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ABSTRACT

The paper describes a system used in Nebraska in which vocational rehabilitation specialists determine who is a high need client and develop programs via a social-ecological or "person-environment" perspective. A high need client is defined as an individual who will require considerable staff support, intervention, and time. A three-phase study was initiated to determine the needs for services and resources of 18 mentally retarded clients in a community based setting. Phase I produced data on the amount of staff time devoted to individual habilitation programing and behavioral interventions. In addition, 19 client descriptors were related statistically to these two outcomes. Phase II involved statistical analyses of the data which included the finding that the amount of individualized programing was positively related to needed self-help ambulation skills and frequency of negative behaviors, whereas non-programmatic behavioral intervention was more related to frequency of negative behaviors. Significant predictor variables were identified, and behaviors were classified according to high need and moderate need. Procedures were then developed to measure those behaviors. The third phase involved reducing mismatch of clients to available programs through behavioral skill training, use of prosthetics, environmental modification, and staff assistance. A person-environment perspective model is depicted, and steps involved in matching the persons with the environment are considered. Two case histories illustrate the system by which the mismatch of clients can be reduced. (CL)

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VOCATIONAL SERVICES TO HIGH NEED CLIENTS:
THE IMPORTANCE OF NEED DETERMINATION
AND PERSON-ENVIRONMENT MATCH

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American Association on Mental Deficiency
107th Annual Meeting: Dallas, Texas
June 1, 1983

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The increased emphasis on providing vocational services to high need clients raises several important questions related to how we approach their habilitation and training. The more important questions include:

1. What is a high need client?
2. What guidelines should be used to identify the specific skill and performance areas on which to focus one's assessment and training?
3. How can one incorporate rehabilitation engineering, prosthetics, and environmental modification into one's vocational program?

These are three critical questions that vocational rehabilitation specialists must answer if we are to deal effectively with the high need person. I would like to address these questions in today's presentation by first describing to you how Nebraska has recently implemented an objective determination of a high need client; and second, presenting two case histories that demonstrate how we have increased a person's independence and productivity by incorporating into our training and placement activities environmental analysis, prosthetics, and environmental modification. This concept I refer to later as a social ecological or "person-environment" perspective.

The High Need Client

A high need client is frequently a high risk client who has a high probability of being placed in an environment characterized by a lack of independence, productivity and community integration. These are individuals who require considerable staff support, intervention, and time. As such, they potentially require different service delivery components than a moderate or low need person. But, on what basis should a client's need status be determined?

In thinking about this question, two possible approaches emerge. One focuses on the client and his/her needs for service. Thus, a client might need physical therapy, social skills training, vocational training and probably a whole lot more. The problem with this approach to needs determination is that most of our clients need everything we can offer, and then some. Hence, all clients become "high need" and consequently are indistinguishable. Because of this lack of differentiation from a program planning and evaluation perspective, we choose a second procedure. The approach we used related client characteristics to the actual amount of staff time involved in 1:1 systematic prescriptive programming and the amount of time staff devoted to what we called "non-programmatic behavioral intervention." Both of these dependent variables are important in planning programmatic services and staff utilization patterns, as well as reflecting realistically what resources are required to deal effectively with high need individuals.

Time constraints permit only a brief description of our procedure. Specific details are available if you are interested. The study was divided into three phases. The first phase involved a 30-day time study of 18 randomly chosen clients within a community based mental retardation program.

The program included both residential and day services. Programmatically, the clients had an average of 7 prescriptive programs dealing with community living and vocational training skills. There were 10 females and 8 males. Their average age was 37; their average WAIS full-scale IQ was 55 (6 were nontestable). The time study covered 24 hours, 7-days a week, and included the number of minutes spent in each activity (column) listed in Figure 1. These activities included skill acquisition or deceleration programming, maintenance, non-programmatic behavioral intervention, enabling-facilitating (assistance), case management, transportation, fiscal, and assessment. Data from only two activities were used to determine a client's need status: Average minutes per day in skill acquisition or deceleration programming, and minutes in non-programmatic behavioral intervention. These were chosen as outcome variables because they were the only two activities that discriminated significantly among the 18 clients who had been grouped and ranked statistically into different categories such as IQ, AAMD-ABS functional level, and medical needs.

Phase I also included gathering data on 19 client characteristics that served in Phase II as predictor variables that were regressed against the two outcome variables (average minutes of acceleration/deceleration programming and non-programmatic behavioral intervention). These 19 variables will be presented in a few moments.

Before describing Phase II, remember what we accomplished in Phase I. We had a 30-day data base on 18 clients summarizing the amount of staff time devoted to their individual habilitation programming and needed behavioral interventions. We also had 19 client descriptors to relate statistically to these two outcomes.

Figure 1: CLIENT MONITORING FORM

Client's Name _____

Date _____

Directions: Insert in the appropriate "30 minute box" the actual number of minutes spent in each activity listed.

- (1) Skill Acquisition or deceleration programming - involving a prescriptive program with recording of data.
- (2) Maintenance - involves any one of the following: (a) assisting in self help skills; (b) supervising; or (c) non-programmatic-informal training.
- (3) Non-Programmatic Behavioral Intervention - redirecting, holding, restraining or sitting with a difficult client.
- (4) Enabling/Facilitating - programmatic or non-programmatic activities associated with maintaining successful living, work placement or community integration.
- (5) Support Services - case management (including certification, appointments, correspondence) transportation, fiscal, and assessment.

Time Periods	Skill Acquisition or Deceleration Programming	Maintenance	Non-Programmatic Behavioral Intervention	Enabling/Facilitating	Support Service			
					Case Management	Transportation	Fiscal	Assessment
5-6:30 am								
6:30-7 am								
7-7:30 am								
7:30-8 am								
8-8:30 am								
8:30-9 am								
9-9:30 am								
9:30-10 am								
10-10:30 am								
10:30-11 am								
11-11:30 am								

Phase II consisted of a number of statistical manipulations of the data including point biserial correlations, multiple discriminant analyses, and step-wise multiple regression analyses. Let me briefly share with you some highlights from those analyses.

The Point Biserial correlations between each of the 19 predictor variables and each dichotomized outcome variable are presented in Table 1. An interesting pattern emerges from these intercorrelations: The amount

Refer to Table 1

of individualized programming is positively related to needed self help-ambulation skills and frequency of negative behaviors, whereas non-programmatic behavioral intervention (second column in Table 1) is more related to frequency of negative behaviors, especially threatening/violence, disrupting, uncooperative, stereotypic and hyperactive.

