

Measuring the Perceptions
of Staff and Patients of the Treatment Environment
of a Psychiatric In-patient Unit

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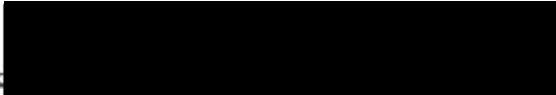
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A Clinical Investigation

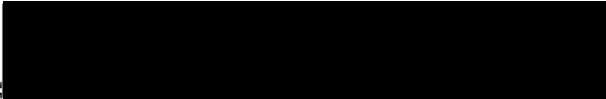
Presented to
The Oregon Health Sciences University
School of Nursing
in partial fulfillment
of the requirements for the degree of
Master of Science

June 13, 1986

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This project was supported by a traineeship
from the National Institute of Mental Health

Grant Number 5 T01 MH17172-02

ACKNOWLEDGMENTS

I gratefully acknowledge the support and encouragement of:

Jo Horsley, my advisor, who helped me understand what I could accomplish, and who gave meaning to the idea of the scientific process. Also, Virginia Tilden and Sarah Porter-Tibbetts, my committee members, who offered invaluable advice throughout the project. I appreciate the time and effort my committee gave to this project.

The professional staff of the unit, who assisted and encouraged me in many ways. I particularly wish to thank the nursing staff. The interest of the staff helped sustain my enthusiasm for this project. Also the patients, who gave the project its reason for being.

And finally, Mark Elliott, whose humor makes everything more enjoyable and whose support made the project possible.

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CHAPTER I

Introduction

The recognition and understanding of the important relationship between an individual's behavior and his or her external environment has had a far-reaching impact on society as a whole. For example, architectural design is believed to be important in the amount of safety and security high-rise apartment dwellers perceive in their environments. In educational programming as well, the physical and social environment created for students is known to play a crucial role in their interest and achievement in school (Barker, 1968). Similarly, in the field of mental health, the understanding of the psychiatric hospital environment as a therapeutic entity has led to many changes in program design.

After its introduction into the mental health literature and practice over 30 years ago, the concept of a therapeutic milieu was hailed as a promising treatment for mental illness. The notion was advanced by Maxwell Jones (1953) that the effects of a supportive and carefully structured hospital environment could help chronically hospitalized patients return to society. Widespread and concerted efforts were made to improve the basic hospital program, and the concept of the environment began to be

considered as part of the therapy. It became well understood that the causes of mental illness, and the subsequent degree of recovery, do not rest solely in the individual, but also in the way an individual interacts with his or her external environment. Humans perceive qualitative differences in environments, and these perceptions of the environment tend to influence behavior (Barker, 1968).

Treatment philosophies and practices have changed a great deal in the 30 years since the ideas of therapeutic environments were developed. The average length of hospitalization is considerably shorter than previously. The trend is toward several briefer hospital stays rather than one extended hospitalization for persons with a chronic mental disorder (Lamb and Peele, 1984). Patient populations tend to be heterogeneous, and patients with a variety of clinical problems may be treated in the same in-patient setting.

The understanding and management of the environment for the benefit of patients has long been of interest to nurses, and this goal remains a major focus of nursing activities (Fawcett, 1984). Mental health nurses have a primary role in creating and maintaining the treatment environment, and will continue to be involved in this aspect of the care of

their patients (Devine, 1981). Further, the structuring and maintenance of a therapeutic environment for clients is identified as a basic standard of mental health nursing practice (ANA, 1982).

The human perception of the qualities of the environment influences behavior that occurs in that environment. Therefore, one question that faces nurses and others involved in planning and maintaining a hospital program is how patients and staff perceive the environment. This project is based on one approach to measuring patient and staff perceptions of an in-patient psychiatric hospital environment.

Review of the Literature

A considerable body of literature addresses various perspectives regarding the assessment and analysis of treatment environments. Some researchers have measured the levels of patient satisfaction with the types of treatment offered, and then used these assessments to plan and develop programs (Lehman and Zastowny, 1983). Others have examined how closely a particular environment approximates the qualities of a "standard" treatment approach as an indication of the program's success (Skodol, Plutchik & Karasu, 1980). These investigators

examined how the milieu that patients actually experienced contrasted with their pre-hospital expectations of the milieu. Other investigators have used an approach that measures how patients and staff perceive the environment created by staff characteristics, behavior and attitudes (Ellsworth et al., 1971).

For the purpose of this review, the work that has developed from an approach to the study and assessment of treatment environments described by Moos and his associates (1974) will be examined. In general, these studies are based on the framework of social ecology, which examines the effects of the environment on human functioning. The social ecological approach does not advocate for the efficacy of any single treatment philosophy, but rather seeks to identify the characteristics of the environment that are associated with specific human behaviors.

According to Friedman, Jeger and Slotnik (1982), assessments evolving from the social ecological perspective have been of three major types: (1) measuring the process of treatment (2) assessing and comparing the outcomes of various treatment modalities, and (3) serving as a catalyst for planned change on psychiatric units, thereby linking process and outcome. This discussion will focus on the third aspect of assessment of ward atmosphere.

By 1972, investigators began describing efforts to track planned changes in psychiatric treatment settings through the assessment of the social environment (Pierce, Trickett & Moos, 1972). They used the Ward Atmosphere Scale (WAS), an instrument for assessing the climate or atmosphere of in-patient units developed earlier and reported by Moos, et al. (1974b). These investigators demonstrated that, over time, specific characteristics of a ward's atmosphere can change in ways that can be systematically measured. They used the WAS to identify dimensions of the environment in which change had been perceived after a program development plan was instituted. Because of the study design, the cause of these changes in perceptions could not be directly attributed to the ongoing program development. However, these researchers found that the discussion between staff members stimulated by the results of the study was useful in clarifying ward issues.

Verinis and Flaherty (1978) used the WAS to measure differences between staff's and patients' perceptions of what an ideal therapeutic environment should offer and what was present in their own setting. Verinis and Flaherty utilized the study results to catalyze staff discussions about treatment philosophy. They found that readmission rates for patients dropped from 39% before the study to 20% afterward. The researchers noted a slight increase in length of hospital stay

during the study period. They suggested that these findings might indicate that more intensive or effective treatment was occurring. While it was difficult to attribute the cause of changes perceived in ward atmosphere and readmission rates directly to the staffs' planned program interventions, these researchers believed that the method was helpful in identifying specific areas for program change. These authors, as well as Friedman, et al. (1982), described the relative efficiency of the WAS in tapping key points for staff discussion regarding the treatment environment.

Friedman, et al. (1982) built on this methodology of assessing treatment environments as a basis for program development, and also found the methodology particularly useful. They administered the WAS to patients and staff on three wards of an inner-city hospital. These investigators found discrepancies in the ways staff and patients viewed the same treatment environment, with staff often perceiving the environment more positively. They then held discussions regarding the implications of the findings with each group of staff. They reported that the staff suggested possible program-level interventions, aimed at increasing communication between patients and staff. The observation that staff and patients often perceive the environment differently had been made earlier

(Moos & Bromet, 1978). They suggested that those who hold more control in an environment tend to view it in a more positive light.

Following up on the studies identifying discrepancies between staff and patient perceptions of the same treatment environment, Archer and Amuso (1980) demonstrated a new use of the Moos scale. They asked staff to predict how a typical patient would respond to the questionnaire, and compared the results with actual patient responses. They found that staff often over-emphasized the differences in perceptions between staff and patients. More specifically, the staff predicted that patients would view the environment as less supportive than was the actual case. In their conclusions, Archer and Amuso pointed out that agreement in staff and patient perceptions of the environment may not be a necessary prerequisite for effective treatment. They stated that it may be more important for clinical staff to accurately predict and understand clients' perceptions of the basic aspects of the treatment environment. Their results are not immediately generalizable because of limitations in the study design. However, the notion that staff may tend to misinterpret patients' perceptions of the treatment environment, and then base program decisions on these perceptions, is worthy of further study.

Another potentially fruitful area of social ecological study is the notion of comparing treatment outcomes for patients who receive therapy in differing ward environments. Klass, Grove, and Strizich (1977) examined the relationship between ward atmosphere characteristics and length of time spent out of the hospital. They found that the chronic schizophrenic patients who were treated in environments that emphasized order and organization had longer community tenure than did patients who were treated in environments stressing the expression of anger and aggression. In a review of studies comparing program characteristics with various patient outcomes, Finney and Moos (1984) noted that several trends emerged. Overall, disorganized and disturbed clients tended to have better outcomes in terms of length of community tenure when treated in programs that emphasized structure and impulse control. In contrast, less seriously disturbed patients had better outcomes in programs that stressed communication and problem solving. These findings underline the difficulties experienced by staff and administrators who must often plan in-patient programs to serve heterogeneous patient populations in the same environment. The current literature does not identify specific environmental

characteristics appropriate for such diverse patient groups. However, staff may find information regarding the patients' perceptions of their own particular environment to be useful.

Moos (1973) described the conditions under which environmental assessments were most likely to have practical clinical application. He found that the methodology probably best facilitates social change when used with relatively small groups, most of whose members interact directly with one another. Also, the factors assessed by this methodology are often under the "local control" of the staff who participate in the study. In other words, it makes sense for nursing and other treatment staff to hold discussions about the degree of emphasis placed on concepts such as involvement, support, and program clarity because these staff persons have a direct influence on these aspects of the treatment program.

Moos pointed out (1973) that an inherent value in applied environmental research is that it stimulates adaptive staff behaviors such as coping and problem-solving. He described the methodology as being consonant with an "individual's active need for involvement, for efficacy, and for the prediction and control of his own environment" (p.591). Further, the use

of the research process in a practically applied way may stimulate the increased use of research findings, and generate ideas regarding future research through staff involvement in the process.

The process outlined above of gathering and making use of survey data for the purpose of organizational development has been described as a useful technique in the literature on organizational change. Bowers and Franklin (1975) developed a model for organizational change that is based on systems theory. Theirs is a goal-oriented model, in which a change agent enters an organization, and systematically collects survey-generated data on the agency's perceived needs, or other staff or management issues. This survey information is then offered to management and staff in feedback sessions for their use in developing goals for the organization. Changes in organizational or program structure are then initiated, based on the outcome of the surveys. The entire process can be undertaken again once the changes are in place.

In conclusion, the current literature promotes the assessment of in-patient ward atmosphere for several reasons. Feedback of the assessment data to staff may assist them in clarifying the issues regarding the way patients experience the environment of the unit. Also,

the process of discussing the dimensions of the ward atmosphere may facilitate program planning decisions, and may assist in identifying areas where program changes might be beneficial.

Conceptual Framework

An approach to examination of human environments, described by Moos (1974a) and Jackson (1969), that rests on the framework of social ecology, was the theoretical basis of this project. Social ecology is primarily concerned with the assessment and structuring of human environments. Social ecology is multidisciplinary in nature, and draws from the fields of psychiatry, psychology, epidemiology and sociology. The focus of social ecology is on human adaptation and organizational change in relation to environmental variables (Moos, 1974a). Some social ecological inquiry has sought to identify factors in the environment that may elicit or inhibit certain kinds of human behavior (Moos, 1974a). For example, evidence suggests that individuals behave differently in hot, crowded settings, where they are more likely to display aggression, than in cooler, less crowded environments.

