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An Observational Analysis of the Interactions between Institutionalized Mentally Retarded Clients & Direct Care Staff

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AN OBSERVATIONAL ANALYSIS OF THE INTERACTIONS BETWEEN INSTITUTIONALIZED MENTALLY RETARDED CLIENTS AND DIRECT CARE STAFF

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AN OBSERVATIONAL ANALYSIS OF THE INTERACTIONS
BETWEEN INSTITUTIONALIZED MENTALLY RETARDED
CLIENTS AND DIRECT CARE STAFF

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AN OBSERVATIONAL ANALYSIS OF THE INTERACTIONS
BETWEEN INSTITUTIONALIZED MENTALLY RETARDED
CLIENTS AND DIRECT CARE STAFF

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The purpose of this study was to investigate the interactions between direct care staff and the mentally retarded (MR) clients that they served in an institutional setting. It was hypothesized that (a) most of the staff-client interactions, regardless of quality (i.e., positive or negative) and/or level of intellectual functioning, would be instructional rather than conversational or no response interactions; (b) there would be an insufficient amount (i.e., duration and frequency) of conversational interaction, regardless of quality, across intellectual functioning levels; and (c) there would be a greater number of negative no response interactions (i.e., ignoring an appropriate client verbalization) than positive no response interactions (i.e., ignoring an inappropriate client verbalization). The impetus for these specific hypotheses was a concern that overall, in institutional settings, insufficient stimulation through direct care staff-client interaction occurred for proper implementation of individualized habilitation plans across IQ levels.

The subjects were 45 clients currently residing in an institutional

setting in Kentucky. The criterion variable was IQ. The predictor variables were twelve possible combinations of type (i.e., conversational, instructional, and no response), quality (i.e., positive and negative), and amount (i.e., frequency and duration) of staff-client interaction. An experimenter-developed instrument was used to record the observational data of staff-client interactions. The experimenter-developed instrument yielded interobserver agreement, among six observers, ranging from .81 to 1.00; intraobserver stability, over a two-week period, ranged from .86 to 1.00 across the six observers. Subjects were observed four times for six minutes each on a varied schedule across four days.

Data were analyzed using a stepwise multiple regression procedure to determine the most significant model of staff-client interaction for predicting IQ. Pearson product-moment correlation coefficients were also calculated between each of the 12 predictor variables and the criterion (IQ) since the number of subjects ($n = 45$) was small in comparison to the number of predictor variables.

Results of the data analyses supported the experimenter's hypotheses. The stepwise procedure indicated that the single significant predictor of IQ was duration of positive instruction. That is, a significant inverse relationship existed between level of intellectual functioning and duration of staff-client positive instructional interaction ($F = 6.72$, $p < .01$). A Pearson product-moment correlation coefficient ($r = -.37$) confirmed the results of the stepwise multiple regression procedure

indicating a significant inverse relationship between IQ and duration of postive instruction (IPD). Pearson coefficients also indicated significant inverse relationships between IQ and frequency of positive instruction ($\underline{r}$ = -.35), frequency of negative instruction ($\underline{r}$ = -.33), and duration of negative instruction ($\underline{r}$ = -.32). Frequency of positive instruction (IPF), frequency of negative instruction (INF), duration of negative instruction (IND), and IPD shared significant amounts of variance indicating that instructional interactions, regardless of quality or amount, account for the only significant variance across IQ levels. Assuming linearity of the data, the hypothesis that negative no responses would exceed positive no responses across IQ levels was confirmed.

CHAPTER I

INTRODUCTION

Historically, those mentally retarded (MR) individuals unable to reside in family situations due to either insufficient self-help and survival skills or consistent behavior problems have been housed in institutions. In the early to mid-1900s institutions were designed primarily for custodial care of the MR client -- along with the mentally ill client -- away from society's mainstream. However, modern institutions for MRs, some of which serve all levels of MR clients, have committed to an individualized developmental training process (Baumeister, 1970) designed to ready each MR client for his/her least restrictive living arrangement.

Both the complexity and the length of the developmental training process and the designated least restrictive living arrangement depend on the MR client's functioning level, physical handicaps, chronological age, and background. Projected length of time for optimal developmental training of each MR client varies with the complexity of his/her needs. For example, the developmental training process for a severely retarded adult might focus strictly on self-help skills,and the targeted least restrictive living arrangement might be a very highly structured group home. The developmental training process for a relatively high functioning (i.e., mildly mentally retarded) client with emotional problems might focus intensely on psychological counseling and socialization skills. This higher

functioning client might be appropriately placed in a supervised apartment, placed in foster care, or returned to the original family situation.

Since the mid-1900s the Association for Retarded Citizens, along with health service professionals and the government, has been instrumental in creating many community-based, less restrictive living alternatives to the institution. The development of such alternatives has enabled institutions to carry through with their commitments to place MR clients in least restrictive living arrangements once training in the institution is completed. However, the newly created living units now available (e.g., group homes, supervised apartments, and waiver homes which are the adult equivalent of foster care) are not adequate to house all those clients presently designated to be discharged from the institutions. Meanwhile, clients awaiting discharge are assumed to be inappropriately placed in the institutional environment where they have supposedly completed their individual training program.