Significant Predictor Variables

Two Multiple Regression Analyses were conducted in which each of the 19 predictor variables was regressed against either the dichotomized "programming" or "non-programmatic" outcome variable. These results are summarized in Table 2. The most significant part of Table 2 is the last column that

Refer to Table 2

indicates (through a statistic referred to as "F-Ratio") which predictor variables differ significantly between those clients who are above the median and those below. Significance is indicated by an asterik. In reference to skill acquisition/deceleration programming, eight client char-

Table 1

CORRELATION BETWEEN CLIENT CHARACTERISTICS AND AMOUNT OF PROGRAMMING OR
NON-PROGRAMMATIC BEHAVIORAL INTERVENTION

Client Characteristic	Acquisition/Deceleration Programming	Non-Programmatic Behavioral Intervention
Age	-.18	.01
Gender	-.09	.30
WAIS IQ ^a	-.62*	-.24
Vision	.42*	-.05
Hearing	.22	-.07
Speech	.56*	.31
Seizures	.23	.09
Feeding	.56*	.28
Toileting	.84*	.49*
Hygiene	.54*	.43*
Dressing	.69*	.32
Ambulation	.52*	-.11
Threatening/Violence	.46*	.46*
Damage	.05	-.08
Disrupt	.44*	.52*
Uncooperative	.27	.43*
Stereotypic	.27	.45*
Sexual	-.30	-.09
Hyperactive	.47*	.97*

^a Based on dichotomized variable (testable; non testable).

* Statistically significant at .1 probability level or beyond (df = 16).

Table 2

Significant Predictor Variables From
Multiple Regression Analyses

<u>SKILL/ACQUISITION DECELERATION PROGRAMMING</u>		
Variable	Multiple R ^a (Beta)	F-Ratio ^b
Toileting	0.84	38.98*
Dressing	0.70	15.25*
Speech	0.57	7.54*
Feeding	0.56	7.49*
Hygiene	0.54	6.70*
Ambulation	0.52	6.03*
Hyperactivity	0.48	4.68*
Threatening/Violence	0.46	4.19*
Disrupts	0.44	4.10*
Vision	0.42	3.47
<u>NON-PROGRAMMATIC BEHAVIORAL INTERVENTION</u>		
Hyperactivity	0.97	305.81*
Disrupts	0.52	5.98*
Toileting	0.49	5.08*
Threatening/Violence	0.46	4.24*
Stereotypic	0.45	4.17*
Hygiene	0.43	4.01*
Uncooperative	0.43	3.64

* Statistically significant at .05 level (df = 1/16).

^a Multiple R denotes correlation with outcome measure.

^b F-ratio reflects differences between client groups on the variable.

acteristic differed significantly. These include toileting, dressing, speech, feeding, hygiene, ambulation, hyperactivity, and threatening/violence. In reference to non-programmatic behavioral intervention, six client characteristics differed significantly between groups, including hyperactivity, disrupting, toileting, threatening/violence, stereotypic and hygiene.

Based on the data summarized in Tables 1 and 2, the following decision rule was developed: That High Need Behaviors are those that are significantly correlated with both outcome measure (Table 1) and that are statistically different for clients above or below the median on the outcome variables (Table 2). Similarly, Moderate Need Behaviors would include those that either correlate or discriminate significantly with either one of the outcome measures. Using the above decision rule, specific behavioral indicators, which are listed in Figure 2, include:

<u>High Need</u>	<u>Moderate Need</u>
Toileting	Speech
Hygiene	Feeding
Threatening	Dressing
Disrupting	Uncooperative
Hyperactivity	Stereotypic

To summarize Phase II, we now had our indicators of high and moderate need clients. What remained was to develop a procedure to measure those behaviors, impliment the procedure, and complete cross-validation studies. That is what Phase II accomplished.

Our measurement procedure is very simple. It includes four steps centered around a Client Need Status Rating Scale (Figure 2). The specific

Refer to Figure 2

Figure 2: CLIENT NEED STATUS RATING SCALE

Directions: Circle the current level of the client's behavior in reference to each client characteristic. Completed once by three staff (case management, training, residential).

Client's Name: _____

Date: _____

Staffs' Initials: _____

Average Score: Behaviors 1-5 _____; 1-10 _____

Client Characteristic ^a	Current Level of Client's Behavior			
<u>HIGH NEED INDICATORS</u>				
1. Toileting	(1) Independent	(2) Prompts	(3) Assistance	(4) Does Not Do
2. Hygiene	(1) Independent	(2) Prompts	(3) Assistance	(4) Does Not Do
3. Threatening/Violence	(1) None, or less than one incident a month	(2) One or two in- cidents per month	(3) Once or more per week	(4) Once or more daily
4. Disrupting	(1)	(2)	(3)	(4)
5. Hyperactivity	(1)	(2)	(3)	(4)
<u>MODERATE NEED INDICATORS</u>				
6. Speech	(1) Normal or Intelligible	(2) Impaired	(3) No Expressive Language	
7. Feeding	(1) Independent	(2) Prompts	(3) Assistance	(4) Does Not Do
8. Dressing	(1) Independent	(2) Prompts	(3) Assistance	(4) Does Not Do
9. Uncooperative	(1) None, or less than one incident a month	(2) One or two in- cidents per month	(3) Once or more per week	(4) Once or more daily
10. Stereotypic	(1)	(2)	(3)	(4)

Definitions on back.

DEFINITIONS

1. Toileting - involves bowel and bladder control.
2. Hygiene - body care including bathing, grooming and health related activities.
3. Threatening - verbal or physical threats to do harm to self, others or objects.
4. Disrupting - interferes with others' activities through behaviors such as damages own or others' property, uses profane or hostile language, or persistently pesters, irritates, whines or teases.
5. Hyperactivity - excessive physical movements including bounces up and down in chair/place continuously, in and out of chair/place/workstation continuously, moves about area continuously in a moderate or fast-paced manner, and/or moves around area continuously in a seemingly random and very rapid manner.
6. Speech - speaks in a recognizable language or uses a formal symbolic substitute such as finger spelling or American Sign Language.
7. Feeding - ingesting food and/or beverages.
8. Dressing - putting on and removing regular articles of dress (skirt, blouse, shirt, pants, dress, shoes, stockings, underwear).
9. Uncooperate - rebellious, untrustworthy, unmotivated, or doesn't follow directions.
10. Stereotypic - engages in repetitive behavior that has no apparent function (eye-poking, rocking, hand and finger movements).

steps for determining a client's need status include:

1. Evaluate the client. Three staff (preferably one each from case management, training and residential) should independently evaluate the client on the 10 behaviors listed on the "Client Need Status Rating Scale" presented in Figure 2. Average scores for the three raters per characteristic should be used in the ensuing steps.