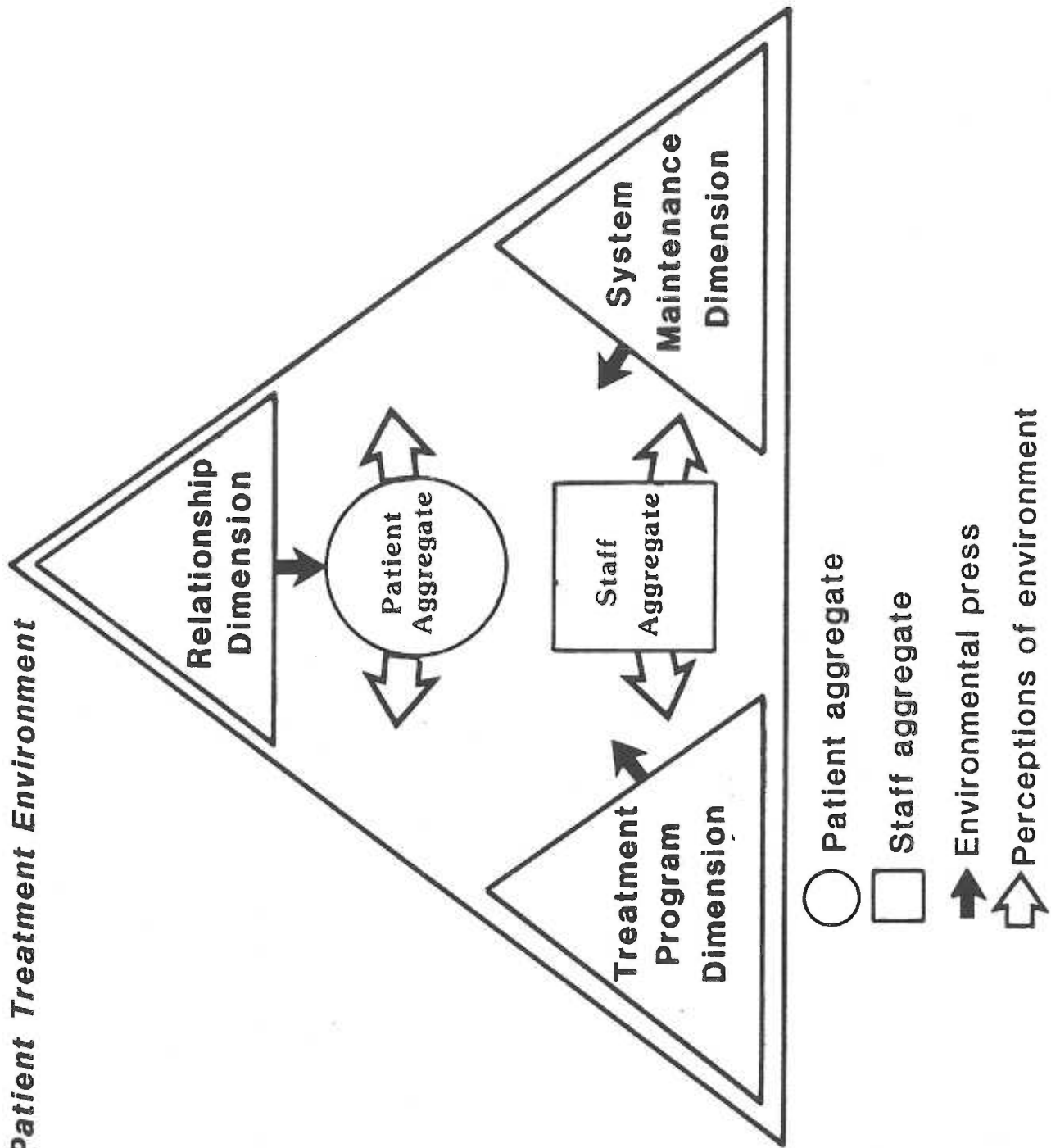
Different human environments have different "personalities". The personality of an environment can be understood as those aspects that may exert an influence on persons who function within the environment. These observations have led to the development of the concept of environmental press, the perceived expectations for behavior required by differing social environments. In

other words, "press" is the kind and amount of behavior characteristically demanded by the environment as perceived by the individuals in it (Barker, 1968). For example, classrooms typically have an environmental press toward reading, writing, and answering questions. All environments have a press of some kind, but the type and intensity vary from setting to setting.

A therapeutic hospital environment might be defined as one that exerts a press toward rational behavior, self-control, mastery of independent living skills, acceptance of self, or whatever outcomes are the goal of the treatment program. For the purpose of this project, however, it is assumed that there is no single optimal treatment environment that will serve a heterogeneous patient population. Differing types of environmental press may produce desired outcomes for patients. It is assumed that there is clinical utility in identifying and describing the nature of the environment as it is perceived and experienced by patients and staff.

The relationships between concepts examined in this project are depicted in Figure 1. In this model, there are three major dimensions of a treatment environment; the Relationship Dimension, the Treatment Program Dimension and the System Maintenance Dimension. A basic assumption of the model is that the type and quality of environmental

Figure 1. In-Patient Treatment Environment



press of these dimensions in any given setting can be perceived and measured. These dimensions were developed through an inductive approach to environmental conceptualization described by Moos and his associates (1974b). These researchers read popular and professional literature about psychiatric hospitals, and conducted numerous qualitative interviews with patients and staff. From this pool of observations, they developed and tested a 206 item questionnaire to assess the characteristics of the in-patient ward atmosphere. It appeared that these dimensions may vary independently of each other in a given environment. This assumption was empirically tested and substantiated by Moos (1974b).

Environmental Dimensions

The Relationship Dimension assesses the extent to which individuals are involved in the environment, and the extent to which they support and help each other. An important aspect of this dimension is the extent and quality of the relationships between the patients themselves. Some treatment philosophies emphasize socialization between patients, while others emphasize interactions between treatment staff and patients.

The Treatment Program Dimension addresses the extent to which persons perceive that they are being encouraged to regain functioning. A treatment environment for a

psychiatric patient can be understood as analogous to an orthopedic cast for a patient with a fractured femur (Black, 1972). In other words, the in-patient treatment environment is a therapeutic tool, and exists to provide external structure and support for a patient until he or she regains or stabilizes functioning.

The System Maintenance Dimension involves the structural, organizational and administrative aspects of the program. This dimension can be conceptualized as the amount of press in a given environment toward its stability and homeostasis or toward change. Every program has organizational qualities and systems, either implicit or explicit, that tend to be repeated. These aspects contribute to the overall picture of the environment.

The model (Figure 1) is probably not inclusive of all possible dimensions of a ward environment. Undoubtedly there are factors of an environment, not described by these dimensions, that may exert a press toward certain behavior. For example, the characteristics of one particular patient, or of a recent event, may exert an influence on the environment. However, it is assumed that at any given time, the amount of "gray area", or environmental press not included in this model, will be small in comparison to the three identified dimensions. These issues will be discussed further in the section

describing the measurement instrument.

The environmental press is depicted in Figure 1 by the heavy arrow leading from the dimensions under study toward the patient and staff aggregates. The specific behaviors that may be influenced by the environmental press are not directly represented in this model. Rather, the unit of measurement is the human perception of these environmental variables. The perceptions of the environment are depicted by the lighter arrow from the patient and staff aggregates toward the dimensions of the environment.

Moos (1974) identified several basic assumptions on which the work of social ecology relies. These were:

1. Human behavior must be examined and understood in the context in which it occurs.

2. Physical and social environments are interactive and must be considered together. For example, both staffing characteristics and treatment philosophy can significantly affect patient and staff behavior. Similarly, behavior exhibited by patients plays a part in the development of treatment philosophies.

3. Social ecology is a value-based study, and seeks to gather and utilize knowledge for the enhancement of human functioning.

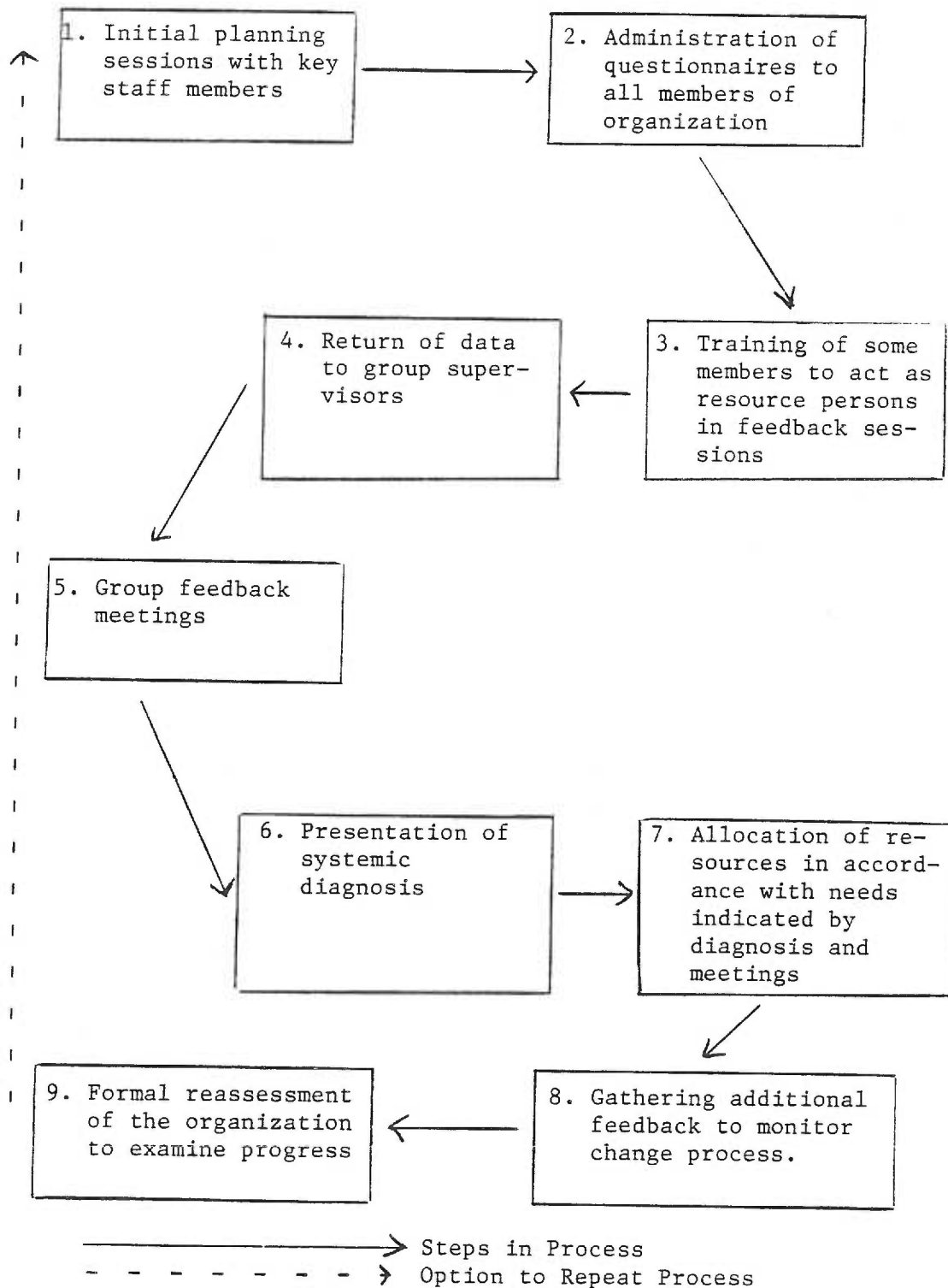
Organizational Change

The notion of change within organizations underlies the framework of this project. Over time, change within any organization is inevitable. Social, political and economic forces outside and within a hospital require adaptation of the administrative structure and of individual staff members. These factors are outside the scope of the study, and are not addressed in any systematic way.