MR clients often categorized as being emotionally disturbed and/or having behavioral disturbances who are also relatively high functioning (Reiss, Levitan, & McNally, 1982) account for a large portion of the above mentioned, inappropriately placed clients. These higher functioning clients with emotional and/or behavioral disturbances are misplaced in MR institutions because, in many cases, they do not meet the "normal" intelligence qualifications (IQ $\geq$ 90) for facilities designed to deal with emotional or behavioral difficulties. Many authorities feel that

MR clients would be exploited by their peers in facilities designed for higher functioning individuals with emotional and/or behavioral disorders. Yet, these higher functioning MR clients are too high functioning to be trained in with the average group of individuals found in an institution for MRs. In the MR institutional setting, relatively high functioning individuals are (a) given behavioral, psychological, and social training and (b) targeted for discharge into the community-based less restrictive living arrangements designed for MR clients, for lack of a better plan.

The overall recidivism rate for MR individuals who are able to move from the institution to a less restrictive living arrangement is quite high (Sutter, Mayeda, Call, Yanagi, & Yee, 1981). While there is some variability in reported rates -- some research shows the rate to be as low as 36.1% and some as high as 50% -- the frequency with which MR deinstitutionalized clients fail is definitely a concern. Research shows that those clients presenting socially maladaptive behavior in the community-based living arrangements represent a disproportionately large portion of the failures (Sutter et al., 1981; Intagliata & Wilder, 1982). Reiss et al. (1982) suggest that the move to these community placements is highly stressful for the MR client, especially for those with emotional and/or behavioral disturbances.

Given the mixture of the types of MR clients that most institutions for MRs are forced to deal with, it is apparent that a great variety of services must be offered to meet the needs of each client and to provide him/her with the most appropriate individualized training program (Baumeister, 1970). It appears that many of the institutions are aware

of this need for diverse services and have expanded their programs to include intense psychological and behavioral services in conjunction with relatively sophisticated educational training programs. But, the high recidivism rate of the deinstitutionalized MR client suggests that the adaptation of the institutional programming results in positive, though insufficient, changes. Where, then, is the breakdown in the institutional developmental process occurring?

In most MR institutions the individual developmental training programs are created by an interdisciplinary team made up primarily of professionals in psychology, social work, medicine, physical therapy, occupational therapy, speech, special education, and recreation. The majority of the programs are carried out by non-professional, direct care staff. These direct care staff persons often have no previous training in the mental retardation or health services field (Warren & Mondy, 1971). In his 1970 article entitled "The American Residential Institution: Its' History and Character," Baumeister very aptly summarizes the role of the direct care staff person (attendant) as follows:

> No one among the institutional staff is so vital to the programs as the attendants. They are responsible for the day-to-day care, management, and rehabilitation of the residents. For better or worse, the welfare of the patient is in the direct hands of the attendant personnel. The attendants perform a fantastic array of responsibilities, many of which they are not trained to carry out. Why institutional administrators have difficulty recruiting and retaining a highly motivated and competent staff is no great mystery. Inadequate pay

> and low social status account for the low ability level. Salaries are generally below average in the surrounding community . . . Too, they hold a low position in the institution "pecking order". Typically they are the last to be consulted in policy decisions affecting patients and the first to be blamed when something goes awry. About the only formal training that many attendants receive is a brief "orientation" when they first arrive. The most significant training is usually the result of their personal interactions with "veterans" on the ward. What is learned under these conditions may not always serve the best interests of the patients. (pp. 25-26)

Direct care staff, then, spend a great deal of time with the MR clients in an institution as they are required to implement the individual developmental training programs. Therefore, the interactions between direct care staff and the MR clients would be critical in terms of behavioral intervention and the development of socialization and leisure skills (Veit, Allen, & Chinsky, 1976; Warren & Mondy, 1971). Several researchers (e.g., Veit et al, 1976; Blindert, 1975; Das & Hermanson, 1977; Prior, Minnes, Coyne, Golding, Hendy, & McGillivary, 1979) have examined the direct care staff-MR client interaction process in institutions and have concluded that there is too little staff-client interaction in this setting. It is hypothesized by these researchers that this lack of staff-client interaction is a major weakness in the institutional developmental training process. A major concern of the present study is that this breakdown in training through a lack of appropriate stimulating interaction could, in turn, result in failure of a number of clients in their move to a less restrictive living arrangement.

To date much of the research involving staff-client interaction has been done with moderate (IQ 35-49), severe (IQ 20-34), and profound (IQ below 20) MR clients (Warren & Mondy, 1971; Veit et al., 1976; Dailey, Allen, Chinsky, & Veit, 1974; and Das & Hermanson, 1977). Research with these low functioning clients in an institution has examined the amount and quality of interaction time between direct care staff and MR clients. Findings generally indicate that staff spend most of their interaction time carrying out daily duties involving physical and custodial care. Since many modern institutions (a) house MR clients of various intellectual functioning levels, (b) have relatively large numbers of clients awaiting discharge, and (c) house clients with emotional distrubances and/or behavioral disturbances who are institutionalized due to lack of a better placement (Reiss et al., 1982), it seems appropriate to examine the direct care staff-MR client interactions in the institutions across functioning levels. This examination should help determine if (a) lack of staff-client stimulating interaction is specific to the moderate, severe, and profound population, possibly due to their limited abilities to carry on stimulating conversation, or (b) if this lack of stimulation generalizes to the entire institutional MR population. One study by Seigelman and Werder (1974) examined interactions between staff and mild and moderate MR clients. However, the setting was a group home rather than an institution and the results of the study cannot be compared to institutional interactions.

