LONGITUDINAL EVALUATION OF A CHILD/ ADOLESCENT
PSYCHIATRIC PROGRAM

THESIS

Presented to the Graduate Council of the University of North Texas in Partial Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

Diane D. Harvey
Denton, Texas
December, 1994
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Children and adolescent psychiatric inpatients (n = 25) versus staff (n = 35) milieu perceptions were measured with the Ward Atmosphere Scale (WAS) Form K (Kids). The perceptions were compared with previous data collected in 1981, 1982, and 1984 on the same unit. The 1993 staff and patients continued to perceive the unit as a therapeutic environment despite recent restrictions on length of stay due to health care reform. The views of the staff and patients were found to be divergent but less so than in previous years. Additionally, the more seriously ill a patient was determined to be, the more negatively he or she perceived the environment. Differences in perceptions between day shift versus night shift and administrative versus non-administrative staff were also found and discussed. Staff perceptions versus their ideal conceptions were also investigated and compared with those of the 1984 staff. The 1994 staff was found to more closely approximate their ideals than the 1984 staff.
ACKNOWLEDGEMENTS

Special thanks to Dr. Bert Hayslip and Dr. Graham Emslie for their assistance and encouragement.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>v</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Review of the Literature</td>
<td></td>
</tr>
<tr>
<td>Evaluating Therapeutic Milieus</td>
<td></td>
</tr>
<tr>
<td>Patient Versus Staff Perceptions</td>
<td></td>
</tr>
<tr>
<td>Children’s Studies</td>
<td></td>
</tr>
<tr>
<td>Hypotheses</td>
<td></td>
</tr>
<tr>
<td>II. METHOD</td>
<td>21</td>
</tr>
<tr>
<td>The Unit</td>
<td></td>
</tr>
<tr>
<td>Staff Subjects</td>
<td></td>
</tr>
<tr>
<td>Patient Subjects</td>
<td></td>
</tr>
<tr>
<td>Measures</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
</tr>
<tr>
<td>III. RESULTS</td>
<td>26</td>
</tr>
<tr>
<td>IV. DISCUSSION</td>
<td>31</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>44</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>50</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table                                Page
1. WAS (Real) X 4 Years (1981, 1982, 1984, 1993) .. 45
2. Weighted Aggregate (Staff and Patient Combined) Means for Involvement and Support Scales ....... 47
3. Dayshift Versus Nightshift Real and Ideal Perceptions for 1984 and 1993 ..................... 48
CHAPTER I

INTRODUCTION

Throughout this century, there has been an increasing awareness of the shortage of mental health care for children in the United States. Children have recently been referred to as one of the most neglected groups in regards to mental health. It has been estimated that as many as 15% of children or roughly 9.5 million have mental problems that need treatment. Of these, approximately 70-80% receive either inappropriate care or no treatment at all (Philips, 1990). In addition, 3-8% of these children are classified as seriously disturbed requiring intensive treatment. Despite an increased awareness of the problem, mental health care for children remains deficient and fragmented. Government commissions and panels have called for increased services for children. However, funding continues to be deficient, posing additional deterrents for treatment of the poor (Tuma, 1989). Medicaid is the primary source of health care funding for those children who are socioeconomically disadvantaged. However, only 3% of medicaid funds are allocated for mental health (Kiesler, 1992).

Scarcity of funds has caused cost-effective measures to be imposed on the delivery of mental health care.
Hospitalization stays have decreased in efforts to conserve mental health care dollars. The purpose of the present study was to explore the effects of these measures on an inpatient child/adolescent psychiatric unit. Specifically, the feasibility of maintaining a therapeutic community, in terms of how patients and staff perceive their environment, given restrictions on length of patient’s stay, was examined here.

Moreover, it is desirable in itself to evaluate the changes of a psychiatric unit over a period of time. The data collected addressed the patients’ and staff’s perceptions of the ward milieu, using the Moos Ward Atmosphere Scale at four different time periods. These data were utilized to determine if the changes that occur on the given unit over time were positive and if the perceptions of the unit coincided with the philosophy of the unit.

**Review of the Literature**

Although there is a preference for treatment of children to be in the least restrictive environment, there are many situations in which hospitalization is the treatment of choice. These situations include treatment of those children that are too disturbed to be treated in the outpatient unit or children that are in need of a controlled environment such as an acutely suicidal child. Other circumstances which would indicate hospitalization are for diagnostic purposes (if an underlying physical condition is
suspected, if treatment could be more readily initiated while hospitalized, or in certain cases where there is cause to remove the child from his or her environment, such as prior to placement elsewhere) (Hoffmann, 1982).

Children can be hospitalized in many different types of facilities. These include free-standing psychiatric hospitals, separate children's hospitals or units, psychiatric units of general hospitals or on general hospital wards. It is now commonly accepted that the treatment environment in which a child is placed in itself has a critical impact on the success of the treatment. Dr. Philippe Pinel was a leader in creating institutional reform for psychiatric patients. In 1792, he improved the treatment environments of insane asylums with resultant improvements in the patients' behaviors and mental conditions (Moos & Smail, 1974). The theory of environment affecting treatment effectiveness was substantiated by the works of Stanton and Schwartz, Caudill, Goffman, and others in the 1950's. Stanton and Schwartz (1954) contributed the idea that the patient's symptoms were related to the social environment and may be, in fact, caused by it. Caudill (1958) viewed patients' behaviors as an adaptation to the environment in which they are placed. Goffman's (1961) perception was that treatment environments create negative effects for their patients. These studies, however, were
qualitative in nature, and recent authors have challenged the conclusions drawn from them (Weinstein, 1979).

Nevertheless, these studies were the impetus for widespread changes made involving treatment environments. In the 1950's Maxwell Jones expanded the roles of the patient and direct care staff by involving them in treatment planning. Restructuring of therapeutic communities was occurring by incorporating this concept. Hospitals were moving away from custodial care to one of a more active role for patients increasing their responsibilities.