2. Determine if High Need. Evaluate the client on the first 5 behaviors in Figure 2. If the average score for the 5 behaviors is 2.00 or above, the client is a High Need person.

3. Determine if Moderate Need. If the client's average score for the first 5 behaviors is below 2.00, evaluate him/her additionally on the next 5 (#6-#10). If the average of the 10 scores is 1.4 or above, the client is a Moderate Need person.

4. Determine if Low Need. If the client's average score from step 3 is below 1.4, the client is a Low Need person.

The above procedure has been computerized and implemented for all of Nebraska's CBMR clients. Prior to its implementation, a number of cross-validation studies were completed to determine its reliability and validity. The results of one study, are summarized in Table 3. Results show that inter-rater reliability averaged .96; the concordance rate was .92 (11

Refer to Table 3

of the 12 objective ratings were identical to the subjective rating). The only exception was one male whom staff rated as Moderate Need, whereas his average score across the 10 behaviors was 1.1 (Low Need).

You might be wondering at this point about how the concept of a client's

Table 3

Results of Cross Validation Study - - Hastings

Client Number	Gender	Staff's Subjective Need Status	Average Score on Figure 4	Empirical Need Status
1	F	High	2.4 (.25) ^a	High
2	F	High	2.6 (.00)	High
3	M	High	2.1 (.05)	High
4	M	High	2.3 (.40)	High
5	F	Moderate	1.5 (.10)	Moderate
6	F	Moderate	1.8 (.35)	Moderate
7	M	Moderate	1.1 (.00)	Low
8	M	Moderate	1.5 (.05)	Moderate
9	F	Low	1.0 (.06)	Low
10	F	Low	1.0 (.00)	Low
11	M	Low	1.1 (.15)	Low
12	M	Low	1.2 (.10)	Low

^a Standard deviation of three staff's ratings.

need status relates to the theme of this symposium: "Vocational Services to High Need Clients." The title should give you part of the answer; the rest is provided by the following somewhat debatable notion. My observation has been that current programmatic services are frequently based on the assumption that a client's quality of life will be significantly improved by the client's participation in those services. We have also assumed that in placing client's into different service delivery programs, program planners will give consideration to matching the characteristics and needs of their clients to the type of community services and staff compliment provided. Unfortunately, the latter assumption may not be true, since to date developmental disability professionals have generally not stressed or related a client's need status to appropriate programmatic services and staffing patterns. Specifically, in most vocational training programs with which I am familiar, staffing ratios and training foci are the same regardless of the client's need status. I am convinced that in the immediate future, we need to take two steps to deal more effectively with high needs clients. The first step is to do a better job matching clients to available programs and then reducing any "mismatch" through behavioral skill training, use of prosthetics, environmental modification, and staff assistance. The second is to take a step beyond this and to conceptualize the criteria and parameters that will permit an array of services that are appropriate to different client needs.

One way to take the first step (that is, reduce the mismatch between persons and their environments) is to pursue a social ecological, or person-environment perspective. Let me share some recent work we have done in this area. A model that reflects this person-environment perspective is outlined in Figure 3. You should at this point conceptualize two profiles:

Refer to Figure 3

One summarizes a person's behavioral skills and needed prosthetics; the second reflects the environment's available living-training progression, behavioral skill requirements, and environmental characteristics. The two profiles are then integrated through a process referred to as "Person-Environment Match." These steps are described in more detail below.

Person Analysis

Client characteristics are critical for both community placement and job success. There are a number of behavioral skill assessment instruments that can be used to determine a person's behavioral skill profile related to behaviors required by a person's living-habilitation environments. For example, Table 4 summarizes how we assess behavioral skills by using

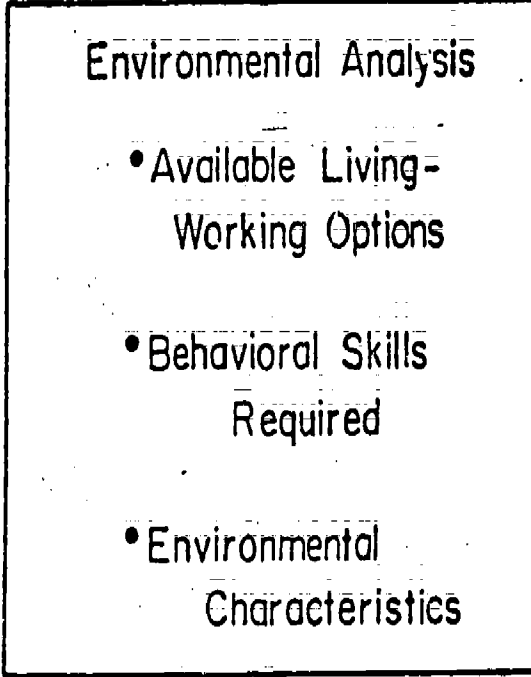
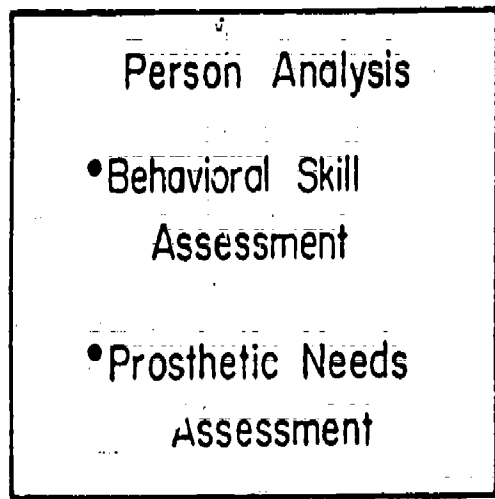
Refer to Table 4

the Community Living Skills and Vocational Training Screening Tests. The skills assessed represent the behavioral skills generally required for increased independence and vocational productivity.