The purpose of this study was to examine the interactions between direct care staff and mild, moderate, and severe MR clients in an

institutional setting to determine if there was a difference in quality (positive vs. negative), amount (frequency and duration), and/or type (conversation vs. instruction vs. no response) of direct care staff-client interactions across client intellectual functioning levels. The individual habilitation programs prescribe entirely different implementations of program plans with higher functioning mildly retarded clients with behavioral or emotional difficulties from those prescribed for the severely retarded individual. Lack of direct care staff differentiation in interaction with the MR clients across functioning levels could possibly be a major weakness in the institutional developmental training process that causes many failures of deinstitutionalized MR clients as they still display maladaptive behavior and social skills.

It was generally hypothesized that no differences in direct care staff-client interactions existed across functioning levels even though the individual developmental training programs were vastly different across levels. It was specifically hypothesized that (a) most of the staff-client interactions across IQ levels and regardless of amount or quality would be instructional; (b) there would be no significant differences in amount of conversation, regardless of quality, across IQ levels; and (c) there would be a greater amount of no responses to appropriate client comments than no responses to inappropriate client comments across IQ levels.

CHAPTER II

LITERATURE REVIEW

The literature concerning institutional direct care staff and MR client interactions is somewhat limited in comparison to the vast amount of literature available concerning the effects of the disadvantages and advantages of institutionalization. The literature examining institutional staff-client interactions appears to be broken down into categories which focus on the effects of these interactions on different aspects of the client's developmental training (i.e., communication, cognition, socialization, and behavior). All of the studies to be discussed except the Seigelman and Werder (1974) study of staff-client interactions in group homes deal with moderate, severe, or profound MR clients. In each of these studies there seems to be a general concensus that too little stimulation through staff-client conversational and social interactions occurs in the institutional setting (Veit et al., 1976; Blindert, 1975; Das & Hermanson, 1977; Prior et al., 1979).

Influence of Staff-Client Interaction on Development of Communication Skills

In a study by Prior et al. (1979) staff-client interactions were examined as a stimulus for language development in MR clients. This study involved 29 moderately to profoundly MR institutionalized clients and 22 direct care staff. Prior et al. found that direct care staff most often ignored client-initiated verbal interactions. They also

concluded that an increased frequency of client verbal responses occurred when direct care staff interacted with the MR clients in conversational as opposed to instructional communication.

It appeared that the level of staff-client interactions was not a sufficient stimulus for the facilitation of language development in MR clients in this particular institutional setting. Prior et al. (1979) emphasized the importance of individual verbal interactions between staff and MR clients in the facilitation of client language development.

Influence of Staff-Client Interaction on Development of Cognitive Skills

Blindert (1975) examined the direct care staff-MR client interactions in an institution to investigate the facilitation of the learning process as a function of the type and amount of MR client-direct care staff interaction. Blindert defines the learning process as the opportunity for the production of novel skills not previously existing in the MR client's repertoire. Seventeen direct care staff and 15 institutionalized moderate or severe MR clients were involved in 35 ten-minute observations during free, unstructured time in the institution playroom. The average number of direct care staff-MR client interactions was a low 0.58 per client per 10-minute observation during the study. Blindert concluded that this institutional living environment was deficient in stimulational interactions and did not promote the client learning process.

Blindert's (1975) conclusion that too little stimulation in the

form of staff-client interaction occurs in the institutional setting appears to agree with the conclusions of Prior et al. (1979). Opportunities for the production of novel skills in Blindert's study refer to interactions in which the client could have learned something through staff training. Less than one opportunity per subject during the entire observation period seems to be inordinately low. The interaction rate per subject is even lower than the rate of opportunities for client learning. Therefore, it seems that Blindert's conclusions are valid in an institutional setting -- staff do not interact in the optimal manner to produce learning or often enough to increase socialization with the MR clients.

Influence of Staff-Client Interaction on Development of Social and Behavioral Skills

The remainder of the literature examining direct care staff-MR client interactions deals with the effects of this interaction process on the development of behavioral and social skills (Warren & Mondy, 1971; Dailey, Allen, Chinsky, & Veit et al., 1976).

Warren and Mondy's (1971) study examines the interaction process between 15 direct care staff and 49 ambulatory institutionalized severely retarded clients. Their observations were done at two separate times on the MR clients' wards. Warren and Mondy found that (a) direct care staff frequently failed to respond to appropriate or inappropriate client behaviors and (b) that,for all behaviors, staff offered infrequent variable ratio reinforcement, thereby causing both the appropriate and inappropriate behaviors to exist indefinitely.

Dailey et al. (1974) examined the interactions between 14 direct care staff and 37 moderately to severely retarded institutionalized clients to determine which clients were responded to most often and most favorably. They concluded that direct care staff interacted most often and more positively to the attractive, likeable, less behaviorally problematic and higher functioning clients than to the clients termed "less desirable" according to an attitudinal rating scale. Dailey et al. further concluded that of the 7,108 direct care staff-initiated interactions only 23% were social interactions, 9% were formal training interactions, and 64% of the interactions were neutral in affect. Dailey et al agreed with Warren and Mondy (1971) that direct care staff predominantly ignored the behavior of the typical client (e.g., severely or profoundly mentally retarded).