It was during this same period that changes were occurring regarding treatment of children. Fritz Redl, Stanislaus Szurek and others began to create treatment environments in which the milieu itself was to have positive effects on the children. Bruno Bettelheim and Emmy Sylvester reorganized the Orthogenic School of Chicago to reflect a comprehensive approach to the treatment of disturbed children. They called their approach "milieu therapy". They created an environment that would itself function as therapy. Every aspect of the child's daily life was included to help each child master life experiences that would lead to ego growth (Bettelheim & Sanders, 1979).

Thus, the term milieu therapy had evolved. Milieu therapy was defined by Ellsworth et al. (1971) as "the modification of the environment part of the patient-environment process with a view to facilitating more
satisfactory patterns of interaction." (Ellsworth et al., 1971, page 428). In essence, milieu therapy emphasizes the therapeutic value of all members of the treatment team including the patient and all levels of staff. The treatment setting is modified to facilitate therapeutic interactions. Central to milieu therapy is the idea that all aspects of the treatment environment are relevant to the care of the patients. Moos (1974) defines this as social ecology. Essential to the understanding of social ecology are basic assumptions as follows:

1. Human behavior cannot be understood apart from the environmental context in which it occurs.
2. Physical and social environments must be studied together, since neither can be fully understood alone.
3. Social ecology has an explicit applied value orientation in that it gathers and utilizes knowledge for promoting maximally effective human functioning. (Moos, 1974, page 21)

**Evaluating Therapeutic Milieus**

Moos developed a means of categorizing and differentiating social environments. The Ward Atmosphere scale was developed to measure the social environment of psychiatric treatment programs. The items were developed by several methods, including information obtained by direct observation of psychiatric programs and from structured
interviews with patients and staff. Additional items were developed from information obtained from professional books related to psychiatric treatment programs. The items were then divided into one of three dimensions identified as relationship, treatment program and system maintenance dimensions. By using statistical methods the items were then streamlined into the 100-item test used currently. The dimensions of relationship, treatment program and system maintenance were further divided into subscales. Each dimension contains three subscales. The relationship dimension contains the three subscales of involvement, support and spontaneity. These subscales measure the type and intensity of personal relationships between patients and staff. The treatment program dimension includes autonomy, practical orientation, and anger and aggression subscales. These variables measure psychotherapeutic values of the particular program being evaluated. Lastly, the system maintenance dimension includes order and organization, program clarity and staff control subscales. These are directly related to the order and functioning of the system. The subscales are further defined in Table 1.

Using the Ward Atmosphere Scale it is possible to differentiate one treatment setting from the next and attempt to discern which programs are more effective. Price and Moos (1975) used the WAS to categorize treatment environments. They evaluated 144 treatment programs and
clustered them into six types of programs. Those programs were identified as therapeutic community, relationship oriented, action oriented, insight oriented, control oriented and disturbed behavior.

Therapeutic community programs score highly on relationship and treatment program dimensions with lower emphasis on the system maintenance dimension. Therefore, these treatment programs emphasize patient involvement in treatment, open expression of feelings (including anger and aggression) and individualized attention to the personal problems of patients. Program planning, attention to the physical environment of the unit and staff enforcement of rules are not as strongly emphasized. This type of program most closely resembles the "therapeutic community" developed by Maxwell Jones. Relationship oriented programs differ from therapeutic community programs in that more emphasis is placed on planning and rules. There is also more emphasis on the quality of the relationship between the patients and staff. Action-oriented programs are characterized by low scores on all dimensions except for autonomy and staff control. These programs encourage patients to be self sufficient. Insight oriented programs have a moderate level of staff control with an emphasis on personal problem orientation and expression of anger and aggression. Inversely, control oriented programs are characterized by a high level of staff control of patient behavior. Strict
rules with highly structured programming are characteristic of such programs. Disturbed behavior programs may be defined as those programs whose aim is to manage acutely disturbed and aggressive patients. These programs score higher in program clarity and expression of anger and aggression.

The authors found a relationship between the program type and the type of institution where the program is housed. In university hospital settings, therapeutic communities were more likely to be found. Whereas, a state hospital was more likely to hold action or control oriented programs. As the program evaluated in this study is housed in a university hospital setting, it was predicted that the program would be consistent with a therapeutic community as described by Price and Moos.

Several studies have emerged to identify the characteristics of effective treatment programs. Effective programs may be defined as those programs with a low rate of readmission. Kellum et al. (1967) studied a group of schizophrenic patients from twelve wards in four hospitals. The authors examined the relationship between ward atmosphere and short term treatment outcome. They found that patient behavior variables, such as social grouping, degree of disturbed behavior, etc., were better predictors of patient improvement than system maintenance dimensions, such as census, patient-staff ratio, etc. An unexpected finding was that those wards which emphasize self
sufficiency, such as an action-oriented unit, had the least improvement of patient behavior. It may be hypothesized then, that specific patient groups may improve more rapidly in different settings.

Ellsworth et al. (1971) studied adult patients from five VA Hospitals on nineteen units using the Perception of Ward Scales (POW). They found two distinctly different types of units, the efficient and the effective. The efficient unit was characterized as having a higher patient release rate than the effective unit. Ellsworth et al. (1981) found that nursing staff had negative perceptions of these wards. These units do not involve patients of nursing staff in the treatment plan. Conversely, the effective units were characterized by a low patient return rate. These units allow patients and nursing staff to be active participants in treatment planning. This is consistent with the essential elements of Jones' "therapeutic community."

Indeed, the authors stated that perceived treatment environment was more highly and consistently related to treatment outcome than ward size, staffing or patient character.

However, others view better staffed programs to have a patient and staff perception of a more supportive environment which emphasizes the relationship dimensions. This, in turn, is associated with successful outcomes (Price & Moos, 1975). Friis (1986) found staff availability versus
staffing, per se, to have a stronger impact on treatment outcome. Staff turnover, conversely, was found to be detrimental.

**Patient Versus Staff Perceptions**

Weinstein (1981) reviewed the quantitative research on patients' attitudes towards mental hospitalization. The results were largely favorable in terms of attitudes expressed by patients. The patients rated staff in a positive manner in terms of accessibility, receptivity, support and training. Ratings were less favorable in the areas of staff permissiveness and control. In addition, patients in university hospitals tended to express more positive views than those in state or veteran's hospitals. Research comparing staff's and patients' perceptions were found to have inconsistent findings.