Another kind of change experienced by organizations is planned, intentional change carried out to achieve a specified goal. The literature supports the contention that this type of change is a possible result of the process of using data feedback, which in this case involves assessing the treatment environment and providing the staff with the results of the assessment. While change in the program goals or in the treatment environment itself is not a goal of the project, it is a possible outcome. As such, organizational change must be considered conceptually.

Bowers and Franklin (1976) developed a generic approach to the use of survey generated data in organizations. An illustration of the Bowers and Franklin model is found in Figure 2 and explains the process of using survey data to initiate development in organizations. This is a systems-based model, where an

Figure 2. Bowers and Franklin Model of Survey Guided Organizational Development.

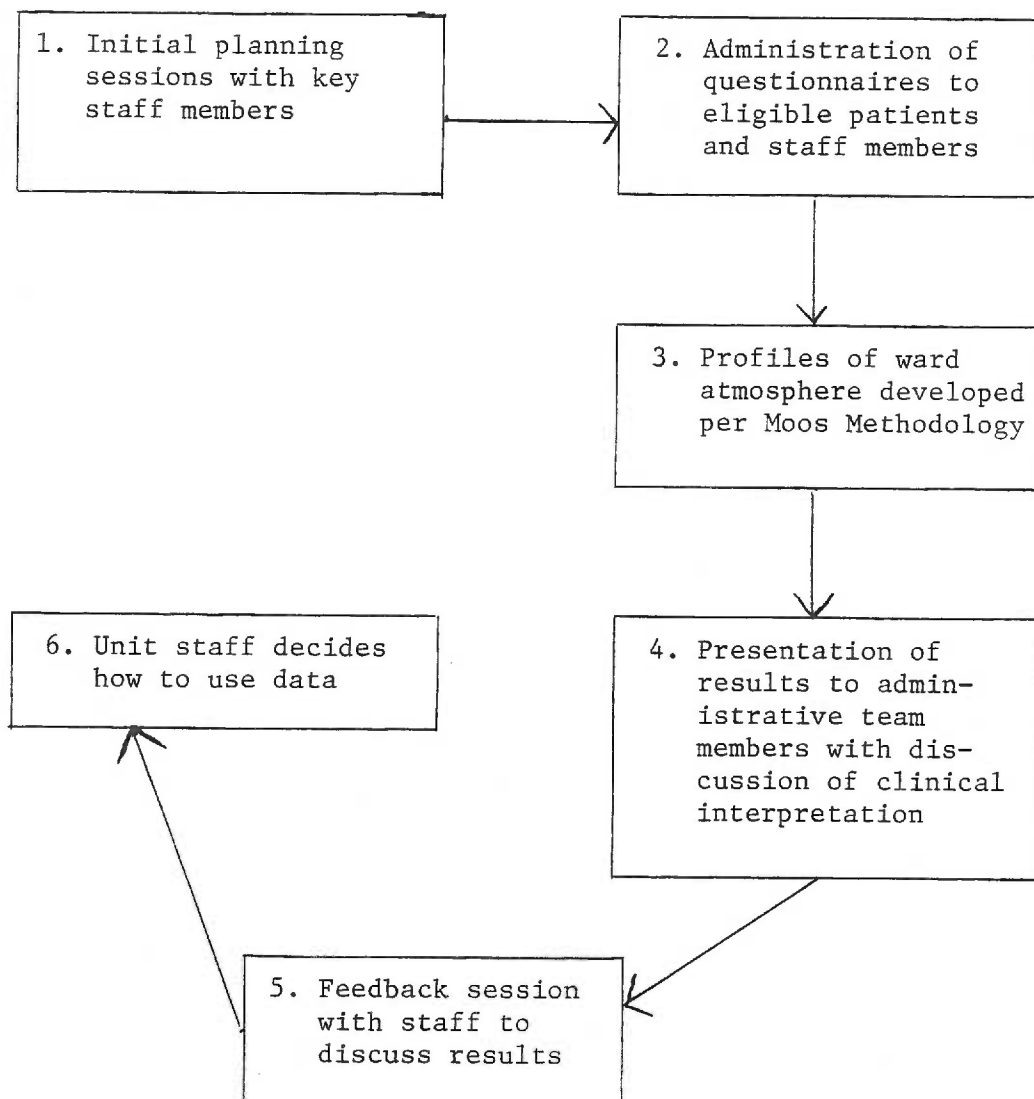


identified change agent collects survey data regarding organizational needs. The change agent then organizes the survey results into the form of a diagnosis regarding agency or program needs and offers this information as constructive feedback to management and line staff.

The portions of the Bowers and Franklin model that apply to the proposed project are depicted in Figure 3. The goal in this project was to systematically collect and provide potentially useful survey-generated information to the staff. The process of discussing the survey findings with staff members acts as a stimulus that may result in program change. For example, the survey data may be used as a basis from which to decide whether or not to institute changes in the treatment environment. However, such outcomes were not a requirement of this project.

The role of the investigator in this project was slightly different from that of a traditional researcher. In most scientific research, the focus is on building theory, testing interventions, or searching for relationships between factors. The investigator's role in this project was to systematically gather, organize, and make available for staff the survey data regarding the nature of the treatment environment. Bowers and Franklin (1976), using a systems approach, conceptualized this aspect of the investigator's role as that of a

Figure 3. Adaptation of Bowers and Franklin Model for Use in Environmental Assessment.



"transducer" of scientifically generated information for use by the organization.

In summary, the meaning of human behavior must be understood in the context in which it occurs. The environmental climate exerts a directional influence on human behavior, and improved functioning on the part of patients is one purpose of the structured hospital environment. Persons act within the confines of a specific environment at any point in time, and their behavior is shaped and directed in part by their perceptions of that environment. These perceptions can be measured, and this information may be useful to those who hold responsibility for shaping the quality of a particular environment.

Purpose of the Project

The purpose of the project was to provide environmental assessment data to the staff responsible for planning and structuring the treatment environment of an in-patient unit. The goal was to systematically collect and analyze the perceptions of patients and staff regarding the environment, and then return this information to the treatment and administrative staff of that in-patient unit.

The specific questions addressed by this project

were: How do staff and patients characterize the nature of the treatment environment? What are the similarities and what are the differences in the way staff and patients view the same treatment environment? How do the perceptions of the staff and patients of the particular environment differ from observed norms?

The characteristics of a particular treatment environment were assessed with respect to specific dimensions. Understanding how both staff and patients perceive and experience the treatment environment may allow staff to assess the need for and rationally plan and institute changes, if any are needed, in that environment.

The treatment environment was broadly defined as the atmosphere on the in-patient setting in which the patient receives therapy. It is a multi-dimensional concept, and includes aspects of the ward, as perceived by staff and patients, such as the interactional and behavioral patterns of staff and patients, the organizational climate and structure, and expectations for patient involvement and activity.

CHAPTER II

Methodology

This section describes the design of the project, as well as the rationale for the choice of the measurement instrument. The setting is described, and the criteria for patient and staff inclusion in the sample is presented. This section also addresses the data collection procedures used, including the safeguards for protection of human subjects.

Design

The focus of this project was the ward atmosphere as a whole. The design was therefore analogous to an individual case study, since one particular environment was the focus of analysis. Data collection was of a one-time, cross-sectional nature.

The design differed from both formal evaluation procedures and measures of patient satisfaction in both its intent and focus. The purpose was to identify and describe the unique "personality" of a particular environment, rather than to rate the ward against an ideal measure. Because of the nature of the project, external validity, or generalization of the findings to other samples, was not an identified goal. Issues of internal validity were critical to the project and are discussed below.

Several considerations pointed toward the choice of a descriptive rather than an evaluative focus. First, on satisfaction scales, patients tend to rate their treatment experiences positively, and therefore these scales may not reveal much distinction between programs (Lehman & Zastowny, 1983). Second, the evaluative aspects of patient satisfaction scales may tend to put staff in a more defensive stance toward receiving feedback about the environment. Third, the multidimensional profile obtained from this study was intended to provide a more comprehensive picture of the ward environment than do measures of a single aspect of the ward experience, such as patient satisfaction.

Data Collection Instrument

Several instruments were available for the purpose of assessing the characteristics of a particular treatment environment. Two instruments that focused on the more objective aspects of the environment were the Ward Atmosphere Scale (Moos, 1974b) and the Characteristics of a Treatment Environment (Jackson, 1969). These two instruments share some commonalities, in that they both purport to measure the social and treatment environment as it actually exists in a setting. Some measures and techniques focus on what patients expect from the hospital milieu prior to hospitalization, while others address the

benefits patients derive from aspects of their treatment. The Moos and Jackson scales attempt to quantify specific dimensions of the treatment setting, treating the environment itself as the unit of analysis.

The Ward Atmosphere Scale (WAS) is a questionnaire developed by R. H. Moos and his associates to analyze treatment settings. It has been used extensively over a wide variety of treatment programs, both in methodological and experimental designs, as well as for descriptive and evaluation purposes. The format is a printed, reuseable booklet containing 100 items in the form of true/false statements about the ward. It is given as a paper and pencil test and takes approximately 15-20 minutes to complete. Some items are negatively worded to minimize the effects of extreme response set and social desirability biases.

Jackson's Characteristics of a Treatment Environment (CTE) scale is a 72 item questionnaire consisting of statements which the subject is asked to rate as true or false. Each item is followed by a linear scale ranging from 0% to 100%, and the subject circles the amount of truth he feels there is in each statement. The CTE has five separate subscales, reported to be orthogonal scales, in that they are independent and do not necessarily vary together in a given profile. The CTE measure is reported

to be reliable, although no specific estimates are given (Jackson, 1969).

Both the WAS and the CTE have seen wide usage, and are apparently reliable, efficient and sensitive to actual differences between wards. Both instruments are long enough to give some depth and breadth of data, and not so long as to be unwieldy for patients and staff. The format of the WAS appears to be more practical from a clinical perspective. Patients would likely be more able to respond to the simple true-false format of the WAS than the somewhat more complex percentage scale of the CTE. The WAS may also allow for more in-depth analysis of a particular environment, since it measures 10 concepts compared with five measured by the CTE. The WAS has more published normative data available. The profile of the characteristics of the ward atmosphere make a useful visual display during discussion sessions. For these reasons, the WAS was selected as the instrument for this project. The WAS is included as Appendix C.