Veit et al. (1976) examined the direct care staff-institutionalized MR client interactions process with 37 moderate to severe MR clients and 18 direct care staff. They concluded that these clients experienced relatively few interactions in the context of socialization and/or formal training. They further concluded that client-initiated interactions were ignored one-third of the time and that most of the interactions initiated by staff were neutral instructions.

Das and Hermanson (1977) examined the correlation between degree of physical and mental handicap and the quality of care and training given by the direct care staff for a population of 77 nonambulatory, severely retarded clients. Degree of handicap was measured by the

Adaptive Functioning Scale (Hermanson & Das, 1977). Quality of care and training was measured by the type (i.e., conversation vs. instruction vs. no response) and frequency of staff-client interactions. Das and Hermanson found that the degree of adaptive functioning did not consistently predict the amount or kind of interactions intitiated by the staff. However, the more alert the client was to his/her surroundings, the greater the chance that staff would talk to him/her. Das and Hermanson concluded that institutional care, defined by King and Raynes (1968) as rigid routines combined with (a) little opportunity for the child to learn social skills and (b) little interaction between care-givers and the children, except during physical care, was a problem only on one custodial care ward compared to two developmental training care wards. It was further concluded that the custodial care orientation of direct care staff on the one ward was an administrative program implementation problem rather than a function of the habiliation program itself.

Seigelman and Werder's 1974 study of interactions between direct care staff and MR clients in group homes was reviewed due to the use of mild (IQ of 50-70) and moderate clients as subjects. Their study pointed out differences in behavior and adjustment of MR clients who have never been institutionalized (i.e., cared for by family at home) compared to institutionalized MR clients. MRs entering group homes from institutions displayed significantly higher rates of maladaptive behavior and lower rates of adjustment than MRs who had

not been institutionalized. These findings were substantiated in studies by Sutter et al., 1981; Intagliata & Willer, 1982; Schalock, Harper, & Carver, 1981; Landesman-Dwyer & Sulzbacher, 1981.

The studies examining the effects of staff-client interactions on MR clients' social and behavioral skills support the findings of previously mentioned studies regarding communication and cognitive skills in that too few stimulating interactions occur between staff and MR clients. Dailey et al. (1974) and Das and Hermanson (1977) appear to contradict one another in their findings regarding the relationship of quality and amount of staff-client interactions as a function of social desirability of the MR client. Dailey et al. found that social desirability of the client increased his/her chances of being involved in interactions with staff,while Das and Hermanson found that no pattern could be established linking desirability of the client with quality or amount of interaction. These studies were done with moderate to severe MR clients and excluded mild MR clients who usually have the highest ability of all levels of MR clients to involve themselves in social and behavioral interactions. Seigelman and Werder (1974) did a study which did include mild MR clients, but the study was not restricted specifically to the institutional setting. Their study involved both mild and moderate MR clients and looked at the relationship between staff and clients in group homes as well as the institution. Seigelman and Werder concluded that clear deficits in social and behavioral skills exist at a higher rate in deinstitutionalized

MR clients than in MR clients who have never been placed in an institutional setting.

The recidivism rate of deinstitutionalized clients of all MR functioning levels seems to warrant a study of the interactions between those individuals most directly involved with the institutional developmental training process (i.e., the direct care staff) and the MR clients. If staff-client interactions are infrequent and/or undifferentiated according to client degree of intellectual functioning, then individualized developmental training is not being validly implemented. Therefore, behaviors, social skills, communication skills, and cognitive abilities are not being addressed as prescribed to ready the MR clients for a less restrictive living arrangement.

CHAPTER III

METHOD

Subjects

The subjects in this study were 45 of 58 clients in an intermediate care facility for the mentally retarded and developmentally disabled (ICF-MR/DD) in Kentucky. According to Kentucky State Regulations an ICF-MR/DD is defined as follows:

> A facility providing services for all age groups on a 24 hour basis seven days per week, in an establishment with permanent facilities, including client beds for persons whose mental or physical condition requires developmental nursing services along with an active treatment plan. The facility provides special programs as indicated by the individual care plans to maximize the client's mental, physical, and social development in accordance with the normalization principle. (KAR 20:086)

The ICF-MR/DD participating in the present study currently serves mild, moderate, and severe clients. The admission requirements are that the client must be certifiable for the Kentucky Medical Assistance Program, ambulatory, between the ages of 11-34, and have a primary diagnosis of MR.

Following a survey of the entire staff of the participating facility, 13 of the 58 clients were excluded from the study due to their lack of verbal communication skills. There was a great discrepancy among direct care staff in abilities to utilize non-verbal modes of communication with these non-verbal individuals. Since the interactions to be observed in this study were verbal interactions, non-verbal clients were not

considered to be appropriate subjects. These clients also are grouped together in programming which makes observation of clients with or without particular skills easier.

The subjects' functioning levels were determined through an assessment which included a standardized intelligence test (i.e., Stanford-Binet or Wechsler Adult Intelligence Scale-Revised). This assessment is done annually by the in-house, certified psychologist. Subjects ranged in chronological age from 11-34. However, differences in staff-client interactions across clients of differing chronological ages was not examined in this study. Few, if any, clients were functioning at ages reflective of their chronological ages. In this study the age of concern was mental age or degree of intellectual functioning. Subjects' standard intelligence test scores ranged from 25-70.