It is generally felt however, that it is important to evaluate both the patient and staff perception of the therapeutic milieu. Congruence between patients' and staff's perceptions has been considered to be favorable (Moos, 1974). However, differences may also be utilized as useful information in evaluating a treatment setting. Herrera and Lawson (1987) utilized unfavorable findings (negative perceptions by staff and patients) to improve the milieu. The WAS was first administered to the patients and staff of a recently converted research unit of a state hospital. The unfavorable results were then presented to
the staff and several consultation sessions followed. From the results, the milieu was altered in a therapeutic manner. After three months, the WAS was readministered. Significant improvements were reported in both patient and staff perceptions. The WAS was similarly used to evaluate changes implemented by staff in other studies (Emslie et al., 1984; Eriksen, 1987).

Main, McBride and Austin (1991) proposed that differences in staff and patient perceptions were to be expected and were influenced by the rater’s role in the environment. Staff members may be expected to rate the environment more favorably as they are more invested in it. Attention to the differences can assist staff in determining whether the patient’s perception of the milieu coincides with the mission of the treatment team.

Also utilizing the WAS, Steiner, Haldipur and Stack (1981) addressed the question of whether or not it is possible to create a therapeutic community on an acute short term adult inpatient unit. The authors evaluated six units of this type. Three of the units were designated to be run as a therapeutic community. The remaining three were operated as structured milieu settings. They differed in that the therapeutic communities emphasized open communication, active participation by patients and staff and deemphasized rules and strict adherence to order. The patients and staff were administered the WAS at two time
periods, a year apart. The results indicated no significant
differences between groups. The authors suggested that the
failure to find differences in staff and patients
perceptions was due largely to the increasingly short stay
of patients. (i.e., twenty days) They proposed that these
lengths of stay do not allow a sense of community to
develop, despite maximum effort by staff. Others, however,
have demonstrated the effectiveness of brief psychiatric
hospitalization (Lieberman & Strauss, 1986; Braun et al.,
1981; Kirschner, 1982). These studies were conducted on
units with stays of an average of thirty days.
Interestingly, Steiner (1991) also reported success in
maintaining a therapeutic community on a child/adolescent
unit with an average stay of thirty days which is discussed
below.

Most studies evaluating effectiveness of treatment
environments were conducted on adult units. The paucity of
research conducted on child/adolescent units may be due to a
lack of inpatient units available for the care of children
and adolescents with psychiatric problems. The few existing
studies were reviewed.

Children’s Studies

Steiner (1982) evaluated a child/adolescent
psychosomatic unit at Children’s Hospital at Stanford. The
14 bed unit housed children and adolescents with primarily
psychosomatic disorders such as asthma, diabetes, etc. The
patients were the age range of 1-20 years. The average length of stay was 40 days. The staff-patient ratio varied from 2 to 1 to 3 to 1 with 1 to 1 staffing available if necessary. An adapted version of the WAS, WAS Form K (Kids), was utilized to evaluate the environment. The WAS Form K was given to 75% of the staff and 77% of the patients over a two month period. Steiner found the unit to be perceived in a manner consistent with a therapeutic community as defined by Moos. Also, it was found that the staff viewed the unit in a slightly more positive manner than the patients. This finding is consistent with the findings from adult studies. The unit was found to be an active one where both patients and all levels of staff are involved and supported. Personal problems of patients and open expression of feelings were emphasized in this program.

In addition, Steiner et. al. (1983) compared the psychosomatic unit above with a general pediatric unit in the same hospital. This was researched in order to delineate what was an effect of programming versus the nonspecific hospital setting. This study found the psychosomatic unit to be perceived as having a greater emphasis on the relationship dimension as well as the system maintenance dimension. Also, a higher level of activity in treatment planning was found on the psychosomatic unit.

Terry et al. (1984) compared the same two units to evaluate how social planning affected the perceived
environment. The two units vary by types of social processes that occur on a daily basis. The psychiatric unit was a decentralized, multidisciplinary unit with deliberate social planning and the pediatric unit was a more traditional ward with centralized authority and decision making. The psychiatric unit was found to place a stronger value (as measured by the WAS) on the relationship dimension than the medical unit. Also the staff of the psychiatric unit was found to be more cohesive than the medical unit’s staff. Unexpectedly, the authors found the psychiatric unit to have a significant disparity between the patients’ perceptions and the staff’s perceptions of the milieu. The authors attributed the differences to the young age of the patients, lack of experience with psychiatric units, and to the patients’ degree of psychopathology.

Steiner (1991) reevaluated the psychosomatic unit after ten years of operation. The length of stay had been shortened from forty days (1981) to thirty days (1991). The author found that despite changes in health care delivery the unit remained stable. The profile remained consistent with that of a therapeutic community. Also, the correlation between patients’ and staff’s WAS scores improved. The author attributed this to a maturational effect caused by an increase in staff experience.

Emslie et al. (1984) evaluated a similar child psychiatry unit at two points in time, before and after the
unit director changed. The data were compared with two different milieus. The results indicated a significant difference between staff's and patients' perceptions of the unit. Particularly, relationship and treatment dimension variables were rated higher by staff. Due to this finding, program changes were initiated with an improvement in convergence of scores. Thus, the WAS may be used as a tool to evaluate the effectiveness of a change or intervention.

McPeters (1984) measured the milieu perceptions of staff and patients on the same child/adolescent unit as studied by Emslie in 1981 and 1982. The unit was locked at that time and held a sixteen bed maximum. The average length of stay was forty-five days. Typical diagnoses included conduct disorder, separation anxiety disorders, depression, anorexia and other psychosomatic disorders. Thirteen patient-subjects were administered the WAS Form K. The age range of the patient-subjects was nine to sixteen. Staff-subjects were administered both the WAS Form K and The WAS Ideal Form. The Ideal Form uses identical questions as the WAS Form K (also referred to as the Real Form). However, the subject is asked to answer the questions according to their ideal milieu. In addition, ten staff members were given an additional ten item questionnaire to obtain information regarding job satisfaction. Thirty-seven staff members, who had been employed a minimum of two months were tested. The age range for staff-subjects was 21 to 66.
Independent variables included sex, shift worked, full-time versus part-time, employment classification, administrative versus non-administrative and employment duration. Dependent variables were produced from real and ideal forms and converted to standard scores. Means were computed for each category.