The rationale used in developing the WAS is that a consensus of individual perceptions characterizing an environment constitutes a measure of the social climate of that environment (Moos, 1974b). The measure relies on the assumptions discussed previously concerning social ecology. In addition, the WAS is based on the notion that

the dimensions that shape the atmosphere of a ward are not simply a reflection of staff philosophy but are influenced also by other factors such as the nature of the patient population, staffing ratios, architectural features, and administrative characteristics (Lehman, et al., 1982). In other words, the whole "personality" of a ward is more than the sum of its individual parts.

The WAS contains 10 subscales that measure the treatment environment. These can be grouped into three main dimensions. These dimensions of a treatment environment were developed as a result of naturalistic field studies (Moos, 1974b) using an inductive process. Moos and his associates read contemporary accounts of psychiatric hospital environments, conducted qualitative interviews, and developed questions based on these observations. The items on each subscale are conceptualized as identifying an aspect of the environment that could exert a press towards the concept measured by the subscale. These subscales are:

Relationship Dimension

1. Involvement--how active and energetic patients are.
2. Support--how helpful staff and patients are seen as being.
3. Spontaneity--how freely patients may act and Express feelings

Treatment Program Dimension

4. Autonomy--how self-sufficient and independent patients are.
5. Practical Orientation--how well patients are prepared for release.
6. Personal Problem Orientation--how much patients are encouraged to work through feelings and problems.
7. Anger and Aggression--to what extent patients are allowed to express anger.

System Maintenance Dimension

8. Order and Organization--how orderly are the routines on the unit.
9. Program Clarity--how much do patients know what to expect from the program.
10. Staff Control--how strict are the rules and schedules.

The current norms of the WAS were derived from data collected on 160 wards in 16 different states (Moos, 1974b). The reliability and validity of the WAS are well established and have been reported widely. The mean internal consistency (Kuder-Richardson Formula 20) for all the sub-scales combined is reported as .66 for patients and .71 for staff (Moos, 1974b). The WAS is reported to

measure aspects of the environment that tend to remain stable over long periods of time, in the absence of planned program change or other major impacts. In some cases the test-retest stability of the WAS remains in the .80 range after 6 months (Moos, 1974b). The fact that patients' responses remain stable (.70 at 9 months) is noteworthy, since the patients included in the second testing sample were almost entirely different from those included in the first testing sample. In the same study the test-retest stability was .78 for staff.

The WAS appears to effectively and systematically discriminate differences between programs with different treatment philosophies. The amount of subscale variance accounted for by differences in programs has been measured in several tests across 36 wards. On the average, differences among programs accounted for approximately 25% of the variance for patients and staff (Moos, 1974b). An important aspect of validity is the extent to which patients and staff tend to reply to the WAS in predictable, socially desirable ways. The subscales were correlated with the Crowne Marlow Social Desirability Scale, and the average correlation was only .13. Social desirability apparently has only a minimal effect on subjects' responses (Moos, 1974b).

These characteristics of the WAS were important in

terms of the validity of the project design. Since the profile of the characteristics of the treatment environment was obtained by averaging the individual responses of subjects, it was assumed that the "average" perception accurately represented the treatment environment under study. The evidence to date suggests that the subjects' perceptions were not merely reflections of their personalities or demographic background. These factors are apparently only minimally related to how one characterizes a particular environment (Moos & Bromet, 1978). Moos and Bromet (1978) suggested that subjects who hold more relative power in a given environment may hold more positive perceptions of it, for example staff may tend to view the environment more positively than do patients.

Setting and Subjects

The setting was a 20 bed acute care in-patient psychiatric unit, where the average length of stay is nine days. The unit uses an eclectic treatment approach, including medications, group and individual psychotherapy, occupational therapy, educational groups, and electroconvulsive therapy. The ward is an important community resource and serves both public and private patients.

Full-time staff members and part-time staff members who work at least half-time were invited to participate in the study. "Staff members" were defined as those persons who formed the treatment team on the in-patient ward, and included persons from the medical, nursing, psychology, social work, and occupational therapy teams. Persons from other occupational categories, for example dietary and housekeeping, and students of the professional disciplines, may have a significant impact on the environment perceived by staff and patients. However, persons from these categories were not included in the study, because they are not directly involved in treatment planning and programmatic decision making.

Nursing comprised the largest category of professional staff, with 12 full-time RNs, 2 LPNs, and 6 part-time permanent RNs. In addition, 3 full-time and 1 part-time psychiatric technicians were invited to participate. At the time of the study, almost 90% of the nursing staff had worked on the unit for one year or more. There were 8 physicians associated with the unit, including 2 psychiatric residents. The other occupational categories had three or fewer persons on the psychiatric treatment staff. In all, 40 staff persons were eligible and were invited to participate in the study. Based on the experiences of Moos and his

associates in using this methodology, a response rate of 80%, or 32 staff persons in this case, was predicted. These investigators report that validity of the project is not altered as long as response rates are at least 50% (Moos, 1974a). Traditional demographic data, such as gender and age, were not recorded for staff, since evidence has shown that environmental perceptions are not significantly related to these variables (Moos and Bromet, 1978).

Twenty consecutive patients who had been on the unit at least 4 days were invited to participate in the study. A "patient" was defined as a person currently admitted to the unit as an in-patient or on follow-up status. The requirement for length of stay was to ensure that patients had spent enough time on the ward to form some impression of its various dimensions. Hospitalized patients who were recognized by staff, or the investigator, on the basis of a chart review, as being severely organically impaired, were excluded from the sample. The investigator contacted the patient's nurse, prior to inviting the patient to participate in the study, to determine if there were any special considerations, such as hearing impairment or language difficulties. Efforts were made to include all eligible patients, and the investigator read the questionnaire aloud for two subjects with visual

impairments. Traditional demographic data were not recorded for patients for the reasons described above.

The nursing unit served a heterogeneous patient population, with patients from a variety of diagnostic, socioeconomic, and ethnic groups. From the standpoint of the validity of the project, it was important to not systematically exclude the environmental perceptions of certain patient groups. The staff must plan programs for all patient groups, and even patients who are not voluntarily admitted for treatment are a part of the overall social environment of the ward. For these reasons, all patients who met the eligibility criteria above were invited to participate in the study.

Data Collection Procedures

Prior to beginning data collection, the investigator met on two occasions with the administrative team of the ward, which included representatives from medicine, nursing, social work and occupational therapy. This team was invited to plan for the presentation of the results to staff. The management staff participated in the decisions regarding the specific procedures for inviting staff and patients to join the study. The possible risks and benefits to the unit as a result of the study were discussed, including the possible practical applications. The investigator communicated with nursing and medical

managerial staff regularly regarding progress of the project.

All eligible staff were invited to participate. An in-service for nursing staff was held prior to beginning the study to orient them to the nature and purpose of the project. The in-service was attended by nine nurses from the day and evening shifts, and the investigator facilitated a discussion about the data collection instrument and procedure. In addition, a short written description of the study was posted on the unit for staff who could not attend the in-service. The following day, the investigator delivered individually addressed packets to the unit inviting the 40 eligible staff members to participate in the project. Included in the packet were the questionnaire, answer sheet, and a cover letter with instructions for returning the completed questionnaires. Data collection for staff was completed in a two week period, with 28 staff persons (70% of those eligible) responding to the questionnaire.

All eligible patients who met the criteria described above were invited in person by the investigator to participate. The investigator made rounds on the ward three times a week during the study period in order to identify patients who were near discharge. A brief chart review was conducted to assure that the patient was

eligible. The investigator approached the patient's nurse prior to inviting him or her to participate to ensure that the questionnaire would not interfere with the treatment plan. Three patient characteristics were noted from chart review for the purpose of a brief description of the patient sample. These were: admission status (voluntary, non-voluntary), diagnostic category (psychotic, non-psychotic), and prior hospitalization record (first admission or previous admission). The purpose of the study, to find out how patients and staff viewed the ward, was explained by the investigator, and potential participants were asked to sign an informed consent form. The study period ended when the sample size of acceptable questionnaires for patients reached 20, which occurred at three weeks. Criteria for acceptability of the questionnaire are presented in a later section. The rationale for maintaining a short length of study period was to minimize any possible effects of history on the internal validity of the project. The unit currently discharges approximately 20 patients per month.

Protection of Subjects

Anonymity was assured to all respondents. Staff who represented occupational categories with only a few members on this ward, such as social work, were assured anonymity by being grouped as "other professions" for

purposes of analysis.

Confidentiality of the study results was addressed as a separate issue. Confidentiality of the study findings were protected and were considered to be an important issue in early meetings with the administrative team. Just as researchers consider the potential risks and benefits to human subjects from participation in a study, with a project of this nature it was necessary to consider these aspects with regard to the integrity of the particular treatment environment. The possible risks and benefits to the hospital ward as a whole were discussed in the meetings with the administrative team.

It is unlikely that the individual subjects were exposed to any substantial risk from their participation in this study. The questionnaire was short, and subjects were not asked to reflect deeply on their problems or circumstances of hospitalization. The investigator was available during the study period to answer any questions. Several staff asked questions regarding the purpose of the project that were addressed during feedback sessions. The long term effects of the project, if any, on the ward environment as a whole cannot be accurately predicted. The available literature does not report significant detrimental effects in either staff processes, management concerns, or characteristics of the milieu as a result of this type of environmental assessment.

Data Analysis

The raw data were examined for acceptability using criteria suggested by Moos (1974a). Questionnaires with more than 10 missing items were excluded from analysis. In addition, there could be no obvious "runs" of trues or falses or systematic alternating between the two, and questionnaires that showed a pattern of 20 or more answers such as these were excluded. These precautions were intended to control for any cases where the respondent was not able to respond to the questionnaire meaningfully because of symptoms of his or her illness. All questionnaires met this criteria, and none were dropped from analysis.

The data were analyzed using methodology developed by Moos and his colleagues (1974a). The staff and patient profiles were generated by averaging the individual scores on the 10 scales of the WAS. The scales were tested for reliability with both patient and staff groups, using Cronbach's alpha internal consistency-reliability coefficient, and Pearson's product moment coefficient. These results are reported in the following section.

Extensive normative data are available on the WAS. The average raw scores for each of the scales were

converted to standard scores ($M=50$, $SD=10$) to make it possible to compare the social climate of the ward with the norms. Statistical differences between groups can often lack practical clinical significance, and therefore tests for statistical significance were not performed on these data. Item level frequencies were generated to compare responses of staff and patients at this level. Efforts were made in the written analysis and discussion sessions to emphasize the practical clinical implications of the profile.

The investigator provided the staff with descriptive data regarding the interpretation of the profile of the ward atmosphere as perceived by staff and patients. The profile of the individual ward was plotted on a graph with standard scores the subscales ranging from a possible low of 2 to a high of 99. The ward profile became a visual representation of the findings for use in discussion with administrative team and staff.

CHAPTER III

Results

In this section, some characteristics of the persons who formed the sample of the project are described. The scores obtained on the WAS scales are presented, and selected item level results are noted. This section addresses some problems with reliability of the measurement instrument, and hypotheses for why this may have occurred are discussed.