Behavioral skill assessment represents one aspect of person analysis. The second component includes assessing the need for prosthetic devices that would smooth the interface between the person and environment. A prosthetic need profile would include needed sensory, motor, communicative and cognitive prosthetics.

Environmental Analysis

Evaluating the characteristics and behavioral requirements of different



Environmental Modifiability

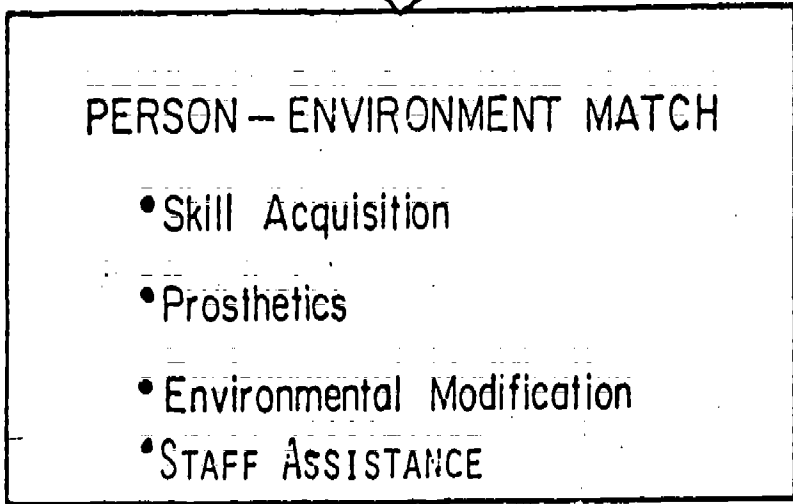


FIGURE 3 - AN ECOLOGICAL ASSESSMENT - PLACEMENT MODEL

Table 4
 BEHAVIORAL SKILL TRAINING AREAS ASSOCIATED WITH
 LIVING-TRAINING FACILITY PROGRESSIONS

		Community Living-Facility Progression		
		<u>ICF/MR</u> →	<u>Group Home/Transitional Living</u> →	<u>Staffed Apartment/Indep. Housing</u>
CLS Training Areas ^a 91	Grooming Skills		Health Care	Handles Medication
	Dressing Skills		Laundry Skills	Clothing Repair/Replacement
	Independent Eating		Meal Preparation	Meal Planning & Shopping
	Self Referenced Behaviors		Social Integration	Interpersonal Relations
	Expresses Needs		Uses an Expressive Language System	Language Generalization
	Cleaning Skills		Home Safety	Coping Skills
	Utility of Money		Money Concepts	Independent Money Usage
	Prompted Daily Routine		Unprompted Daily Routine	Independent Scheduling
	Perceptual-Motor Skills		Recreation & Leisure Activities	Uses Community Recreation Facilities
	Community Awareness		Community Access	Independent Community Use
		Vocational Training-Placement Progression		
		<u>Extended Employment</u> →	<u>Sheltered Workshon</u> →	<u>Center Industry/Competitive Employment</u>
VT Training Areas ^a	Self Help Skills		Job Related Skills	On-the-Job Evaluation
	Personal/Interpersonal Behaviors		Work Performance	On-the-Job Training
	Information Processing		Work Behavior	Industrial Practica
	Learning/Coping Strategies		Job Seeking Skills	Job Enabler-Facilitator (Assistance)
	Prevocational Skills			

^a Referenced to behavioral domains contained in Community Living and Vocational Training standardization manuals (Chalock and Gadwood, Note 2).

environments is the essential element in an environmental analysis. A number of environmental characteristics can be assessed including available living-work options, behaviors required to adapt successfully to those environments, and the "personality characteristics" of the environment. In the remainder of my presentation I will focus only on the skills required to adapt successfully to a vocational training environment (sheltered workshop) and a semi-independent living environment (a staffed apartment).

Our environmental analysis requires that Diagnostic Programmers evaluate an environment in reference to whether the behavioral skills on which the client is assessed on our Screening Tests are required to be actually performed in that environment. And if they are, do they need to be performed independently or is assistance provided? The reference criterion is "skills performed/needed by clients who are working or living in that environment successfully." This concept is shown in Figure 4 that summarizes the be-

Refer to Figure 4

havioral skills required by one of our seven sheltered workshops. The darkened area represents skills required to be done "independently"; the slashed area, "done with assistance"; and the white area, "skill not required."