Patient-subjects were read the directions for the test and supervised in groups of up to four. Staff-subjects were randomly assigned into one of two groups. One group received the ideal form first and the other group received the real form first. Each group was administered the alternate form in a minimum of two weeks. Ten staff members took the additional questionnaire while the tester rated their responses.

The results of the staff-patient comparison were remarkably congruent. The patients rated the milieu the same as the staff had for eight of ten subscales. The patients rated the order and organization scale higher than the staff. Also, the staff rated the staff control scale higher than the patients did. The author suggests that the elevated staff control scale may be a compensation by staff for their perceived lack of order and organization. Staff real scores closely matched ideal scores in the areas of anger and aggression, practical orientation and autonomy. It was derived from other scale ratings, that the staff wished for greater emphasis on the relationship variables of
involvement, support and spontaneity. Also, the staff desired a greater amount of program clarity, personal problem orientation and order and organization with less staff control.

In comparison of night shift versus day shift, the night shift viewed the unit in a more positive manner both realistically and ideally. The night shift perceived a higher press towards relationship variables, where the day shift perceived higher emphasis on anger and aggression and staff control. The author attributed this finding to the different roles of staff due to the daily schedule. The day shift tends to be more highly structured with school, meetings and groups. The night shift is more loosely structured with more time for personal problems to be explored.

The author also explored the staff's level of satisfaction with their roles on the unit. Specific cases of non-satisfied staff were reviewed. This aspect of the study was not duplicated below.

Overall, the author found the unit to fall within the therapeutic community range as described by Moos. The unit was found to emphasize the relationship and treatment dimensions which is attributed to effective units. Discrepancies between day and night shift workers were found and were attributed to the different schedules of the day
and night shift. The author suggested allowing workers to rotate shifts to minimize this discrepancy.

The unit evaluated in the present study has been evaluated at previous times by Emslie et al. and McPeters as above. Specifically, the study described below addresses the question of how changes to the child/adolescent unit that have occurred over a period of eleven years have affected the unit in terms of being a therapeutic community. Primarily, these changes are that the unit is no longer locked, and the average length of stay has decreased to 28 to 30 days with a higher acuity of patients. A moderate amount of staff turnover has occurred as well as a 100% turnover in patients. It is important to reassess the ward atmosphere of the unit to see if the sociotherapeutic profile has changed. The results will be used as a means of objectively measuring and defining the changes in perception of the milieu by patients and staff over time and the level of convergence in each group's perceptions.

The purpose of the present study was to objectively measure the ability of a child/adolescent unit to maintain a therapeutic community over time, in terms of how patients and staff perceived their environment, given the restrictions of the current health care system. This study specifically analyzed differences in patients' versus staff's perceptions, day shift versus night shift (staff) perceptions and changes in such perceptions over time.
Ancillary questions as described above were also be addressed.

Hypotheses

Hypothesis 1. It was expected that the unit would continue to fall within the therapeutic community profile as described by Moos. A therapeutic community would be expected to have above average relationship and treatment (also called personal growth) dimensions with below average system maintenance dimension scores. The patients are described as active and involved, and they are encouraged to express their feelings and work on improving their personal problems. This type of program tends to be disorganized and lack clarity, partially due to individualized treatment orientation. On this particular unit, it was predicted that the system maintenance scores would be even lower than in previous years due to the open policy of the unit. An additional predicted result of the open door policy was that higher patient autonomy scores would be evidenced in 1993 versus previous years. Relationship and treatment dimensions were predicted to remain strongly emphasized. However, such dimensions were likely to be perceived as having less emphasis than in previous years due to time restraints.

Hypothesis 2. Staff's and patients' perceptions were predicted to continue to be divergent. Staff were expected to view the unit more positively than the patients due to
the fact that they are more invested in their environment. Also, patients were expected to view their environment more negatively based on the fact that they were experiencing significant mental illness. It follows then that the more seriously ill child or adolescent would perceive the environment more negatively than their less ill peers.

Hypothesis 3. Differences in day shift versus night shift were expected to be of less magnitude than in previous years due to the frequent use of alternative schedules spanning both shifts.

Hypothesis 4. Ideal and Real staff scores were expected to remain discrepant. However, it was predicted that the staff would have become less "idealistic" in 1993 than in 1984, due to imposing restraints on time and care delivered.

Hypothesis 5. Additionally, it was predicted that the staff's perception would not be affected by a need to appear socially desirable (i.e. Crowne-Marlowe scale), as the staff expressed a desire to evaluate their environment truthfully.

Hypothesis 6. Furthermore, the administrative staff was anticipated to view the unit in a similar fashion as those that are working in non-administrative roles as was reported in 1984.
CHAPTER II

METHOD

The Unit

The milieu to be evaluated is a sixteen bed inpatient unit housed at Children’s Medical Center, a university hospital associated with the University of Texas Health Science Center of Dallas, Texas. As mentioned above, during the time of previous data collections included in this study (1981, 1982 and 1984), the unit was locked. During the 1993 data collection, the unit was open or unlocked.

Staff Subjects

The staff group included all disciplines. Psychiatrists, social workers, nurses, milieu therapists, teachers, and psychologists participated. The 1981 and 1982 staff groups were each comprised of 19 staff members. The 1984 staff group had 35 subjects. In 1993, 35 of 38 eligible staff members chose to participate in the study. In accordance with the previous studies cited above, a staff member must have been employed for at least two months prior to being eligible for this study. Seven males and twenty-eight females comprised this subject group and ranged in age from 23 to 65 years old (mean age 34 years, 8 months).