Characteristics of the Sample

Demographic variables for the 48 persons who participated in the project were not directly analyzed, because the focus of the project was the social and treatment environment of the in-patient unit. However, limited descriptive data were collected for patients, including admission status and diagnostic category. For staff members, only occupational category was recorded.

A total of 40 staff members were eligible and were invited to participate. Twenty-eight (70%) returned completed questionnaires. Of these, sixteen (57%) were from the nursing staff, 5 (18%) were from the medical staff, and 6 (21%) were from other categories, including social work and occupational therapy. One staff respondent did not identify an occupational category. The 12 (30%) eligible staff members who did not

respond to the questionnaire were equally represented in the three occupational categories. The investigator posted a reminder memo on the unit to all eligible staff one week after data collection began. Staff members were further encouraged to complete the questionnaires by nursing and medical managers during a routine staff meeting.

During the study period, a total of 30 patients met the eligibility criteria for a minimum length of stay of 4 days. Twenty-three of these patients were invited by the investigator to participate in the project, three of whom refused for individual reasons. In addition, there were 7 patients on the unit during the study period who were not invited to participate, 6 of whom had severe dementia, and 1 who did not understand English.

Of the 20 patients who completed the questionnaire, 12 had been previously hospitalized on the unit, while 8 were in that environment for the first time. Seventeen of the patients were hospitalized voluntarily, and 3 were admitted involuntarily. Ten of the patient respondents carried a diagnosis of a psychotic illness at the time of admission, while 10 were diagnosed with a non-psychotic disorder.

Measurement Instrument

The WAS has been widely used in several general types of studies, and reliability estimates have been reported as adequate for research and utilization purposes. In this project, several scales did not perform as expected, as evidenced by low alpha-coefficients and Pearson's correlations for the items. The reliability estimates calculated using Cronbach's alpha are reported in Table 1. Individual cases were dropped from reliability analysis if any items were missing on the particular scale. The reliability criterion level was set at Cronbach's alpha of 0.50. This is a lower standard than usually set for clinical or research purposes. A rationale for this lower standard is presented below.

Five scales did not meet this standard for internal consistency with one or both groups. Two scales were far enough below the 0.50 cut-off for both patients and staff to make interpretation of the meaning of the scores difficult. These were the Support and the Personal Problem Orientation scales. Three additional scales were close to the 0.50 criterion level, but sufficiently low with one group to reduce confidence in the meaning of the score for that group. These were the Autonomy, the Practical Orientation and the Program Clarity scales. Discussion of the results is limited to the scales that statisfied the 0.50 standard for internal

TABLE 1

Reliability Coefficients on Ward Atmosphere Scales							
Relationship Dimension	Scale	Staff			Patients		
		(N)	alpha	$\bar{r}$	(N)	alpha	$\bar{r}$
Relationship Dimension	Involvement	27	0.62	0.13	18	0.75	0.24
	Support	26	0.25	0.04	17	0.35	0.05
	Spontaneity	25	0.63	0.15	15	0.50	0.09
Treatment Program Dimension	Autonomy	27	0.27	0.03	11	0.62	0.14
	Practical Orientation	27	0.46	0.12	13	0.62	0.15
	Personal Problem Orientation	27	0.19	0.03	17	0.37	0.06
	Anger & Aggression	25	0.65	0.17	15	0.69	0.19
System Maintenance Dimension	Order & Organization	28	0.58	0.13	16	0.59	0.15
	Program Clarity	27	0.76	0.21	17	0.25	0.03
	Staff Control	27	0.55	0.10	12	0.56	0.12

consistency with one or both groups.

The fact that many items produced little or no variance of responses in one or both of these groups may have made the estimates of reliability artificially low. Cronbach's alpha is a mathematical formula dependent in part on variability of response. The WAS has dichotomous variables, as the respondent must choose either "true" or "false", and a forced choice inherently reduces potential variability of response. Some of the attributes in this environment are so clearly perceived by patients, staff, or both that there is in effect a "right" and a "wrong" answer, and when all respondents answer "correctly", there is no variability of response. For example, the entire sample agreed with the statement that "Patients may call nursing staff by their first names". Only one person in the sample agreed that "Patients can leave the ward without saying where they are going". In other words, the instrument consistently tapped some clearly perceived characteristics, however the lack of variability reduced the level of the alpha coefficient.

There are other possible explanations for why some of the scales did not perform as expected. One possibility is that the concepts addressed by these scales are no longer relevant to the current context of treatment. The WAS was designed and tested in the early 1970's, when the average length of

psychiatric hospitalization was considerably longer than it is at present, and the characteristics of the patient population were notably different. Some of the scales may have been conceptualized to reflect different treatment philosophies and beliefs regarding mental illness than are current today. These scales may have been weakened by changes in treatment philosophies and in social and political expectations of the outcomes of psychiatric hospitalization. These changes may have altered the understanding of the concepts underlying the scales enough to diminish their validity.

Of interest is the fact that none of the reports of the use of the WAS reviewed for this project described problems with scale reliability. Internal consistency for the WAS scales were generally reported for the original Moos (1974a) work, rather than for the study reported in a given article. It is difficult to determine whether other investigators have experienced similar problems with scale reliability, and if so, how the scores were interpreted.

Several procedures were undertaken to reconceptualize some of the problematic scales and obtain more reliable measures of the concepts. One procedure was to delete from the scales with low alpha-coefficients the individual items with low item-total coefficients that also seemed not to "fit" conceptually. Another procedure involved testing a total reconceptualization

of the WAS, using the scale reconstruction suggested by Denny, Costello and Cochrane (1984). These authors questioned the validity of the three dimensions identified by Moos, and suggested an alternative organization of the items to reflect a more evaluative focus.

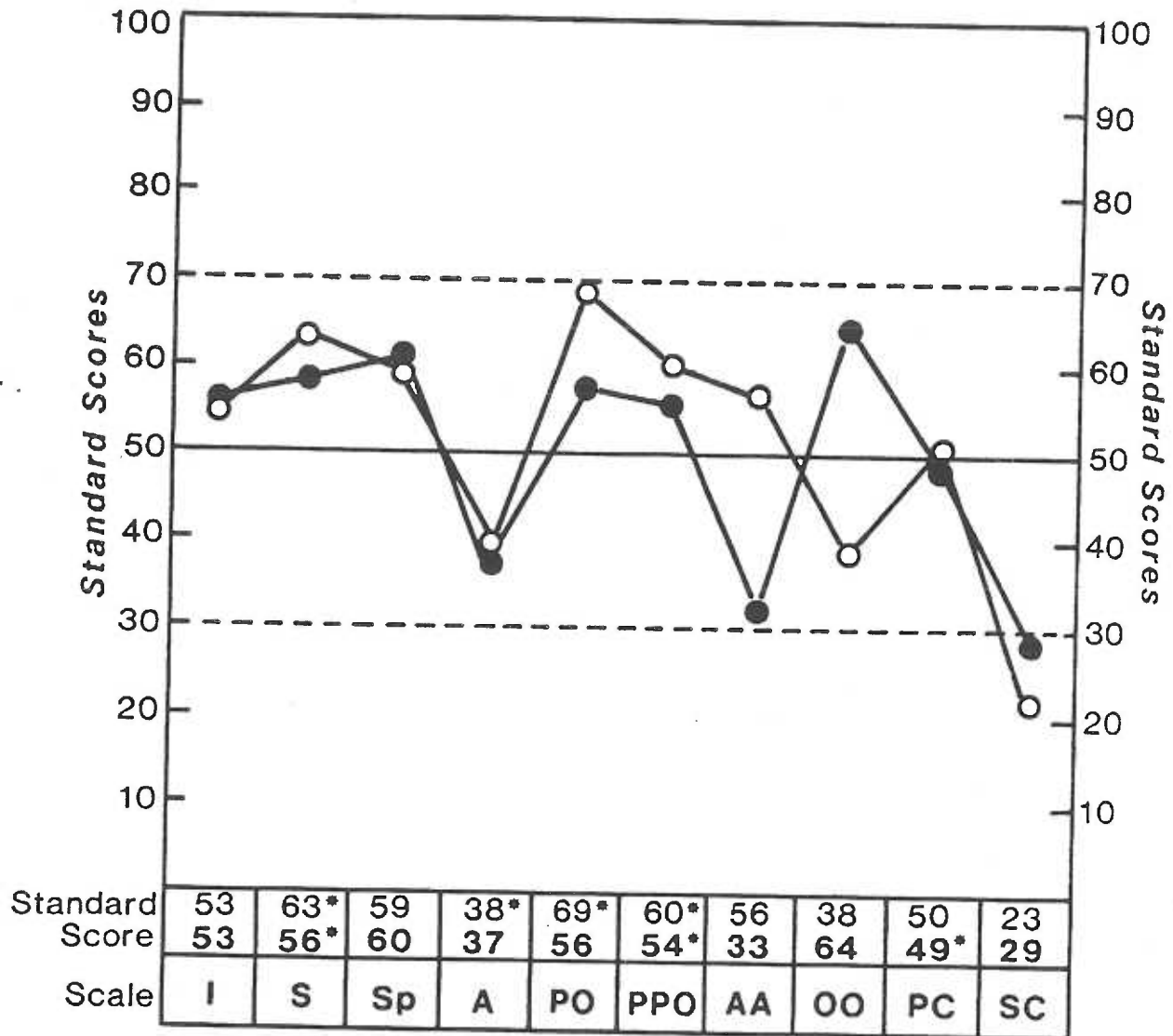
Neither of these procedures significantly increased the internal consistency coefficients. Also, much would be lost in terms of understanding the scores obtained on these new scales because they could not be compared with the norms. For these reasons, the scales remained as they were originally designed and tested.

Ward Atmosphere Profile

Standardized scores obtained on the WAS for patients and staff compared to the normative sample are presented in Figure 4. Scores for all scales are shown for visual comparison, and those that did not meet the 0.50 standard for internal consistency are identified by an asterisk. The solid horizontal line represents the national mean for all scales, and the dotted horizontal lines represent two standard deviations from that mean.

The items that comprise the scales are presented in Appendix A, along with the percent agreement of staff and patients with the item in the scored direction. Some items in each scale were negatively worded to control for

Figure 4.

WAS Profile for the Inpatient Unit

Staff (n=28) ○—○

Patients (n=20) ●—●

*Scale with reliability coefficient of <0.50 (Cronbach's alpha)

I = Involvement
 S = Support
 Sp = Spontaneity
 A = Autonomy
 PO = Practical Orientation

PPO = Personal Problem Orientation
 AA = Anger & Aggression
 OO = Order & Organization
 PC = Program Clarity
 SC = Staff Control

response set biases, and therefore the item was scored if it was answered false. For example, on the Involvement scale, the item "The ward has very few social activities," is conceptualized as identifying an environmental press toward involvement if respondents answer "false" to the item. In that case, the percent agreement with "false" was 64% for staff and 85% for patients. The conceptual basis of the WAS is that an environmental press exists if a consensus of the persons in the environment perceive that it exists. Discussion and interpretation of the scores are limited to those scales where the alpha-coefficient for at one least group was 0.50.

