be forgotten. If feelings start to get ruffled, we try to smooth things over and make the least of the disagreement (e.g., "Well, there is really no point in fighting about it so let's forget it" or "We're all grown-ups, we shouldn't argue").
- b. Often we end the disagreement when someone on the team takes charge and makes a decision, or decides not to discuss it any further.
- c. We try to come to an agreement somewhere between the two disagreeing positions. In other words, we compromise. That way everyone gets a little and everyone gives a little and the disagreement is taken care of.
- d. We get the disagreeing parties together and have them talk through their points of view until each party can see some logic in the other's ideas. Then we try to come to an agreement that makes sense to everyone.

Example(s):

"What It Feels Like to Work Around Here"**Scale 7**

Statement I: I often get the feeling that some people on the team don't think that some other people on the team have much of a contribution to make. Some people don't pay much attention to the problems or suggestions of others. People are often taken for granted.

- a. Just like I
- b. More like I than II
- c. In between I and II (circle one)
- d. More like II than I
- e. Just like II

Statement II: Everyone recognizes that the job could not be done without the cooperation and contribution of everyone else. Each person, including myself, is treated as an important part of the team. When you bring up an idea or a problem, people sit up and take notice. It makes you feel that you and your job are important.

Example(s):

Scale 8

Statement I: This job really gets me down. People do not seem concerned with helping each other get the job done. Everyone is pulling in opposite directions; everyone is out for himself. If you try to do something different, you get jumped on by people for being out of line. If you make a mistake, you never hear the end of it.

- a. Just like I
- b. More like I than II
- c. In between I and II (circle one)
- d. More like II than I
- e. Just like II

Statement II: I really like my job, and I like working with this team. The team encourages you to take responsibility. You feel really appreciated by the other members of the team when you do a good job. When things aren't going well, people really make an effort to help each other. We really pull together on this team.

Example(s):

Scale 9

Statement I: I often feel as though a lot of my energy has been wasted. Many of the things I have to do seem like unnecessary expenditures of time and energy that could be done more efficiently. I often wish we could get it together better.

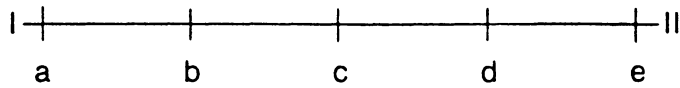
- a. Just like I
- b. More like I than II
- c. In between I and II (circle one)
- d. More like II than I
- e. Just like II

Statement II: I usually have a feeling of accomplishment and satisfaction. Even when I am tired, I know my time and energy have been well spent. I am able to devote myself to getting the job done with a minimum of hassle. We all know our jobs and work together efficiently to get them done.

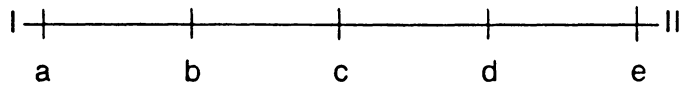
Example(s):