The staff at the present time consists of two attending child and adolescent psychiatrists, two psychiatric fellows,
five psychologists, eight psychiatric nurses, one nursing
director and numerous milieu therapists (previously titled
child care workers). In addition, there are two part-time
social workers and three teachers. The staff/patient ratio
averages 3:1, with more intensive staffing available if
necessary. Patients participate in individual, group,
family and milieu therapies. Children participate in school
which is within the Dallas Independent School District.

Patient Subjects

The subjects included patients who were being treated
in the Psychiatric Unit of Children's Medical Center.
Typical diagnoses of patients include depression,
oppositional defiant disorder, attention-deficit disorder,
anorexia and also include medical diagnoses with a
psychological component such as diabetes or asthma. The
average lengths of stay has significantly decreased from 63
days in 1982 to 45 days in 1984 and is currently (1993) 30
days. Children who voluntarily agreed to participate in the
study and who were able to understand the questions were
included. The 1981 and 1982 patient groups were comprised
of 13 patients each. The 1984 group also had 13 patients.
In 1993, 25 children between the ages of 6 and 18 were
included. The mean age of the patients was 11 years, 8
months, with 14 males and 15 females participating. Those
children who were classified as mentally retarded or
actively psychotic were excluded from the present study.
Consent forms for patient-subjects were signed by both the child and his or her parent or guardian prior to inclusion into the study.

Measures

The WAS Form K (Kids) was utilized for the Real Form of the WAS. The WAS Form K was developed by Steiner (1982) as an adapted version of the WAS for use in children. The syntax and vocabulary were merely simplified. Steiner reported a correlation of $r = .80$ with the WAS Form K and the standard WAS. The WAS itself was developed by Rudolph Moos (1974), as described previously. The WAS has been extensively used for evaluating adult treatment environments. Reliability has been shown to be good with test-retest correlations of .76 for patients and .83 for staff at a two year interval (Steiner, 1991). The Ideal Form used was identical to the Real Form, however, staff-subjects were instructed to answer according to their ideal of the milieu.

The Crowne-Marlowe scale was used to measure social desirability (Crowne & Marlowe, 1960) of staff subjects. This scale has ten true or false items which reflect the degree to which a subject may wish to appear socially acceptable. It has more than adequate reliability and validity (Crowne & Marlowe, 1960).

The Brief Psychiatric Rating Scale for Children (BPRS-C) was used with the patient subjects. This scale was
developed for the purpose of efficiently and rapidly assessing and describing psychiatric symptoms in children. The scale involves rating patients in 16 symptom areas. The symptom areas were developed using factor analysis from symptoms found commonly in clinical practice (Overall & Pfefferbaum, 1982).

**Design**

In the 1981 and 1982 studies, staff and patients were given the real form of the Ward Atmosphere Scale, Kids Form (WAS-K). In 1984, real forms were completed by patients, whereas, staff completed both real and ideal forms. In 1993, patients completed the real form of the WAS-K only. The staff completed real and ideal forms of the WAS-K. In addition, staff-subjects completed the Crowne-Marlowe scale. Also, the investigator used the BPRS-C to grossly determine the degree of psychiatric illness of the patient. The staff was randomly assigned to one of two testing groups. The first group received the Real Form first with the Ideal Form given in a minimum of two weeks time. The second group received the tests in the opposite order.

Dependent variables were generated from Real and Ideal Forms. Independent variables include staff versus patient perceptions, dayshift versus night shift and time. In accordance with previous studies, the night shift included both the evening shift (3-11) and true night shift (11-7), due to the small numbers of true night shift staff. The
above data were compared with the data obtained in 1981, 1982, and 1984. First, the data were analyzed using a 2 (staff versus patient) by 4 (time, 1981, 1982, 1984, 1993) ANOVA with real WAS-K scores as dependent variables. Secondly, a 2 (day shift versus night shift) by 2 (time, 1984, 1993) MANOVA with both real and ideal scores as dependent variables was carried out.

Also, relationships between patient perceptions based on severity of illness were explored by intercorrelating BPRS-C scores and Real Subscale scores. To explore the impact of social desirability on staff perceptions, Crowne-Marlowe scores were intercorrelated with Real subscale scores. Administrative staff versus non-administrative staff in 1984 versus 1993 were tested by a 2 x 2 repeated measures MANOVA. Lastly, the differences between staff’s ideal and real perceptions were calculated and compared for 1984 and 1993 (Real versus Ideal x Time 1984, 1993) with repeated measures MANOVA.
CHAPTER III

RESULTS

Differences in unit perception over time (staff versus patients x 1981, 1982, 1984 & 1993) were tested via a 2 x 4 ANOVA. Main effects of the unit (staff versus patient) were significant at the multivariate level, $F(10, 154) = 17.69, p < .001$. Univariate analyses suggested that these effects were common to all subscales, $F(1, 163) > 8.83, p \leq .001$. Inspection of means indicated that for the variables of Order and Organization (OO) and Staff Control (SC) the staff scores were lower than the patient scores. On the remaining eight subscales the staff scores were greater than that of the patients.

Main effects for year (1981, 1982, 1984 & 1993) were significant at the multivariate level, $F(30, 468) = 2.06, p < .001$. Univariate analyses suggested that these effects were specific to the Involvement (I) scale, $F(3, 163) = 3.80, p < .05$, and the Support scale (Sp), $F(3, 163) = 4.52, p < .01$. Inspection of means indicated that 1994 means were greater than those of 1982, which in turn, were greater than that those of 1984, which in turn, were greater than those of 1981 in terms of both the I and Sp scales. The interaction effect for year by staff versus patient was statistically
significant, $F(30, 468) = 1.50, p < .05$. Univariate analyses again suggested that such effects were specific to Involvement, $F(3, 163) = 2.65, p < .05$ and Support, $F(3, 163) = 3.97, p < .01$. Inspection of means (see Table 1) indicate that for the Involvement scale and the support scale, staff scores are greater than those of the patients for each of the four years. The greatest differences between staff’s scores and patients’ scores were reported in 1981 and 1982. In the support scale, the 1981 differences were the greatest. Each subsequent year scores of patients and staff become increasingly closer with 1993 having the least differences. This is also true of the Involvement scale, but to a lesser extent.