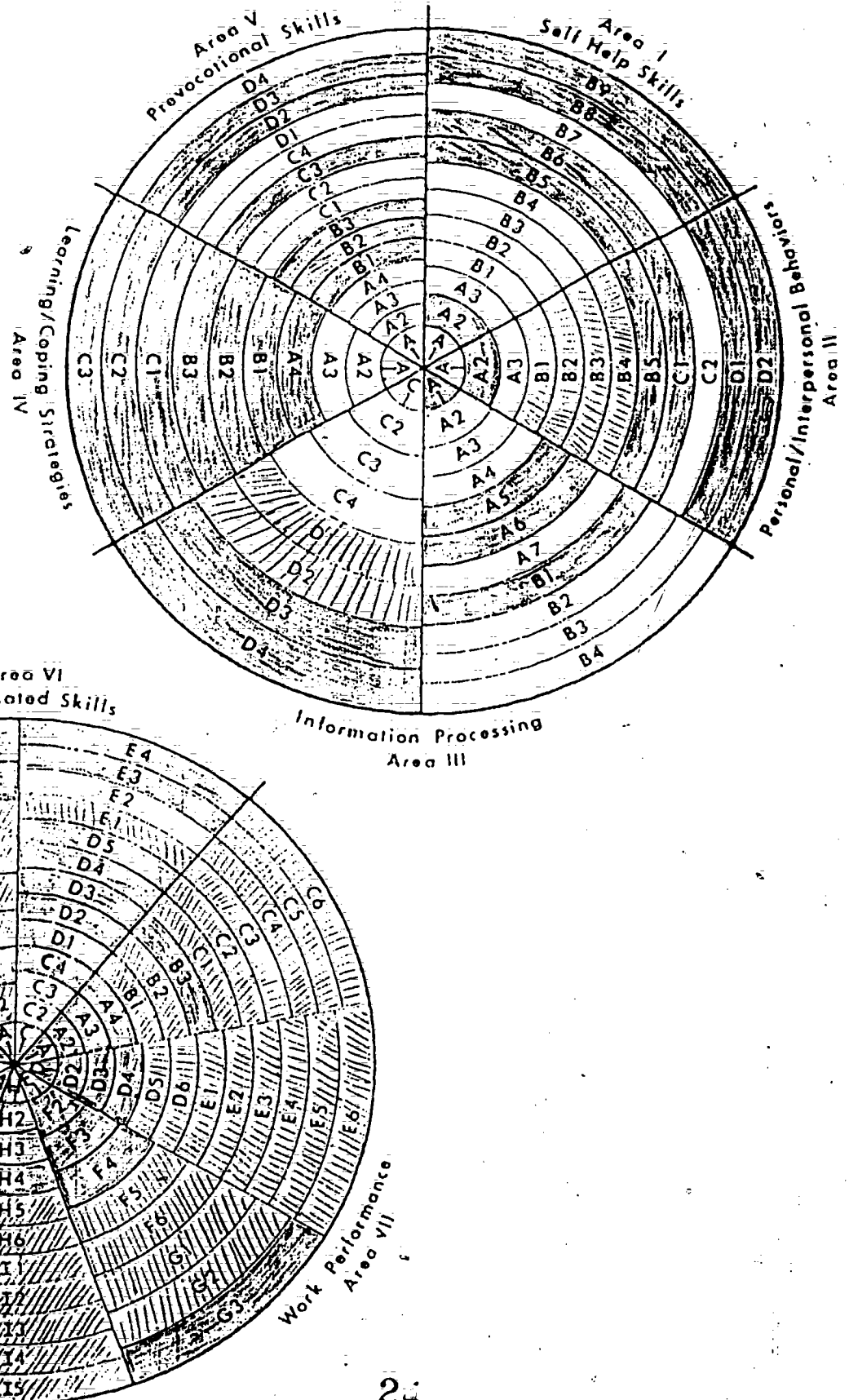
Let's proceed now to two case histories that will demonstrate one of our uses of the concept, "person-environmental match" that demonstrate the utility of this approach to working with high need clients.

Rachel is a 42 year old client who has been in our program for 6 years. She has WAIS Full Scale IQ of 50 with diagnosis of mental retardation, epilepsy and cerebral palsy. Due to Rachel's neuro-muscular impairment, one might expect a low-level skill profile. Figure 5 reflects her profile

VOCATIONAL TRAINING/PLACEMENT FACILITY: ENVIRONMENTAL ANALYSIS PROFILE

Facility SHELTERED WORKSHOP

Figure 4



Refer to Figure 5

on 164 vocational training skills. The darkened areas represent those skills that she can do "independently"; the slashed, "with assistance", and the blank areas, those that she "cannot do." Now, let's proceed with a "person-environmental match." Figure 6 compares Rachel's skill profile with that

Refer to Figure 6

reflecting the skill requirements of her job training site (sheltered workshop). Note the discrepancies or points of "mismatch." How can those "mismatched areas" be reduced and thereby provide a more congruous person-environmental match? Refer back to Figure 3 ("An Ecological Assessment-Placement Model") for a moment. Note the four ways that the mismatch can be reduced:

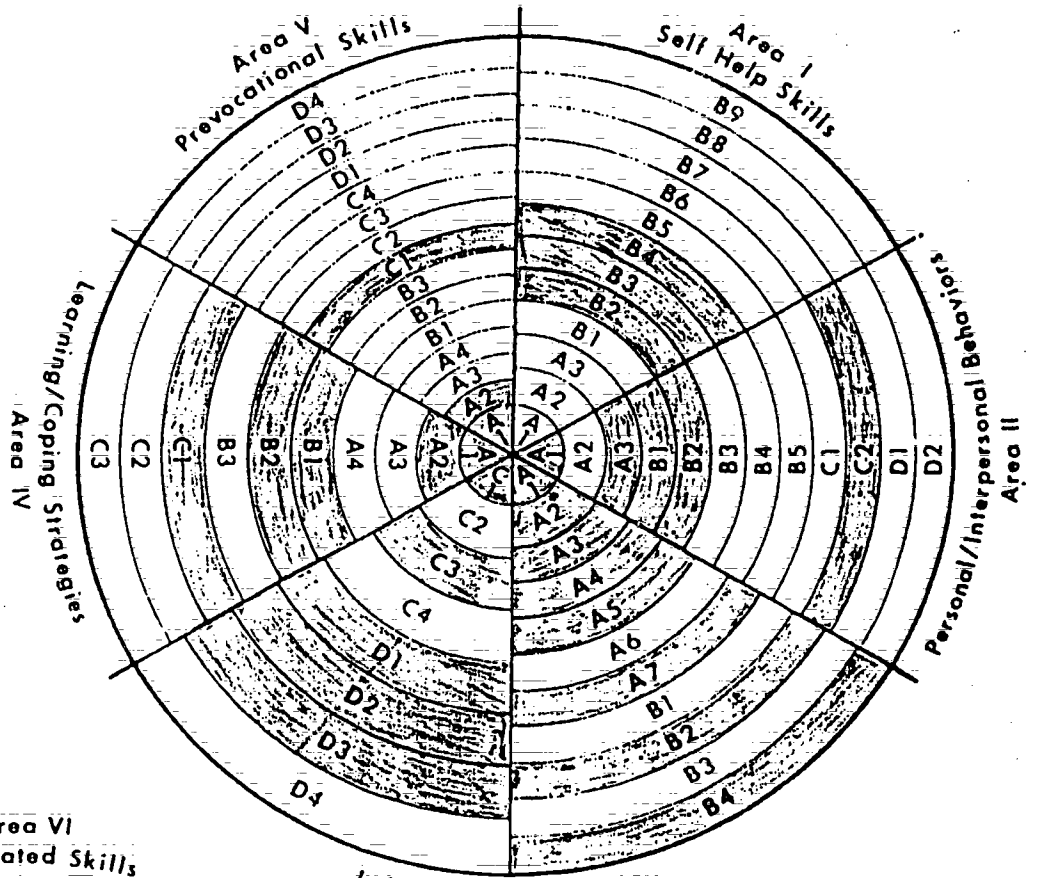
1. Skill Acquisition - Rachel has one prescriptive skill acquisition program in each of the nine domains encompassing the vocational training program.
2. Prosthetics - include pad in her wheel-chair for higher positioning; a cup on the stand to hold bags for contract work; modified hot sealer bags to seal the bagged materials; and a hand splint to control excess movement.
3. Environmental Modification - including a redesigned work table; a counter sheet, funnel and scoop for contracts; and a conveyor belt for disposition