The subjects' daily activities included attendance at a public school or a sheltered workshop, depending on their ages and the prescribed needs addressed by their program plans. The interactions between staff and clients during these daily activities were not relevant to this study since intellectual functioning level, not type of day programming, was the topic of interest.

The subjects displayed a variety of maladaptive behaviors such as non-compliance, physical aggression, verbal aggression, self-abuse, threatening behaviors, property destruction, and running away. The interactions between staff and clients across specific behaviors were not examined in this study. However, the effects of the staff- client

interaction as a part of the developmental training process in reference to the clients' failure in community-based, less restrictive living arrangements is addressed.

Instrumentation

Criterion variable measure. The criterion variable measure in this study was the degree of intellectual functioning of the MR clients as measured by either the Stanford-Binet or the Wechsler Adult Intelligence Scale-Revised. These tests were administered by the in-house, certified psychologist.

Predictor variable measures. The predictor variable measures in this study fell into three intersecting categories: (a) type (conversation, instruction, and no response) of interaction; (b) quality (positive or negative) of interaction; and (c) amount (frequency and duration) of interactions. A conversational interaction was defined as any interaction in the form of social discussion or a comment not related to the current activity or daily tasks. An instructional interaction was defined as any request, command, announcement, or comment regarding the daily facility activities. Reprimands were also included under instructional interactions. A no response interaction was defined as any failure of staff to respond to a client. A positive interaction was defined as a staff verbalization which reflected consideration for the client's feelings. The quality of the observed interactions was subjectively decided by the observers. A negative interaction was defined as a staff verbalization which did not show respect

for a client's feelings. Frequency of interactions was defined as the number of interactions. Duration of interactions was defined by number of seconds.

Hence, there were 12 possible staff-client interactions which serve as the predictor variable measures: frequency of positive conversation (CPF), duration of positive conversation (CPD), frequency of negative conversation (CNF), duration of negative conversation (CND), frequency of positive instruction (IPF), duration of positive instruction (IPD), frequency of negative instruction (INF), duration of negative instruction (IND), frequency of positive no response (NRPF), duration of positive no response (NRPD), frequency of negative no response (NRNF), and duration of negative no response (NRND).

An example of a positive conversation interaction would be staff telling "Johnny" that his clothes look nice on him. An example of a negative conversation interaction would be staff asking "Johnny" if he did not have something better to wear than the clothes he had on. An example of a positive instruction would be "Johnny, please use your fork." An example of a negative instruction would be "Johnny, shut up and eat your food." An example of a negative no response would be staff ignoring a resident comment such as "Mr. Jones, I like your new car." An example of a positive no response would be staff ignoring a resident comment such as "I hate you, Mr. Jones."

Observations of each subject were done in the facility by trained observers,and the observational data were recorded on an experimenter-

developed data coding sheet. The experimenter-developed data coding sheet was developed for recording type, quality, and amount of staff-client interactions. A copy of this data coding sheet appears in Appendix A. Four 6-minute observations were made of each client. Each of the four 6-minute observations was made on a different day. The order in which clients were observed was varied. For example, if client number one was observed first on day one, then he/she was observed second on day two, third on day three, and last on day four. If client number two was observed fourth day one then he/she was observed first on day two, second on day three, and third on day four within that specific observer's group of clients to collect data for. A schedule for observation per observer appears in Appendix B. Observers completed one data sheet per subject per observation. Individual subjects were observed while eating a meal with a group of other clients and one or more direct care staff.

Observers

Observations of staff-client interactions were done by six observers who were trained by the experimenter. Each of the observers held a minimum of a bachelor's degree in a health-related field. The six observers were chosen because they all had worked "hands-on" with the mentally retarded in a school setting, an institutional setting, or both. Two of the observers were special education instructors and one of these had a master's degree in education. Two of the observers were licensed social workers and one of these was then completing a master's degree in education. One observer had a bachelor's degree in social work. The

sixth observer held a bachelor's degree in psychology and was completing a master's degree in the same area.

Procedure

The six observers were given an initial orientation at the institutional facility. This orientation was given by the experimenter and served two purposes: it allowed the observers and clients to converse freely in the observation setting and also acquainted the observers with the observation procedure to be used. Two clients' names were selected at random from the 45 participating subjects and all six observers did a "trial-run," 10 minute observation for each of the two subjects. A demonstration and a thorough explanation of what was expected preceeded the "trial-run" observations. Observations for the two subjects were collected by the experimenter and discusses among the experimenter and the observers.

Approximately one week following the trial run observations, five subjects from each of three dinner meal groups were videotaped in the natural observation setting (a meal group was composed of four to six clients and at least one staff person). The next observers' meeting was a training session using three randomly selected subjects from the videotaped subjects. Data were collected and the results were discussed. In a subsequent session, observers were asked to observe six other randomly selected subjects from the videotapes who had not been previously observed. Results were analyzed to determine interobserver agreement. Interobserver agreement for the frequency data was determined by percent agreement (Medley & Mitzel, 1963); average percent agreements

ranged from .81 to 1.00 across the six frequency measures (CPF, CNF, IPF, INF, NRPF, and NRNF). Average percent agreements for the six frequency measures appear in Table 1. Interobserver agreement for the duration data was assessed via average correlation coefficients (McNemar, 1979). Average correlation coefficients across the six duration measures (CPD, CND, IPD, IND, NRPD, and NRND) ranged from .84 to 1.00. Average correlation coefficients for the six duration measures also appear in Table 1.