Differences in day shift versus night shift by year (1984 and 1993) were tested with a MANOVA. Main effects of year were significant at the multivariate level, $F(20, 44) = 3.54, p < .001$. Univariate analyses suggested that these effects were specific to the Involvement and Staff Control scales (Real) and the Anger and Aggression and Staff Control scales (Ideal), $F(1, 63) \geq 4.19, p < .05$. Inspection of means (see Table 2) indicated that the staff perceptions for the year 1984 were greater than the 1993 scores for the variables of Staff Control (both real and ideal) and Anger and Aggression (ideal). For the variable of Involvement (real) 1984 scores were less than those of 1993. Main effects of shift were significant at the multivariate level,
Univariate analyses suggest that these effects are common the variables of Support, Anger and Aggression, Order and Organization, Program Clarity and Staff Control (real) and Anger and Aggression (ideal), $F(1, 63) = \geq 4.20, p < .05$. Inspection of means (see Table 3) indicate that the day shift scores were less than the evening shift for the variables of O0 SP, AA, PC (real). For the variables of SC (real) and AA (ideal) the day shift scores were greater than those of the evening shift. The multivariate effect for the year by shift interaction was not significant.

A Pearson correlation was calculated between BPRS-C and real WAS-K patient scores. The correlation was significant at the .05 level being at least -.40 for the scales of Autonomy, Practical Orientation, Order and Organization and Program Clarity, wherein each of these scales correlated negatively with the BPRS-C. The second correlation was done between the staff Crowne-Marlowe score and the real WAS-K staff scores. This correlation was not significant.

The differences between administrative versus non-administrative staff by years (1984 & 1993) was tested by a MANOVA. Main effect of year was significant at the multivariate level, $F(20, 44) = 1.85, p < .05$. At the univariate level, the variables of Personal Problem Orientation (real) and Anger and Aggression (ideal) were
significant, $F(1, 63) = 5.26, p < .05$. Inspection of means indicated that for both of these variables, 1984 scores were greater than those of 1993. Main effects of administrative versus non-administrative staff was not significant. The interaction between administrative and non-administrative staff scores by year (1984 & 1993) was significant, $F(20, 44) = 1.85, p < .05$. In 1984, the non-administrative staff scores for (real) Personal Problem orientation were higher than that of the administrative staff. In 1993 the reverse was true. Whereas, for the ideal Anger and Aggression scale in 1984, the score for non-administrative staff was greater than that of the administrative staff for that year. In 1993, the non-administrative staff had a lower score than the administrative staff. Also, there is a greater discrepancy between 1993 administrative and non-administrative scores.

Lastly, the difference between real and ideal staff perceptions by year (1984 and 1993) were tested by using a repeated measures MANOVA. Main effect of year was significant at the multivariate level, $F(10, 56) = 3.20, p < .01$. Univariate analysis indicated that such effects were significant for the Anger and Aggression scale (real and ideal), $F(1, 65) > 10.99, p < .001$. Inspection of means indicated that the 1984 staff scores were less than the 1994 staff scores for the real scale. The reverse was true for the ideal scale.
The main effect for real versus ideal was significant at the multivariate level, $F(10, 56) = 19.96$, $p < .001$. All of the variables are significant at the univariate level, $F(1, 65) = > 11.52$, $p < .001$. Inspection of means indicates that all real scores are greater than ideal scores with the exception of Staff Control (see Table 3). The interaction between real versus ideal and year (1984, 1993) was significant at the multivariate level, $F(10, 56) = 4.20$, $p < .001$. At the univariate level the variables of Involvement and Staff Control are significant, $F(1, 65) = > 7.60$, $p < .01$. For the subscale of Involvement, the 1993 Ideal is slightly higher than the 1984 ideal. However, the 1993 real scores more closely proximate the ideal. For the staff control subscale, the 1993 staff scores for the ideal are lower than that of 1984. The real scores are also lower. Again, the real and ideal scores are closer in proximity than the 1984 scores.
CHAPTER IV

DISCUSSION

The first hypothesis predicted that the unit would continue to fall within the therapeutic community profile as described by Moos. Inspection of the 1993 staff and patient profile supports this hypothesis. The relationship and treatment variables are higher than the system maintenance variables. This is consistent with the profile associated with both university-based units and therapeutic communities as described by Moos (1989). This is a favorable profile for the unit, as the profile parallels that of its philosophy. More specifically, the first hypothesis predicted that the system maintenance scores in 1993 would be even lower than in previous years due to the unit now having open doors. In addition, it was predicted that patient autonomy scores would be higher due to the openness of the unit. Also, it was predicted that the relationship and treatment dimensions would remain higher than system maintenance dimensions but less so than in previous years due to time restraints. Unexpectedly, the subscales which were statistically significant across the years were those of Involvement and support. The open-door policy has not had an effect on either the staff or patient perceived
levels of autonomy or staff control as expected. It would appear that the overall method of managing or perceived control of patients has remained unchanged. The level of involvement is higher than that of 1981 and 1984 and is nearly equal that of 1982. Whereas, the perceived level of support is lower in 1993 than in each of the previous years. It would appear then that the time restraints imposed on the treatment environment in 1993 may impact the ability of staff and patients to develop and maintain a supportive relationship with each other.

The second hypothesis predicted that the perceptions of the staff and patients would continue to be divergent. Staff were expected to view the unit more positively than the patients. Also, more seriously ill children or adolescents were expected to view the unit more negatively than their less ill peers. The results were as expected. In 1993, the staff generally continue to view the unit in a more positive light than the patients, as in previous years. Additionally, the staff as a whole view the unit more favorably than the patients, regardless of year.

One would assume that the staff, being more invested in their place of work, would benefit from looking on the unit with a favorable eye. The patients' perceptions may also be affected by the nature of their illness, level of motivation for treatment and a variety of other factors. Compounding the differences in the perceptions of the staff versus the
patients is the fact that a large number of patients were excluded from the sample due to level of illness or age. Whereas, nearly all staff participated in the study. Additionally, the staff's perceptions were based on their experience with all of the patients regardless of their age or level of illness.