Staff and patients generally agreed in their perceptions of the qualities of the environment as measured by the scales of the Relationship Dimension, which are the Involvement, Support and Spontaneity scales. (The Support scale is dropped from discussion.) Both groups saw an above average emphasis in the amount of patient involvement in the social aspects of ward life. Eighty percent of both groups answered false to the statement "Nobody ever volunteers around here". The majority of both groups agreed with the statement "Discussions are pretty interesting around here". Both patients and staff perceived above average emphasis on

spontaneity, or the extent to which the environment encourages patients to act openly and express their feelings. This was supported by the general agreement with such statements as "Patients are encouraged to show their feelings," and "Patients say anything they want to the doctors".

The scores on the Treatment Program Dimension were more variable, with less agreement between patients and staff, and more deviation from the norms. The Treatment Program Dimension is composed of the Autonomy, Practical Orientation, Personal Problem Orientation and Anger and Aggression scales. (The Personal Problem Orientation scale is dropped from discussion.) Both groups perceived greater than average emphasis on the Practical Orientation scale, designed to measure the extent to which the environment orients patients toward preparing for release from the hospital. Many of the items on this scale produced very little variance in this sample. Virtually the entire sample agreed with the statements, "Patients are encouraged to plan for the future," and "Patients are encouraged to learn new ways of doing things." However, 93% of staff compared with 29% of patients answered false to the statement, "Staff care more about how patients feel than about their practical problems".

The Anger and Aggression scale produced the largest discrepancy between patient and staff perceptions on the Treatment Program Dimension. Staff perceived a greater than average emphasis on freedom of expression of negative affects, while patients perceived considerably less than average emphasis. Item-level responses reflected the differences in perceived expression of negative affects between the two groups. Seventy-one percent of staff agreed with the statement "Staff sometimes argue with each other," while only 25% of patients agreed. Forty-six percent of staff agreed "On this ward, staff think it is a healthy thing to argue," while only 24% of patients agreed.

On the System Maintenance Dimension, patients and staff generally agreed on the Program Clarity and Staff Control scales. The Order and Organization scale reflected the greatest discrepancy in perceptions. This difference in perceptions was reflected more in the items dealing with the visual neatness, where staff perceived more disorder, than in the items addressing the organization of patients' routines. For example, 75% of staff and 95% of patients agreed that "Patients' activities are carefully planned". The entire staff group and 85% of patients agreed that "Most patients follow a

regular schedule each day". In contrast, only 18% of the staff sample, compared with 74% of patients, answered false to the statement "Things are sometimes very disorganized around here". Similarly, 25% of staff as opposed to 85% of patients answered false to the statement "The day room is often messy".

Patient and staff scores on the Program Clarity scale, designed to measure the level of predictability and explicitness in ward routines, were similar to each other and equal to the national norms. At the item level, the largest discrepancy in perceptions was found on the statement, "Ward rules are clearly understood by the patients", with agreement from 32% of staff as opposed to 80% of patients.

Patients and staff had similar perceptions of the emphasis on staff control of patients' behavior through the use of rules and restrictions. The scores for both groups were more than two standard deviations below the normative level of perceived staff control. These perceptions were reflected by items such as "It's not safe for patients to discuss their personal problems around here", which received only 4% agreement from staff and 10% agreement from patients. Twenty-five percent of staff members and 40% of patients agreed with the statement "Once a schedule is arranged for a patient, the patient must follow it".

CHAPTER IV

The purpose of this project was to offer staff of an in-patient unit accurate feedback based on data concerning the perceptions held by staff and patients of the social and treatment environment. This section discusses possible questions which might be addressed by staff about the data, and provides some analysis of the findings. Some suggestions for future utilization of the data are offered.

Discussion

The consensus of perceptions about the ward atmosphere represented here as the WAS profile (Figure 4) are the views of a certain group of people at a certain time in the life of the in-patient program. Previous work with this instrument (Moos, 1974a, 1974b, Moos & Bromet, 1978) suggests that the views regarding a particular environment tend to remain stable over time, and that the perceptions persons hold are not merely reflections of their background characteristics. However, it is worth

noting some of the demographic variables of staff and patients that may provide useful discussion for staff when they examine the data.

For example, the majority (57%) of the staff who responded were from the nursing staff. Nurses tend to spend more actual clock time in the ward environment, and this fact may influence their perceptions. Sixty percent of the patients who responded to the questionnaire had been previously hospitalized on this unit, and likely carried over from earlier experiences some impressions of life on the ward. The literature does not currently address how the trend of re-hospitalization for chronic patients affects their experiences in an in-patient milieu. One can hypothesize that the WAS profile might be even more stable over time if a majority of the patients have had one or more previous hospitalizations there. A possible clinical implication is that even if interventions were undertaken to modify the ward atmosphere, patients might continue to respond to the environment they remembered from earlier hospitalizations.

While the patients who participated were equally represented in the psychotic and non-psychotic diagnostic groups, fully 20% of the patients who met the length of stay requirement for eligibility had severe dementia and

were not asked to respond to the questionnaire. These patients are clearly part of the overall social environment, and the current methodology did not tap the perceptions of this group.

Taken as an overall picture of the ward atmosphere at this time, the WAS profile indicates several qualities that are clearly perceived by both patients and staff. The ward is seen as a place where relationships receive attention. Interactions between staff and patients are facilitated, and patients perceive that they are encouraged to share their feelings. The atmosphere encourages patients to plan for the future; and to use their hospitalization as a time to make changes. Patients and staff perceive far less than the average amount of control measures, and patients apparently do not perceive the environment as restrictive.

Several authors, including Friedman, et al (1982), have noted the likelihood for patients and staff to perceive a given environment differently, with staff often viewing it in a more positive light. This trend did not occur in the current profile. Patient and staff perceptions follow a similar pattern with nearly identical scores on 6 of the 8 reliable scales.

The scales where patient and staff views of the

environment diverged most markedly may provide a useful area for staff to begin discussion regarding the treatment environment. These were the Anger and Aggression and the Order and Organization scales. Friedman, et al., (1982) suggested that a low score for patients on the Anger and Aggression scale in an otherwise "positive" profile may reflect their having perceived it as a "negative" concept.

The clinical significance of these differences in perception may lie in enabling staff to understand how patients experience the atmosphere. It is unlikely that those who direct and maintain the dimensions of the treatment environment would experience it in the same way as the patients for whom the environment is structured. In other words, the data do not automatically suggest a need to direct program level interventions toward reducing the differences in perception of environmental characteristics. Rather, as Archer and Amuso (1980) pointed out, the ward atmosphere as a whole may benefit when staff can accurately predict how patients view the environment. The areas of discrepant perceptions can act as a stimulus for discussion concerning treatment philosophy.

Since the literature does not identify a specific,

most desirable ward profile to serve a heterogeneous patient population, the question of the clinical significance of the findings is difficult to address. In other words, there is not a clear answer to questions of how much discrepancy in staff and patient perceptions is "too much". Nor does the literature suggest how close to the norm is most beneficial. Answers to the question of clinical significance of the findings can perhaps best be defined by the staff and administration. Questions that can be addressed by staff and the administrative team regarding the findings of this project include:

1. Do these results match with what we expected to find? Were there any surprises?
2. Does the profile reflect the features of the treatment environment we intend to maintain?
3. Are there realistic changes we might wish to undertake in program goals or ward routines?
4. Is the data of sufficient credibility to allow for changes in program, policy or procedures?

Underlying all these questions is a more basic one:

5. How important is the concept of the social and treatment environment in the total program offered on the unit? Is environmental assessment a useful technique for the staff to use?

An example of the direction a discussion of the results might take can be found in the discrepancy between staff and patient perceptions on the item from the Program Clarity scale, "Ward rules are clearly understood by patients". Thirty-two percent of staff as opposed to 80% of patients agreed with this statement. Staff may examine this result from several points of view. Do staff feel that patients do not understand the ward expectations that have been explained to them, or do staff feel that the ward expectations are not clearly explained for patients? Is this an area where staff feel that changes in the way they communicate expectations to patients might be beneficial? Is it helpful to have this perspective on how patients perceive this aspect of ward routine?

Comparing responses to similar items from the separate scales produces some interesting contrasts. For example, on the Order and Organization scale, staff and patients perceive a high level of predictable routine as evidenced by the general agreement with items dealing with schedules and planned activities. However, on the Staff Control scale, a much lower percentage of both groups agreed with the statement dealing with the rigidity of a patient's schedule. Apparently, patients perceive a high level of routine, and the flexibility to change it if necessary.

Review of the item level data on even the scales with low Cronbach's alpha indicates certain environmental features that are worth discussing in staff groups. On the Support scale for example, the items "Doctors have very little time to encourage patients", and "Nurses have very little time to encourage patients", offer interesting contrasts. Patients saw considerably less difference between doctors and nurses than did the staff group. Fewer patients than staff perceived the physicians as being too busy to encourage the patients. Over 80% of both groups agreed with the statements, "Patients here are encouraged to be independent", and "Patients are encouraged to learn new ways of doing things". However, only 4% of staff and 42% of patients agreed that "This ward emphasizes training for new kinds of jobs". Apparently staff and patients perceive that there are ways for patients to be independent and learn new ways of doing things that do not necessarily involve training for new jobs.

As measured by the WAS, both patients and staff perceived that the environment had less than average emphasis on autonomy scale. This score in particular needs to be viewed cautiously, and review of item level

data is indicated. In preliminary discussions with staff about the project, questions were raised about the validity of some of the items from the Autonomy scale in particular. The fact that the scale was not internally consistent for the staff group may reflect a changing notion of the meaning of autonomy for psychiatric patients. The constellation of items on the scale points to the notion that independence for patients correlates with having patient government, encouraging leadership, and giving patients responsibility in ward activities. Staff commented that the therapeutic community model seemingly implied by the items in this scale does not match with the treatment offered on this unit. It is likely that there is actually a much larger emphasis on autonomy for patients than is indicated by this measure.

In conclusion, staff and administration of this in-patient unit may find it most useful to examine the data with several things in mind. First, and perhaps most basic, is to consider the relative importance of the ward atmosphere to their treatment program. In light of that, the staff and administration can evaluate the overall WAS profile. The areas where staff and patients' views of the environment diverged, namely on the Anger and Aggression and Order and Organization scales offer potentially fruitful areas with which to begin discussion.

Potential Utilization of Findings

There are several areas of possible utility for this study, some clinical and some as the basis for future methodological work. The findings may become a catalyst to further stimulate staff discussions about what patients "see" in their milieu. The management staff can use the findings to observe the amount of agreement between the defined program goals and the current perceptions of the environment. The study could become the basis for a repeated measure to check progress toward a stated objective. Management and treatment program staff may find the results useful in terms of formulating future program goals. A physical move to a new location and the consolidation of several programs in one central area is planned by the administration. Repeating the measure after the move takes place could provide a way of assessing the impact of the move on the treatment environment.

Methodologically, this project may have identified some developing reliability problems with the instrument. Further testing of the instrument in the same environment with the methodological issues in focus could clarify the problems. Some of the scales may need to be reconceptualized to reflect changes in the overall context in which in-patient psychiatric care is delivered.