Table 1

Interobserver Agreement: Percent Agreement and Average Correlation Coefficients

Type of Staff-Client Interaction	Frequency (F) Percent Agreements	Duration (D) Average Correlations
CP	.89	.95
CN	1.00	1.00
IP	.81	.84
IN	.90	.96
NRP	.86	.93
NRN	.81	.96

Two weeks following the observations for establishing agreement, the six observers viewed videotapes of the six clients upon whom inter-observer agreement had been assessed. The purpose of this second

viewing was to determine intraobserver stability. Intraobserver stability for the frequency data was determined by percent agreement. Average percent agreement across the six frequency measures for the six observers by frequency measure appear in Table 2. Intraobserver stability for the duration data was assessed via Pearson product-moment and average correlation coefficients. That is, a Pearson product-moment correlation coefficient was calculated between each observer's original and second observations for each of the six duration measures. The six resulting Pearson product-moment correlation coefficients for each observer were then averaged using the Fisher Z averaging procedure prescribed by McNemar (1979). Average correlation coefficients for the six observers ranged from .97 to .99. Pearson product-moment and average correlation coefficients representing intraobserver stability for each observer by each duration measure appear in Table 3.

Table 2

Intraobserver Stability: Percent of Agreement for Observers by Frequency Measures

	Observer					
	A	B	C	D	E	F
Measures						
CPF	.83	1.00	1.00	.83	.67	1.00
CNF	1.00	1.00	1.00	1.00	1.00	1.00
IPF	1.00	1.00	1.00	.83	.83	1.00
INF	1.00	.83	.67	1.00	1.00	1.00
NRPF	.83	.83	1.00	.83	1.00	1.00
NRNF	1.00	.83	1.00	.67	1.00	1.00
Average	.94	.92	.95	.86	.92	1.00

Table 3

Intraobserver Stability: Average Correlation Coefficients for Observers by Duration Measures

	Observers					
	A	B	C	D	E	F
Measure						
CPD	.98	.99	.99	.99	.99	.99
CND	1.00	1.00	1.00	1.00	1.00	1.00
IPD	.70	.96	1.00	.71	.92	.97
IND	1.00	.88	.64	.93	1.00	1.00
NRPD	.64	1.00	1.00	.99	1.00	1.00
NRND	1.00	1.00	1.00	1.00	1.00	1.00
Average	.97	.98	.98	.97	.99	.99

Observations

Once observer reliability was assessed, observations of staff-client interactions were done during the evening meal at the facility. During that meal, all clients were in the facility and had an equal opportunity to interact with direct care staff. There was no other time except bedtime when all of the clients had a equal opportunity for interaction with direct care staff. However, bedtime often varied making it difficult to schedule observation periods.

Staff involvement was limited to the 11 direct care staff working

the 2:00 p.m. to 10:30 p.m. shift Monday-Friday. Meals were served "family style" with clients actively engaged in preparation of the table and serving of the food. Tables seated four to six clients and at least one staff person. Those clients who lacked adequate verbal communication skills ate in groups with other non-verbal clients. There were three meal groups as follows: 1st group - 4:15 p.m. to 5:00 p.m., 2nd group 5:00 p.m. to 5:45 p.m., and 3rd group - 5:45 p.m. to 6:30 p.m. The direct care staff person at each table ideally provided an appropriate social and behavioral role model, instructing clients in eating skills when necessary.

Four six minute observations of each of the 45 subjects were completed during the data collection for the study (refer to Appendix B).

Analyses

In order to determine the significant combination of staff client interaction predictors for IQ, Statistical Analysis System's stepwise multiple regression procedure was executed (SAS Institute, 1982). The criterion variable was IQ; the predictor variables were CPF, CPD, CNF, CND, IPF, IPD, INF, IND, NRPF, NRPD, NRNF, and NRND.

Pearson product-moment correlation coefficients were also calculated between IQ and each of the predictor variables to ensure against chance findings by the stepwise multiple regression procedure since the number of predictor variables was so large (n = 12) in comparison to the number of subjects (n = 45).

CHAPTER IV

RESULTS

The stepwise multiple regression analysis, using the stepwise procedure of the Statistical Analysis System package (SAS Institute, 1982), indicated IPD alone as the best predictor model for IQ (F=6.72,p .01). Results of the stepwise multiple regression analysis are shown in Table 4.

Table 4

Stepwise Procedure with IQ Scores as the Criterion Variable

Source	df	SS	MS	F	p
Total	44	6607.24			
Regression					
(IPD)*	1	892.82	892.82	6.72	.01
Residual	43	5714.42	132.89		

* No further improvement in R-square (r = .37, R^2 = .14, p = .01) was possible by entering other variables into the analysis.

Pearson product-moment correlation coefficients were calculated between IQ and each predictor variable to confirm results of the stepwise multiple regression analysis. The Pearson product-moment correlation coefficients indicated significant relationships between

IQ and: (a) IPF (r = -.35, R^2 = .12, p = .01), (b) IPD (r = -.37, R^2 = .14, p = .01), (c) INF (r = -.33, R^2 = .11, p = .01), and (d) IND (r = -.32, R^2 = .10, p = .02). Relationships between IQ and CPF, CPD, CNF, CND, NRPF, and NRPD were not significant. The Pearson product moment correlation coefficients between IQ and each of the predictor variables are shown in Table 5.