It is interesting to note that the patients' perceptions of the unit follow a parallel profile as that of the staff for the relationship and treatment dimensions. The patients see the unit in much the same way but to a lesser extent. Both the patients and staff perceive the unit's strongest attributes to be the extent to which patients become active participants in the program (Involvement) as well as the extent to which patients work on practical goals and prepare for return to their home environment (Practical Orientation). Both patients and staff perceive the unit to be substantially supportive and focused on expression of feelings (including anger) as well as seeking out solutions to patients problems (Support, Personal Problem Orientation, Anger and Aggression). Patients and staff also perceive the unit to allow for independence (Autonomy), but to a lesser extent than other variables. The patients perceive the unit to be average in regard to the degree of structure and organization it provides (Order and Organization, Program Clarity, Staff Control). The staff, however, perceive the unit to be less
orderly (00) and less rule-oriented than the patients. Conversely, the staff perceive the unit to have a high degree of program clarity. This would indicate that although there appears to be an explicit routine to follow, in actuality, the schedule is not met. It would appear that the level of staff involvement in the maintenance of relationship and treatment dimensions may detract from the overall level of organization (as perceived by staff).

In terms of the profile of staff’s versus patients’ perceptions over the years, again the subscales of involvement and support were significant. What is noteworthy in this comparison is that the perceptions of the staff and patients have come closer together over time. This would support the hypothesis that staff is perhaps more likely to see the unit in a more realistic manner or are more able to consider the patient’s point of view in evaluating the unit.

Additionally, it was determined that the degree of patient illness, as rated by the investigator using the BPRS-C, was negatively correlated with perceptions of the unit. More specifically, the more severe the child’s illness the more negatively the patient viewed the unit in terms of Autonomy, Practical Orientation, Order and Organization, and Program Clarity. It would be sensible to suggest that the more ill the child, the more restricted he or she would be on the unit. For example, a suicidal or
homicidal child would be watched more closely, and would be restricted to the unit. Whereas, a child who is less ill would be allowed to go on fieldtrips and to the playground. It is fairly easy to relate this scenario to the levels of autonomy reported by the patients. It is more difficult to speculate as to why a more severely impaired child would perceive the unit as less practically oriented, less organized and less clear. The individual diagnoses could help to explain these perceptions. This in fact, would be an interesting topic for further study.

The third hypothesis predicted the 1993 day shift versus night shift perceptions to be less divergent than in previous years. The differences in year were significant for the Real scales of Involvement and Staff Control. The Ideal scales that were significant were Anger and Aggression and Staff Control. For the Involvement scale, the 1984 staff scored the unit lower than the 1993 staff, as previously discussed. The 1984 staff group perceived the unit to place more emphasis on rules, regulations and controlling patients. This staff group also identified the perceived level of staff control to be closer to their ideal than the 1994 group who prefers to exert less staff control. Similarly, the 1993 staff ideally prefer patients to be less free in terms of expression of their anger. The 1994 staff prefers a more controlled environment than their 1984 counterparts. There is a general feeling among the 1994
staff that the patients are in fact more violent and aggressive than in previous years. This however, has not been shown statistically (the real levels of Anger and Aggression are slightly higher in 1994 than in 1984, but are not statistically significant). However, if this were to be true, it could offer in part an explanation for the differences in the 1984 and 1993 groups. Another plausible explanation is that the 1984 staff group could have been more experienced and therefore more comfortable with the expression of anger (even if expressed negatively). However, the level of staff experience was not measured and is therefore not available to prove or disprove this theory.

Independent of year, there were shift differences in perceptions of the unit. In general, the morning (7 a.m. to 3 p.m.) staff perceived the unit to be less supportive with less ability to allow for expression of angry feelings. In addition, the morning staff also perceived the need to control the patients with rules and regulations and provided more program clarity in the form of a routine than the evening staff. Ideally, the morning staff preferred more expression of angry feelings than the evening staff. These differences in perception are easy to explain in light of knowledge about the routines of both the day and evening shifts. The day shift's activities are tightly scheduled due to school, therapy groups, and most highly structured activities occurring on the day shift. Children are
expected to participate in each of these activities and are not allowed much, if any, free time during the day shift. This is in sharp contrast to the evening shift, which has a much looser schedule with the primary tasks revolving around interactions of patients, staff and families. Relative to 1984, in 1993, the staff continued to report differences in perceptions according to shift worked as discussed above. The alternate work schedules did not decrease the differences in perceptions of the staff as expected. The number of staff who participate in alternate work schedules is perhaps not large enough to affect the unit in this manner.

The fourth hypothesis predicted that the Real and Ideal staff scores would continue to be divergent, however, less so in 1993 than in previous years. The year effect was significant for the Anger and Aggression scale (both Real and Ideal). The 1984 staff reported the unit to be more open in allowing patients to express feeling of anger than the 1994 staff. In contrast, the 1984 staff would ideally like for the patients to be able to express anger more so than the 1994 staff. In light of these differences, it may be helpful to look at the level of convergence for the Real and Ideal perceptions of the Anger and Aggression Scale. The 1993 staff perceptions of real versus ideal are more widely discrepant than the 1984 group. This finding points out a particular aspect of the unit which may lead to decreased
staff satisfaction with the workplace. This discrepancy might be improved by increased staff inservices regarding dealing with angry feelings and aggression to increase this particular staff group's comfort level with the expression of anger.

Independent of year, the staff real and ideal scores varied significantly for all ten subscales. This finding is to be expected as ideals are rarely met, especially in terms of restrictions of time, staff energy, and a myriad of other hindrances in reaching the perfect milieu.

The interaction between year (1984, 1993) and real versus ideal were significant for the scales of Involvement and Staff Control. The 1993 staff perceived the milieu to be more supportive of patients taking an active role in their environment than the 1984 staff. Also, this perception more closely approximates that of the ideal level of involvement. Similarly, the 1993 staff perceived lower levels of staff control which, in turn, more closely approximates that of their ideal. This finding indicates that in terms of Involvement and Staff Control, the 1994 staff is more satisfied with their work environment.