Summary

The social environment, or milieu, of psychiatric in-patient units is believed to be an important therapeutic tool for patients. Manipulation of a patient's environment, for example with treatment in therapy groups, is a frequently used strategy. The way that an individual experiences the external environment is one determinant that helps to shape his or her behavior. Measurement of patients' and staff members' perceptions of the environment can assist staff members in understanding the nature of the milieu. This information can then be used as a basis from which to decide what changes, if any, might be beneficial for the in-patient environment.

The Ward Atmosphere Scale (WAS), a 100 item questionnaire by R.H. Moos, is a widely used instrument for measuring perceptions of the environment. The WAS addresses three dimensions of the ward environment, conceptualized as Relationship, Treatment Program, and System Maintenance aspects of the in-patient atmosphere. The particular characteristics of the dimensions create a press, or a directional influence on behavior, that is perceived by persons familiar with the environment. The amount of press along these dimensions can be compared across environments, using the normative scores from the WAS.

The WAS was given to 20 in-patients and 28 staff members on a psychiatric ward, for the purpose of developing a baseline assessment of qualities of the treatment environment of the ward. The administrative team of the unit assisted with the planning for the project, and this group discussed possible clinical applications of the findings. A profile of the atmosphere of the ward was generated using methodology developed by Moos (1974b). The profile of ward atmosphere and a narrative discussion of its interpretation were given to the administrative team. The investigator held in-service meetings with the administrative team and other staff members to discuss the findings.

Patients and staff generally agreed on the amount of emphasis in the environment along the Relationship Dimension, and the standard scores were above the national norm. The major points of disagreement between patients and staff were on the Anger and Aggression and Order and Organization scales. It was recommended to staff members that these two dimensions might provide some fruitful areas in which to begin discussion of the treatment environment. Both staff and patients perceived far less than average emphasis on aspects of staff control.

The reliability estimates for the instrument presented one limitation in the possible clinical

application of the findings. Two of the 10 scales on the WAS scored well below the minimum criterion of Cronbach's alpha of 0.50 for reliability in this sample. The meaning of the scores was difficult to interpret for these scales. Historical changes in the context of treatment may have altered the meaning of the concepts, and therefore diminished the current validity of certain WAS scales.

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APPENDIX A
Ward Atmosphere Scales
with Percent Agreement
with Scored Response

<u>Involvement</u>		<u>Percent agreement with item in Scored Direction</u>		
<u>Item Number</u>	<u>Scoring Direction</u>		<u>Staff</u>	<u>Patients</u>
1	T	Patients put a lot of energy into what they do around here.	46%	60%
11	T	This is a lively ward.	71	50
21	T	The patients are proud of this ward.	36	68
31	F	There is very little group spirit on this ward.	61	55
41	F	Nobody ever volunteers around here.	82	80
51	T	Patients are pretty busy all of the time.	29	30
61	F	The ward has very few social activities.	64	85
71	F	Very few things around here ever get people excited.	64	25
81	T	Discussions are pretty interesting on this ward.	82	55
91	T	Patients often do things together on the weekends.	41	68

N for the staff group is 28 on all items on this scale.
Because of missing data, N varies on this scale from
19 to 20 with the patient group.

APPENDIX A
Ward Atmosphere Scales
with Percent Agreement
with Scored Response

<u>Support</u>		<u>Percent agreement with item in Scored Direction</u>		
<u>Item Number</u>	<u>Scoring Direction</u>		<u>Staff</u>	<u>Patients</u>
2	F	Doctors have very little time to encourage patients.	36%	55%
12	T	The staff know what the patients want.	75	68
22	T	Staff are interested in following up patients once they leave the hospital.	85	60
32	F	Nurses have very little time to encourage patients.	93	75
42	F	Doctors spend more time with some patients than with others.	11	30
52	T	The healthier the patients on this ward help take care of the less healthy ones.	79	84
62	F	Patients rarely help each other.	93	80
72	T	The ward staff help new patients get acquainted on the ward.	100	70
82	F	Doctors sometimes don't show up for their appointments.	39	47
92	T	Staff go out of their way to help patients.	93	70

Because of missing data, N varies on this scale from 27-28 for the staff group, and from 19 to 20 for the patient group.

APPENDIX A
Ward Atmosphere Scales
with Percent Agreement
with Scored Response

<u>Spontaneity</u>		<u>Percent agreement with item in Scored Direction</u>		
<u>Item Number</u>	<u>Scoring Direction</u>		<u>Staff</u>	<u>Patients</u>
3	F	Patients tend to hide their feelings from one another.	82%	50%
13	T	Patients say anything they want to the doctors.	54	70
23	F	It is hard to tell how patients are feeling on this ward.	82	65
33	F	Patients are careful about what they say when staff are around.	48	60
43	T	Patients set up their own activities without being prodded by the staff.	18	47
53	F	When patients disagree with each other, they keep it to themselves.	92	56
63	T	It's O.K. to act crazy around here.	29	44
73	F	Patients tend to hide their feelings from the staff.	79	68
83	T	Patients are encouraged to show their feelings.	64	95
93	(Filler item)	The ward always stays just about the same.		

Because of missing data, N varies on this scale from 26 to 28
for the staff group, and from 18 to 20 for the patient group.

APPENDIX A
Ward Atmosphere Scales
with Percent Agreement
with Scored Response

<u>Autonomy</u>		<u>Percent agreement with item in Scored Direction</u>		
<u>Item Number</u>	<u>Scoring Direction</u>		<u>Staff</u>	<u>Patients</u>
4	T	The staff act on patient suggestions	82%	68%
14	F	Very few patients have any responsibility on the ward.	29	47
24	T	Patients are expected to take leadership on the ward.	4	29
34	T	Patients here are encouraged to be independent.	82	85
44	T	Patients can leave the ward whenever they want to.	4	10
54	T	Patients can wear what they want.	74	75
64	F	There is no patient government on this ward.	4	12
74	T	Patients can leave the ward without saying where they are going.	0	5
84	F	Staff rarely give in to patient pressure.	64	17
94	F	The staff discourage criticism.	68	67

Because of missing data, N varies on this scale from 27 to 28 for the staff group, and from 16 (on item 64) to 20 for the patient group.

APPENDIX A
Ward Atmosphere Scales
with Percent Agreement
with Scored Response

<u>Practical Orientation</u>		<u>Percent agreement with item in Scored Direction</u>		
<u>Item Number</u>	<u>Scoring Direction</u>		<u>Staff</u>	<u>Patients</u>
5	T	New treatment approaches are often tried on this ward.	61%	53%
15	F	There is very little emphasis on making patients more practical.	82	59
25	T	Patients are encouraged to plan for the future.	96	95
35	F	There is very little emphasis on what patients will be doing after they leave.	93	85
45	F	There is very little emphasis on making plans for getting out of the hospital.	100	85
55	T	This ward emphasizes training for new kinds of jobs.	4	42
65	F	Most patients are more concerned with the past than with the future.	54	50
75	T	Patients are encouraged to learn new ways of doing things.	93	85
85	F	Staff care more about how patients feel than about their practical problems.	93	29
95	T	Patients must make plans before leaving the hospital.	89	90

Because of missing data, N varies on this scale from 27 to 28 for the staff group, and from 17 (on items 5 and 85) to 20 for the patient group.

APPENDIX A
Ward Atmosphere Scales
with Percent Agreement
with Scored Response

<u>Personal Problem Orientation</u>			<u>Percent agreement with item in Scored Direction</u>	
<u>Item Number</u>	<u>Scoring Direction</u>		<u>Staff</u>	<u>Patients</u>
6	F	Patients hardly ever discuss their sexual lives.	50%	15%
16	T	Patients tell each other about their problems.	96	80
26	T	Personal problems are openly talked about.	79	75
36	T	Patients are expected to share their personal problems with each other.	22	20
46	F	Patients talk very little about their pasts.	93	60
56	F	Patients are rarely asked personal questions by the staff.	100	65
66	T	Staff are mainly interested in learning about patients' feelings.	25	74
76	F	The patients rarely talk about their problems with other patients.	89	60
86	T	Staff strongly encourage patients to talk about their pasts.	43	90
96	(Filler item)	It's hard to get a group together for card games or other activities.		

Because of missing data, N varies on this scale from 27 to 28 for the staff group, and from 19 to 20 for the patient group.

APPENDIX A
Ward Atmosphere Scales
with Percent Agreement
with Scored Response

<u>Anger and Aggression</u>			<u>Percent agreement with item in Scored Direction</u>	
<u>Item Number</u>	<u>Scoring Direction</u>		<u>Staff</u>	<u>Patients</u>
7	T	Patients often gripe.	82%	50%
17	T	Patients often criticize or joke about the ward staff.	64	30
27	F	Patients on this ward rarely argue.	36	20
37	T	Staff sometimes argue with each other.	71	25
47	T	Patients sometimes play practical jokes on each other.	36	40
57	F	It's hard to get people to argue around here.	85	29
67	F	Staff never start arguments in group meetings.	63	11
77	T	On this ward staff think it is a healthy thing to argue.	46	24
87	F	Patients here rarely become angry.	89	55
97	(Filler item)	A lot of patients just seem to be passing time on the ward.		

Because of missing data, N varies on this scale from 27 to 28 for the staff group, and from 17 (on items 57 to 77) to 20 for the patient group.

APPENDIX A
Ward Atmosphere Scales
with Percent Agreement
with Scored Response

<u>Order and Organization</u>			<u>Percent agreement with item in Scored Direction</u>	
<u>Item Number</u>	<u>Scoring Direction</u>		<u>Staff</u>	<u>Patients</u>
8	T	Patients' activities are carefully planned.	75%	95%
18	T	This is a very well organized ward.	43	85
28	T	The staff make sure that the ward is always neat.	32	80
38	F	The ward sometimes gets very messy.	36	70
48	T	Most patients follow a regular schedule each day.	100	85
58	F	Many patients look messy.	61	68
68	F	Things are sometimes very disorganized around here.	18	74
78	T	The staff set an example for neatness and orderliness.	57	90
88	T	Patients are rarely kept waiting when they have appointments with the staff.	29	53
98	F	The day room is often messy.	25	85

N for the staff group is 28 on all items on this scale. Because of missing data, N varies on this scale from 19 to 20 with the patient group.

APPENDIX A
Ward Atmosphere Scales
with Percent Agreement
with Scored Response

<u>Program Clarity</u>		<u>Percent agreement with item in Scored Direction</u>		
<u>Item Number</u>	<u>Scoring Direction</u>		<u>Staff</u>	<u>Patients</u>
9	T	The patients know when doctors will be on the ward.	39%	42%
19	F	Doctors don't explain what treatment is about to patients.	54	60
29	T	If a patient's medicine is changed, a nurse or doctor always tells him/her why.	56	80
39	T	Ward rules are clearly understood by the patients.	32	80
49	F	Patients never know when a doctor will ask to see them.	28	15
59	T	On this ward everyone knows who's in charge.	57	58
69	T	If a patient breaks a rule he knows what will happen to him.	25	22
79	F	People are always changing their minds here.	54	56
89	F	Patients never know when they will be transferred from this ward.	89	53
99	T	Staff tell patients when they are getting better.	96	70

Because of missing data, N varies on this scale from 27 to 28 for the staff group, and from 18 to 20 for the patient group.