Name _____
 Social Security No _____
 Date/Baseline _____
 Evaluator _____

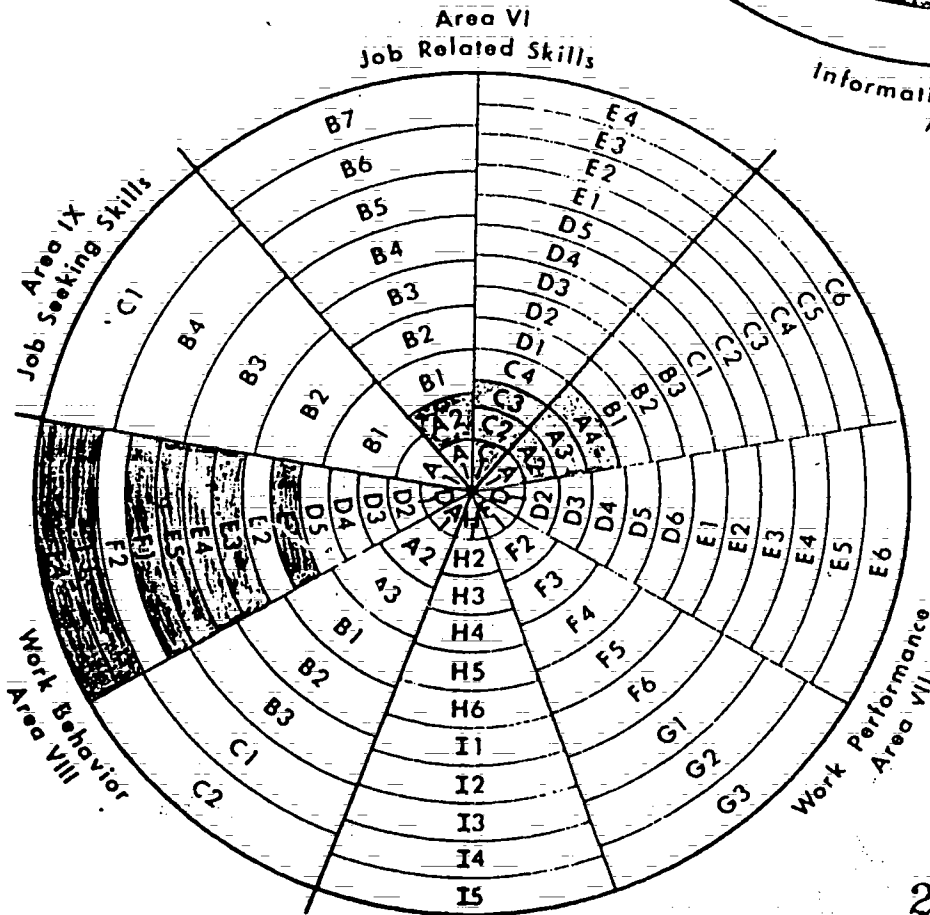
VOCATIONAL TRAINING

Baseline & Skill Acquisition Record

Figure 5



Prevocational - Extended Employment



VOCATIONAL TRAINING

Baseline & Skill Acquisition Record

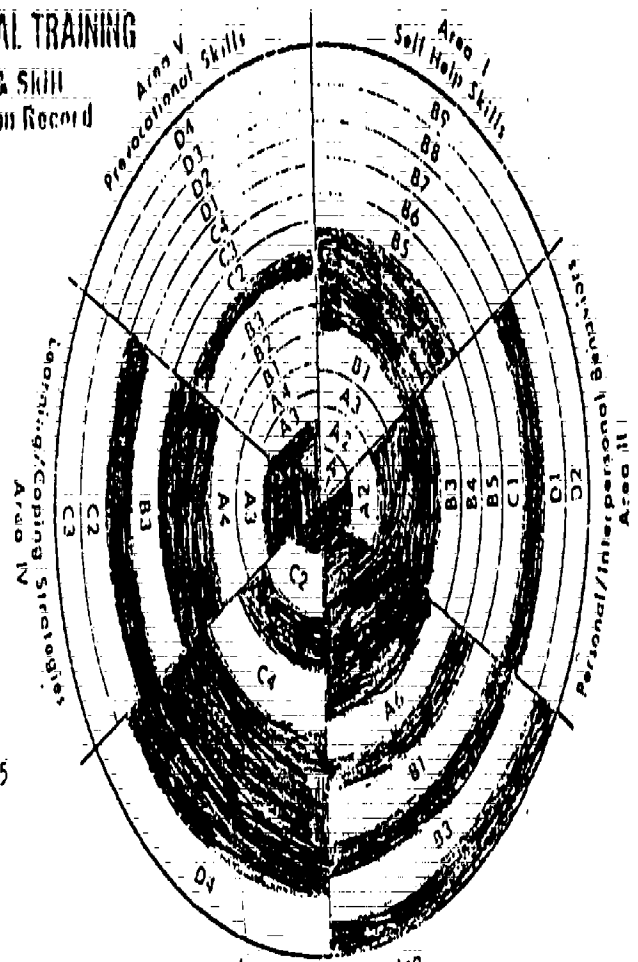


Figure 5

VOCATIONAL TRAINING/PLACEMENT FACILITY: ENVIRONMENTAL ANALYSIS PROFILE

Facility SHELTERED WORKSHOP

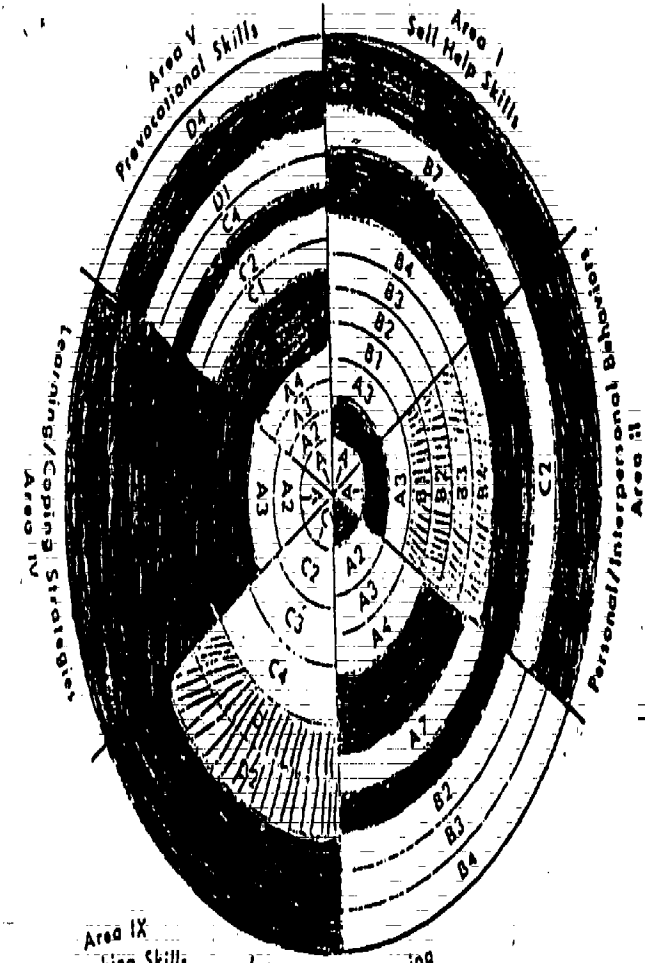
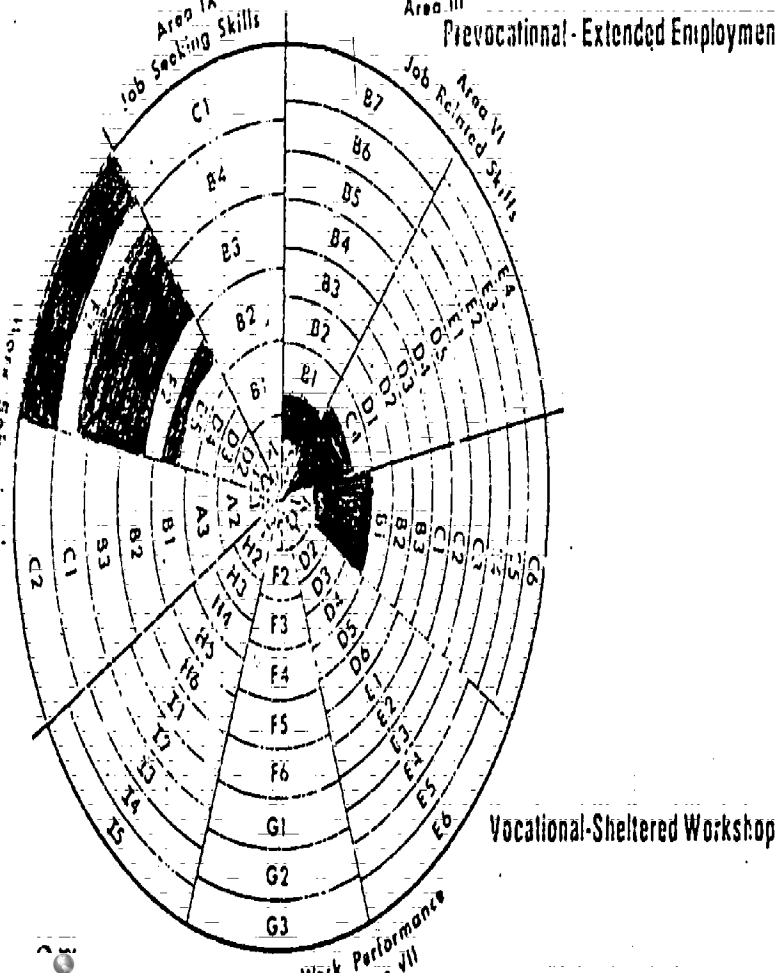