INDIVIDUAL DATA SUMMARY SHEET
Scale

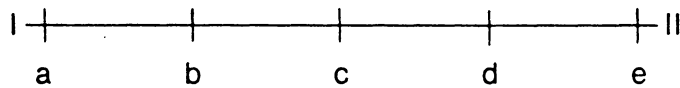
1. Goal clarity
and conflict



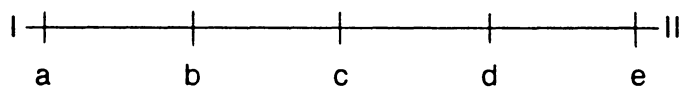
2. Role clarity



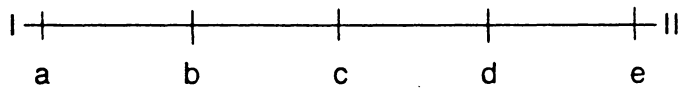
3. Role conflict



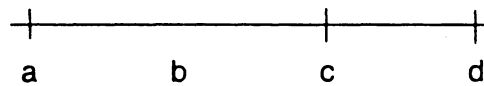
4. Participation/
influence



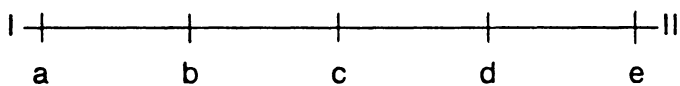
5. Meeting effective-
ness/follow-up



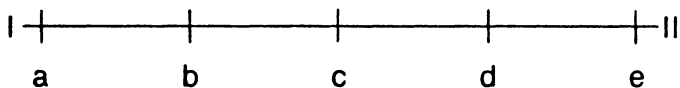
6. Conflict
management



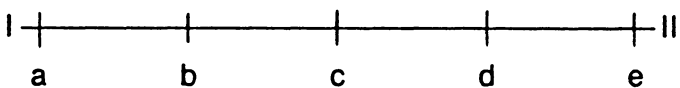
7. Recognition/
involvement



8. Support/
cohesiveness



9. Energy



PERFORMANCE GOALS MONITORING RESPONSIBILITY CHART

PERFORMANCE GOALS FOR
WHICH MONITORING RE-
SPONSIBILITY MUST BE
ASSIGNED
(INCLUDE TARGET
COMPLETION DATE.)

KEY PERSONS TO BE INVOLVED

PROGRESS
REPORT
DATES

Reminder: You must have one team member with an M for each goal listed on the left-hand column, and you must set a date for reporting progress on the goal. Other team members who have responsibility for collecting data, or reviewing progress should also be indicated on the chart. Use whatever abbreviations or letters you want to indicate responsibilities (e.g., M = manager; P = performance goal setter; S = evaluation strategy planner; DC = data collector; E = progress evaluator; etc.).

SAMPLE CONTRACT FORM**A.**

Problem Definition**B.**

(Your Name) Agrees to Do**C.**

Persons B, C, etc. (Their Names) Agree to Do**D.**

_____ Date for Checking Back and Evaluating the Contract

SAMPLE DECISION CHART

WHAT NEEDS TO BE DONE:
SPECIFIC DECISIONS
TO BE MADE

THOSE WHO SHOULD BE INVOLVED
IN THE DECISION-MAKING PROCESS

	*													

*Types of involvement:

- D: directly involved in making the decision
- C: consulted before the decision was made
- I: informed about the decision after it was made
- M: manages the process; in charge of checking when things get done

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AN EVALUATIVE STUDY OF A HEALTH TEAM DEVELOPMENT
INTERVENTION IN A STATE MENTAL RETARDATION TRAINING CENTER

by

Carole VonKamp Ewart

A one sample pre-post design was used simultaneously with three work groups to study the effects of a health team development intervention on interdisciplinary (ID) team processes. Effects were measured by participant questionnaires, managerial diagnostic and follow-up interviews, and by direct observation of team meetings. The intervention, as conducted by internal facilitators, was published in Improving the Coordination of Care: A Program for Health Team Development by Rubin, Plovnick, and Fry. Positive changes were found in members' perceptions of their team's general effectiveness, their leader's approachability, and the value of their meetings. No changes were found in member participation and influence, however, when pre-post differences were compared using the Dunn-Bonferroni approach to multiple t-tests on nine Mean Factor Difference Scores of the Group Behavior Inventory. Structured observation data showed increases in proportional frequencies of Interpretative statements, Alternatives suggested, and Decisions made during teams' meetings. Questions asked and Information given categories on the Team Observation Protocol data showed decreases. No change occurred on the two seldom-used categories, affective statements about Client and Team. Pre-intervention diagnostic interviews had shown that senior management's and team facilitators' expectations were congruent with the goals, roles and procedural areas targeted for change by the team development program. However, Follow-up interviews

corroborated prior organization development research. That is, a comprehensive organizational diagnosis of teamwork problems was needed prior to the selection and implementation of team development with ID teams. Especially sensitive areas for management-consultant negotiation in future efforts to implement HTD should include the use of internal or external third party facilitators, the selection of teams, role of team leaders, and the adaptation of materials and activities to suit ID team tasks. Where conflict exists between senior management and team leaders, other interventions may be needed before team development can be expected to affect positively, ID team members' participation and involvement. Recommendations were made for structural changes to strengthen ID teamwork at the training center. The absence of an empirically-derived theory of ID team performance effectiveness continues to be a barrier to the demonstration of intervention effects and to education for teamwork. Research is needed to describe empirically relations between problem-solving processes in ID team meetings and treatment decisions. Research is also needed to delineate team-role competencies required by members and leaders as prerequisites to establishing indicators of ID team performance effectiveness.