Table 5

Zero Order (Pearson product-moment) Correlations

Covariables	r	
IQ and CPF	.21	(R^2=.04, p=.08)
IQ and CPD	.11	(R^2=.01, p=.23)
IQ and CNF	-.01	(R^2=.00, p=.47)
IQ and CND	-.01	(R^2=.00, p=.47)
IQ and IPF	-.35	(R^2=.12, p=.01)
IQ and IPD	-.37	(R^2=.14, p=.01)
IQ and INF	-.33	(R^2=.11, p=.01)
IQ and IND	-.32	(R^2=.10, p=.02)
IQ and NRPF	-.23	(R^2=.05, p=.07)
IQ and NRPD	-.23	(R^2=.05, p=.07)
IQ and NRNF	.14	(R^2=.02, p=.12)
IQ and NRND	.14	(R^2=.02, p=.12)

CHAPTER V

DISCUSSION

It was hypothesized that (a) most of the staff-client interactions, across functioning levels and regardless of amount (i.e., frequency or duration) or quality (i.e., positive or negative), would be instructional; (b) there would be no significant differences in amountof conversation regardless of quality across IQ levels; and (c) assuming linear distribution of the data, there would be more negative no response than positive no response interactions across all IQ levels.

As hypothesized, the majority of staff-client interactions across IQ levels was instructional. As determined by the stepwise multiple regression procedure, the only significant predictor of IQ was the duration of positive instruction (IPD). Pearson product-moment correlation coefficients confirmed the results of the stepwise procedure. The Pearson product-moment correlation coefficients also indicated the existence of significant inverse relationships between IQ and IPF, INF, and IND. However, IPF, INF, and IND were not reflected in the predictor model as determined by the stepwise procedure. The Pearson porduct-moment correlation coefficients between IQ and all instructional variables (IPD, IPF, IND, and INF) were similar. Therefore, it appears that the instructional variables represent a similar construct. The significant inverse relationships between IQ and the instructional

variables seem logical because a lower functioning client requires more instruction at mealtime than a higher functioning client.

It was further hypothesized that no significant differences in amount (i.e., frequency and duration) of conversation, regardless of quality (i.e., positive or negative),across IQ levels would be found. The data supported this hypothesis as shown in Tables 4 and 5. It may be that mealtime was not only a valuable feeding skills training time for lower functioning clients but also a socialization training time for higher functioning clients; and, as the data implies, this type of interaction and the amount of interaction was not sufficient in the MR setting under study.

A final specific hypothesis of this study was that, assuming linearity, the amount (i.e., frequency and duration) of negative no response interactions would be greater than the amount of positive no response interactions. In other words, it was anticipated that, regardless of functioning levels, clients would be ignored when they should not be and not ignored when they should be. If linear, the data also supported this hypothesis as more NRNF interactions were recorded than NRPF and the total duration of NRNF exceeded total duration of NRND.

In conclusion, the general belief that no difference in stimulating interaction exists across functioning levels appears to be supported by the findings of this study. Therefore, one can reasonably assume that the staff-client interaction is a potential failure point in the implementation of individual habilitation plans in the MR institutional

setting. However, these findings are restricted to a single ICF-MR/DD setting, looking only at interactions during mealtime. It would be interesting to look further at the staff-client interaction process as it affects the implementation of the individual's habilitation plan in other ICF-MR/DD settings at different times during the clients' daily activities.

If results of subsequent studies were confirmed in other settings it would appear that some type of direct intervention to improve the staff-client interaction would be appropriate. In this particular study, and as supported by the literature, the problem of inadequate staff-client interaction appears to be administrative. Direct care staff seldom receive comprehensive orientation regarding the individualized developmental model and receive no incentives -- monetary or otherwise -- for improvements, continuing education in the area of MR habilitation, or productivity. If (a) staff could be continually inserviced, (b) direct care staff could be more involved in the development of the habilitation plans than is currently typical, and (c) staff could be given some incentives for growth in their present positions, it is possible that staff-client interactions would improve.

Certainly, the staff-client interaction failure cannot be cited as the only deficit area in the implementation of individual program plans. Yet, it may be a significant starting point for change in hopes that the recidivism rate, especially among the higher functioning clients moving from the institution to the community, can be decreased.

APPENDIX A

DATA CODING SHEET

CLIENT: _____

OBSERVER: _____

1.	C	I	NR	+ (-)	_____ sec.
2.	C	I	NR	+ (-)	_____ sec.
3.	C	I	NR	+ (-)	_____ sec.
4.	C	I	NR	+ (-)	_____ sec.
5.	C	I	NR	+ (-)	_____ sec.
6.	C	I	NR	+ (-)	_____ sec.
7.	C	I	NR	+ (-)	_____ sec.
8.	C	I	NR	+ (-)	_____ sec.
9.	C	I	NR	+ (-)	_____ sec.
10.	C	I	NR	+ (-)	_____ sec.
11.	C	I	NR	+ (-)	_____ sec.
12.	C	I	NR	+ (-)	_____ sec.
13.	C	I	NR	+ (-)	_____ sec.
14.	C	I	NR	+ (-)	_____ sec.
15.	C	I	NR	+ (-)	_____ sec.
16.	C	I	NR	+ (-)	_____ sec.
17.	C	I	NR	+ (-)	_____ sec.
18.	C	I	NR	+ (-)	_____ sec.
19.	C	I	NR	+ (-)	_____ sec.
20.	C	I	NR	+ (-)	_____ sec.