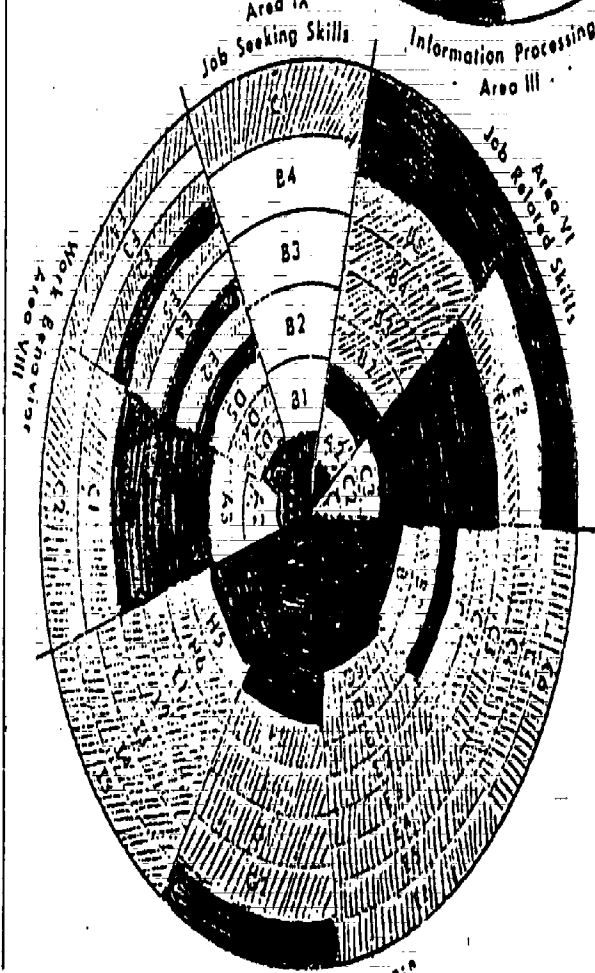


Figure 4

Prevocational - Extended Employment



Vocational-Sheltered Workshop



Work Performance Area VII

Figure 6. CLIENT SKILLS VS. ENVIRONMENTAL REQUIREMENT PROFILES (Vocational)

of completed work.

4. Staff Assistance - provided primarily in setting up the work for the session.

The results of reducing the mismatch have been dramatic--Rachel is both feeling more productive and actually is. Wages have increased 5-fold since the introduction of the prosthetics and environmental modifications.