The fifth hypothesis predicted that the staff's perception would not be affected by a need to appear socially desirable. As expected, this correlation was not significant. The staff apparently responded truthfully with regard to how they perceived the environment and were not
concerned with whether or not their responses were socially acceptable.

The sixth and final hypothesis predicted that the administrative staff and non-administrative staff would view the unit similarly. The results supported this hypothesis in that the main effect of administrative versus non-administrative staff was not statistically significant. However, when 1993 administrative and non-administrative staff scores were compared to 1984's scores there were significant differences. The real subscale of Personal Problem Orientation was perceived differently by these groups. The 1984 non-administrative staff viewed the unit as being more problem-solving oriented than the administrative staff. The reverse was true for 1993. In addition, the 1984 administrative staff ideally would like to have seen less expression of anger when compared to the non-administrative staff. In 1993, the non-administrative staff desired less expression of anger than the administrative staff. On this particular unit, the administrative staff has remained stable over a period of years. More specifically, the Medical Director, Assistant Medical Director, two members of the psychology staff, the director of the school program and one of the two social workers were present for the 1984 data base collection. However, the non-administrative staff has had an almost complete turnover. Perhaps the differences described above
may be due to a seasoning or maturational effect such as that described by Steiner (1993). The administrative staff, being more experienced, are more comfortable with the expression of anger and are more confident of the ability of the unit to handle this anger. Other than these areas, the hands on staff and the administrative staff viewed the unit similarly.

These findings suggest that the sociometric profile of the child and adolescent psychiatry unit remained remarkably stable over the last 11 years by both staff's and patients' perceptions. This speaks highly for the unit considering decreased length of stays, increased acuity of patients and decreased staffing patterns. In fact, two of three relationship variables were even higher in 1993 than in previous years. The unit continues to place relationship and treatment variables as a higher priority than system maintenance variables such as schedules, routines and rules. This is consistent with the description of a therapeutic community which is what the unit studied has been striving for. The perceptions of the staff varied according to shift worked. This is probably due to the varying degrees of structure and activities associated with the different shifts.

The patients whose severity of illness was greater tended to view the unit in a more negative light. This has not appeared to affect the overall scores, assuming that the
current patient group is more ill than that of previous years as perceived by staff. This should be viewed as an assumption however, since objective measures of patient illness in previous years was not available. This aspect of the present study would be interesting to pursue in greater detail, possibly in regards to correlation of diagnosis to perceptions of the unit.

Not surprisingly, the unit staff continues to find the unit to fall short of their ideal unit. However, the 1993 staff did find the unit to be more closely approximating their ideal unit in terms of involvement and staff control. The 1993 staff, however, was less satisfied with the level of expression of anger and aggression. This indicates an area which could be improved by staff education (assuming that the level of aggressive patients cannot be controlled) to increase the current staff satisfaction.

The findings of this study suggest that it is possible to provide a therapeutic community, as a means of treatment itself, despite short lengths of stay. This finding may be helpful in terms of changing the mindset of the psychiatric community who generally view short stays as a negative outcome of the changing health care system. Ellsworth et al. (1972) found that perceptions of the environment are indeed strongly related to treatment outcome. However, further research targeting effectiveness (measured
quantitatively in terms of readmission rate or quality of life measures) of short-term hospitalization is needed.

Additionally, of the literature reviewed, successful treatment environments were reported on those units with an average length of stay of thirty days (Leiberman & Strauss, 1986; Braun et al., 1981; Kirschner, 1982). The one study reviewed which evaluated a unit with a length of stay of less than thirty days (twenty days) failed to provide a perception of a therapeutic environment (Steiner, Haldipur & Stack, 1981). As lengths of stays continue to decrease, new research will be warranted.

In addition, perceptions of patients were highly correlated with the patients' degree of illness in the present study. Additional studies of this nature may be beneficial in the future due to the increasingly ill population of inpatient units.

Limitations of this study include the fact that a selective sample was employed. Consequently, generalizations about the unit, due to differences between patients who were excluded via age or level of disturbance versus those who met the selection criteria, may be limited. This is especially true in light of the fact that a large portion of the unit population was excluded due to the criteria. Also, inpatient hospitalization is now reserved for the very ill including those that are actively psychotic. Therefore, patient perceptions should be
interpreted with this in mind. In addition, the entire staff group that worked on the unit more than two months were included and the staff’s perceptions of the unit were based on their experience with all the patients, not just those that met the criteria. Lastly, the year effects might be overestimated given that different subjects were tested on each occasion.

In summary, these data indicate that the Children’s Medical Center of Dallas Center for Pediatric Psychiatry fared well over the years despite difficult changes with which the unit has been faced. In fact, it would be very interesting and beneficial to retest this unit in the future. After the 1993 data was collected, the unit underwent tremendous changes, in part, due to health care reform. The unit has anticipated shorter inpatient stays and a movement towards day treatment facilities. As a result of this, the center has designed a new off-campus day treatment facility. The inpatient children and adolescents are transported to this facility for daytime programs. Also, concurrent with the move, the unit has undergone programmatic changes. A future study to evaluate the perceptions of staff and patients would serve as an objective gauge to determine how the milieu has been affected by these changes.
APPENDIX

TABLES
Table 1

WAS (Real) X 4 Years (1981, 1982, 1984, 1993)

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*Note.* 0 - 3 = low range; 3.1 - 7.0 = average range; 7.1 - 10 = high range.
Table 2

Weighted Aggregate (Staff and Patient Combined) Means for Involvement and Support Scales

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Note. 7 - 10 = highly supportive or involved; 3 - 7 = average range; 0 - 3 = low range.
Table 3

Dayshift Versus Nightshift Real and Ideal Perceptions for 1984 and 1993

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Note. 0 - 3 = low range; 3.1 - 7.0 = average range; 7.1 - 10 = high range.

49
REFERENCES