C- Conversation I-Instruction NR-No Response

Comments: _____

_____

APPENDIX B

OBSERVATION SCHEDULE

Observer 1	Meal Group 1	Meal Group 2	Meal Group 3
Day 1	01-02-03-04-05*	06-07-08-09	10-11-12-13-14
Day 2	02-03-04-05-01	07-08-09-06	11-12-13-14-10
Day 3	03-04-05-01-02	08-09-06-07	12-13-14-10-11
Day 4	04-05-01-02-03	09-06-07-08	13-14-10-11-12
Observer 2			
Day 1			33-34-35-36
Day 2			34-35-36-33
Day 3			35-36-33-34
Day 4			36-33-34-35
Observer 3			
Day 1		24-25-26-27	28-29-30-31-32
Day 2		25-26-27-24	29-30-31-32-28
Day 3		26-27-24-25	30-31-32-28-29
Day 4		27-24-25-26	31-32-28-29-30
Observer 4			
Day 1		37-38-39-40-41	42-43-44-45
Day 2		38-39-40-41-37	43-44-45-42
Day 3		39-40-41-37-38	44-45-42-43
Day 4		40-41-37-38-39	45-42-43-44

Observers 5 & 6	Meal Group 1	Meal Group 2	Meal Group 3
Day 1		15-16-17-18-19	20-21-22-23
Day 2		16-17-18-19-15	21-22-23-20
Day 3		17-18-19-15-16	22-23-20-21
Day 4		18-19-15-16-17	23-20-21-22

* designates subject identification number.

REFERENCES

Baumeister, A.A. (1970). The american residential institution: Its' history and character. In A.A. Baumeister & E. Butterfield (Eds.), Residential facilities for the mentally retarded (pp. 1-28). Chicago, Illinois: Aldine Publishing Co.

Blindert, H.D. (1975). Interactions between residents and staff: A qualitative investigation of an institutional setting for retarded children. Mental Retardation, 13, 38-40.

Dailey, W.F., Allen, C.J., Chinsky., J.M., & Veit, S.W. (1974) Attendant behavior and attitudes toward institutionalized retarded children. American Journal of Mental Deficiency, 78, 586-591.

Das, J.P., & Hermanson, C. (1977). Social interactions between care-givers and profoundly retarded children. Mental Retardation Bulletin, 5, 101-114.

Hermanson, C., & Das, J.P. (1977). Measuring adaptive functions: Factor analysis of a popular scale. Mental Retardation Bulletin, 5, 62-69.

Intagliata, J., & Willer, B. (1982). Reinstitutionalization of mentally retarded persons successfully placed into family-care and group homes. American Journal of Mental Deficiency, 86, 588-595.

King, R.D. & Raynes, N.V. (1968). Patterns of institutional care for the severely subnormal. American Journal of Mental Deficiency, 72, 700-709.

Landesman-Dwyer, S., & Sulzbacher, F.M. (1981). Residential placement and adaptation of severely and profoundly retarded individuals. In R. Bruininks, C.E. Meyers, B. Sigford, & K.C. Lakin (Eds.), Deinstitutionalization and community adjustment of mentally retarded people (Monograph No. 4). Washington, D.C., American Association on Mental Deficiency.

McNemar, Q. (1979). Psychological Statistics (5th ed.). New York: Wiley & Sons, Inc.

Medley, D.M., & Mitzel, H.E. (1963). Measuring classroom behavior by systematic observation. In N.L. Gage (Ed.), Handbook of research on teaching. Chicago: Rand, McNally & Company.

Prior, M., Minnes, P., Coyne, T., Golding, G., Hendy, J., & McGillivary, J. (1979). Verbal interactions between staff and residents in an institution for the young mentally retarded. Mental Retardation, 17, 65-69.

Reiss, S., Levitan, G.W., & McNally, R.J. (1982). Emotionally disturbed mentally retarded people. American Psychologist, 37, 361-367.

SAS Institute, Inc. (1982). SAS Users Guide: Statistics. Cary, North Carolina: Author.

Schalock, R.L., Harper, R.S. & Carver, G. (1981). Independent living placement: Five years later. American Journal of Mental Deficiency, 86, 170-177.

Seigelman, C.K., & Werder, P.R. (1974, June). Analyzing interactions between supervisors in group homes and other facilities for the mentally retarded. Working paper, Research and Training Center in Mental Retardation, Texas Tech University, Lubbock, Texas.

Sutter, P., Mayeda, T., Call, T., Yanagi, G., & Yee, S. (1981). Comparison of successful and unsuccessful community-placed mentally retarded persons. American Journal of Mental Deficiency, 85, 262-267.

Veit, S.W., Allen, G.J., & Chinsky, J.M. (1976). Interpersonal interactions between institutionalized retarded children and their attendants. American Journal of Mental Deficiency, 85, 535-542.

Warren, S.A., & Mondy, L.W. (1971). To what behaviors do attending adults respond? American Journal of Mental Deficiency, 75, 449-455.