APPENDIX A
Ward Atmosphere Scales
with Percent Agreement
with Scored Response

<u>Staff Control</u>		<u>Percent agreement with item in Scored Direction</u>		
<u>Item Number</u>	<u>Scoring Direction</u>		<u>Staff</u>	<u>Patients</u>
10	F	The staff very rarely punish patients by restricting them.	25%	17%
20	F	Patients may interrupt a doctor when he is talking.	11	20
30	T	Patients who break the ward rules are punished for it.	22	33
40	T	If a patient argues with another patient, he will get into trouble with the staff.	25	35
50	F	Staff don't order the patients around.	29	28
60	T	Once a schedule is arranged for a patient, the patient must follow it.	25	42
70	F	Patients can call nursing staff by their first name.	0	0
80	T	Patients will be transferred from this ward if they don't obey rules.	21	22
90	T	It's not safe for patients to discuss their personal problems around here.	4	10
100	T	It's a good idea to let the doctor know that he is boss.	36	50

N for the staff group is 28 on all items on this scale. Because of missing data, N varies on this scale from 16 (on item 100) to 20 with the patient group.

APPENDIX B

Consent to Participate in the Research Project

Measuring the Perceptions of Patients and Staff
of the Treatment Environment of an In-Patient Unit

I agree to participate in the research project "Measuring the Perceptions of Patients and Staff of the Treatment Environment of an In-Patient Unit." This project is being conducted by Kathy Elliott R.N., under the supervision of JoAnne Horsley R.N., PhD. The aim of the study is to better understand how patients and staff persons perceive the environment on the hospital ward.

I understand that participating in this project involves filling out a short questionnaire which takes about 15 minutes to complete. The questionnaire will be treated confidentially, and my name will not be connected with the answer sheet.

Although I will probably not receive any direct benefit from my participation in this project, my responses may help staff to understand more about how patients feel about the ward. This information may benefit patients in the future.

Kathy Elliott R.N., has offered to answer any questions I may have about the project. I may contact her at the Oregon Health Sciences University Mental Health Nursing Department, telephone number 225-7827.

I understand that I may refuse to participate in this project without affecting my treatment or status as a patient at the Oregon Health Sciences University Hospital. I have read the above and agree to participate in this project.

Date: _____

Signed: _____

Witness: _____

APPENDIX C
WARD ATMOSPHERE SCALE

Instructions:

There are 100 short statements in this booklet. These are statements about hospital wards. Please decide which statements are true of this ward and which are not. Please circle T if the statement is mostly true and F if it is mostly false. Please be sure to answer each question.

Thank you for your participation in this project.

- | | | |
|--|---|---|
| 1. Patients put a lot of energy into what they do around here. | T | F |
| 2. Doctors have very little time to encourage patients. | T | F |
| 3. Patients tend to hide their feelings from one another. | T | F |
| 4. The staff act on patient suggestions. | T | F |
| 5. New treatment approaches are often tried on this ward. | T | F |
| 6. Patients hardly ever discuss their sexual lives. | T | F |
| 7. Patients often gripe. | T | F |
| 8. Patients' activities are carefully planned. | T | F |
| 9. The patients know when doctors will be on the ward. | T | F |
| 10. The staff very rarely punish patients by restricting them. | T | F |
| 11. This is a lively ward. | T | F |
| 12. The staff know what the patients want. | T | F |
| 13. Patients say anything they want to the doctors. | T | F |
| 14. Very few patients have any responsibility on the ward. | T | F |
| 15. There is very little emphasis on making patients more practical. | T | F |
| 16. Patients tell each other about their personal problems. | T | F |
| 17. Patients often criticize or joke about the ward staff. | T | F |
| 18. This is a very well organized ward. | T | F |
| 19. Doctors don't explain what treatment is about to patients. | T | F |
| 20. Patients may interrupt a doctor when he is talking. | T | F |
| 21. The patients are proud of this ward. | T | F |

- | | | |
|--|---|---|
| 22. Staff are interested in following up patients once they leave the hospital. | T | F |
| 23. It is hard to tell how patients are feeling on this ward. | T | F |
| 24. Patients are expected to take leadership on the ward. | T | F |
| 25. Patients are encouraged to plan for the future. | T | F |
| 26. Personal problems are openly talked about. | T | F |
| 27. Patients on this ward rarely argue. | T | F |
| 28. The staff make sure that the ward is always neat. | T | F |
| 29. If a patient's medicine is changed, a nurse or doctor always tells him why. | T | F |
| 30. Patients who break the ward rules are punished for it. | T | F |
| 31. There is very little group spirit on this ward. | T | F |
| 32. Nurses have very little time to encourage patients. | T | F |
| 33. Patients are careful about what they say when staff are around. | T | F |
| 34. Patients here are encouraged to be independent. | T | F |
| 35. There is very little emphasis on what patients will be doing after they leave. | T | F |
| 36. Patients are expected to share their personal problems with each other. | T | F |
| 37. Staff sometimes argue with each other. | T | F |
| 38. The ward sometimes gets very messy. | T | F |
| 39. Ward rules are clearly understood by the patients. | T | F |
| 40. If a patient argues with another patient, he will get into trouble with the staff. | T | F |
| 41. Nobody ever volunteers around here. | T | F |
| 42. Doctors spend more time with some patients than with others. | T | F |
| 43. Patients set up their own activities without being prodded by the staff. | T | F |
| 44. Patients can leave the ward whenever they want to. | T | F |

- | | | |
|--|---|---|
| 45. There is very little emphasis on making plans for getting out of the hospital. | T | F |
| 46. Patients talk very little about their pasts. | T | F |
| 47. Patients sometimes play practical jokes on each other. | T | F |
| 48. Most patients follow a regular schedule each day. | T | F |
| 49. Patients never know when a doctor will ask to see them. | T | F |
| 50. Staff don't order the patients around. | T | F |
| 51. Patients are pretty busy all of the time. | T | F |
| 52. The healthier patients on this ward help take care of the less healthy ones. | T | F |
| 53. When patients disagree with each other, they keep it to themselves. | T | F |
| 54. Patients can wear what they want. | T | F |
| 55. This ward emphasizes training for new kinds of jobs. | T | F |
| 56. Patients are rarely asked personal questions by the staff. | T | F |
| 57. It's hard to get people to argue around here. | T | F |
| 58. Many patients look messy. | T | F |
| 59. On this ward everyone knows who's in charge. | T | F |
| 60. Once a schedule is arranged for a patient, the patient must follow it. | T | F |
| 61. The ward has very few social activities. | T | F |
| 62. Patients rarely help each other. | T | F |
| 63. It's O.K. to act crazy around here. | T | F |
| 64. There is no patient government on this ward. | T | F |
| 65. Most patients are more concerned with the past than with the future. | T | F |
| 66. Staff are mainly interested in learning about patients' feelings. | T | F |
| 67. Staff never start arguments in group meetings. | T | F |
| 68. Things are sometimes very disorganized around here. | T | F |

- | | | |
|--|---|---|
| 69. If a patient breaks a rule, he knows what will happen to him. | T | F |
| 70. Patients can call nursing staff by their first name. | T | F |
| 71. Very few things around here ever get people excited. | T | F |
| 72. The ward staff help new patients get acquainted on the ward. | T | F |
| 73. Patients tend to hide their feelings from the staff. | T | F |
| 74. Patients can leave the ward without saying where they are going. | T | F |
| 75. Patients are encouraged to learn new ways of doing things. | T | F |
| 76. The patients rarely talk about their personal problems with other patients. | T | F |
| 77. On this ward staff think it is a healthy thing to argue. | T | F |
| 78. The staff set an example for neatness and orderliness. | T | F |
| 79. People are always changing their minds here. | T | F |
| 80. Patients will be transferred from this ward if they don't obey the rules. | T | F |
| 81. Discussions are pretty interesting on this ward. | T | F |
| 82. Doctors sometimes don't show up for their appointments. | T | F |
| 83. Patients are encouraged to show their feelings. | T | F |
| 84. Staff rarely give in to patient pressure. | T | F |
| 85. Staff care more about how patients feel than about their practical problems. | T | F |
| 86. Staff strongly encourage patients to talk about their pasts. | T | F |
| 87. Patients here rarely become angry. | T | F |
| 88. Patients are rarely kept waiting when they have appointments with the staff. | T | F |
| 89. Patients never know when they will be transferred from this ward. | T | F |
| 90. It's not safe for patients to discuss their personal problems around here. | T | F |
| 91. Patients often do things together on the weekends. | T | F |

- | | | |
|---|---|---|
| 92. Staff go out of their way to help patients. | T | F |
| 93. The ward always stays just about the same. | T | F |
| 94. The staff discourage criticism. | T | F |
| 95. Patients must make plans before leaving the hospital. | T | F |
| 96. It's hard to get a group together for card games or other activities. | T | F |
| 97. A lot of patients just seem to be passing time on the ward. | T | F |
| 98. The day room is often messy. | T | F |
| 99. Staff tell patients when they are getting better. | T | F |
| 100. It's a good idea to let the doctor know that he is boss. | T | F |

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LOS _____

AN ABSTRACT OF THE RESEARCH PROJECT OF

KATHERINE ELLIOTT, BSN

FOR THE MASTERS OF SCIENCE

DATE OF RECEIVING THIS DEGREE: JUNE 13, 1986

TITLE: MEASURING THE PERCEPTIONS OF PATIENTS AND STAFF
OF THE TREATMENT ENVIRONMENT OF A PSYCHIATRIC IN-PATIENT UNIT

APPROVED: _____

JOANNE HORSLEY, RN, PhD, MRP ADVISOR

This clinical investigation was undertaken for the purpose of developing reliable data regarding the characteristics of the treatment environment of an in-patient ward atmosphere. The project was designed to produce clinically useful information for the management and staff of an in-patient psychiatric unit in a large urban hospital.

The Ward Atmosphere Scale (WAS) is an instrument designed to measure the environmental perceptions of patients and staff along 10 dimensions. It is a 100 item true/false questionnaire that has been widely used to assess treatment settings. The WAS was given to a convenience sample of 20 patients and 28 staff members representing all professional disciplines on the treatment team.

The environmental perceptions of patients and staff members were averaged to generate a score that represented the consensus of these groups regarding the ward atmosphere, and these scores were compared against national norms.

The staff and patients perceived an above average emphasis in the environment on aspects of interpersonal relationships such as patient involvement in ward activities. Both patients and staff perceived far less than the average level of restrictiveness and staff control over patient behavior. Staff and patients diverged in their perceptions of order and organization in the environment, with staff perceiving less than average emphasis. Their perceptions also diverged in the area of expression of negative emotion, with patients perceiving less than average expression of anger and aggression, and staff perceiving greater than average freedom for patients to express these emotions on the unit.

The study findings, in the form of a narrative discussion and interpretation, were provided to the administrative team of this unit for their use. Feedback sessions were also held with interested staff members. Staff were advised that low estimates for internal consistency on two scales may limit the clinical relevance of the scores for those scales in particular.