The same process can be used to facilitate a better match between a person's skill profile and his/her living arrangement. Annabel is a 44 year old client whose primary diagnosis is cerebral palsy and secondarily, mental retardation. She is non-verbal and nontestable on the WAIS. Despite these deficits, she has been living independently with a room mate for four years. Let's compare her skill profile on the 174 Community Living Skills with those skills required to live in an independent apartment. Figure 7 compares the two profiles. Annabel's successful placement is due

Refer to Figure 7

largely to the 23 prosthetics and 8 environmental modifications used by our staff. The prosthetics include elastic band for her glasses; a crock pot, hot plate and skillet to replace a stove; suction cups to hold dishes in place; spill guard plates; roll on deodorant; squirt bottle for shampoo; nail clippers attached to a board; modified clothing including pull on blouses and elasticized waist bands; travel glass for drinking; protective clothing covers for meals (modified bib); coats without zippers or buttons (a "wrap coat"); handivoice and communication board; cooking aides including picture menu cards, recipe cards, grocery list and phone book; 7-day

COMMUNITY LIVING SKILLS

Baseline & Skill

Acquisition Record

X COMMUNITY AWARENESS AND UTILIZATION

IX RECREATION AND LEISURE SKILLS

I PERSONAL MAINTENANCE

VIII TIME AWARENESS AND UTILIZATION

II DRESSING AND CLOTHING CARE

VII MONEY MANAGEMENT

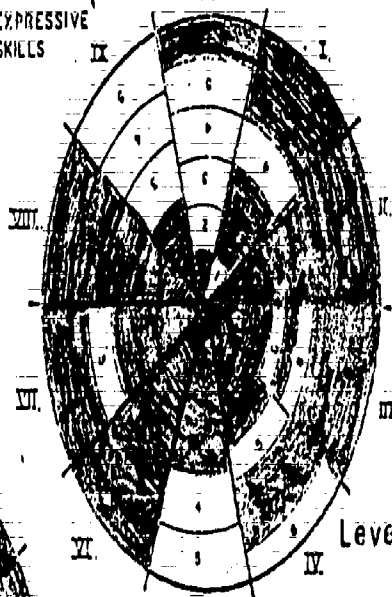
III EATING & FOOD MANAGEMENT

VI HOME LIVING

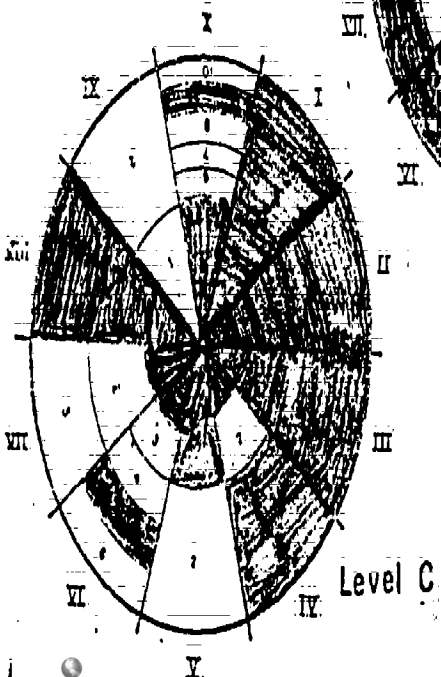
IV SOCIAL BEHAVIOR

V EXPRESSIVE SKILLS

Level A



Level B



Level C

COMMUNITY LIVING FACILITY: ENVIRONMENTAL ANALYSIS PROFILE

Facility: Independent Apartment

X COMMUNITY AWARENESS AND UTILIZATION

IX RECREATION AND LEISURE SKILLS

I PERSONAL MAINTENANCE

VIII TIME AWARENESS AND UTILIZATION

II DRESSING AND CLOTHING CARE

VII MONEY MANAGEMENT

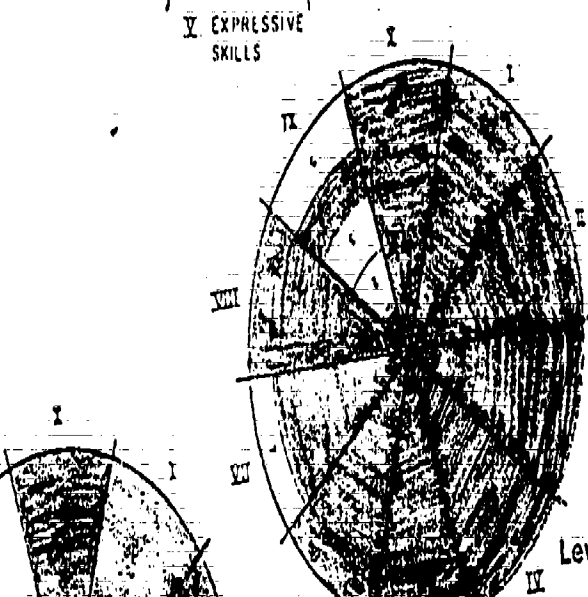
III EATING & FOOD MANAGEMENT

VI HOME LIVING

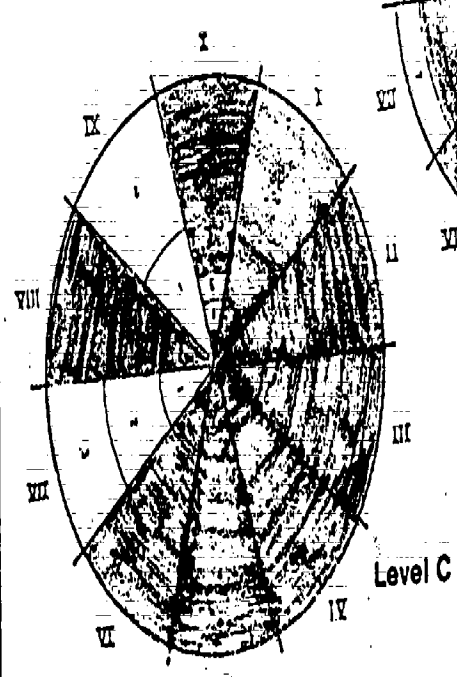
IV SOCIAL BEHAVIOR

V EXPRESSIVE SKILLS

Level A



Level B



Level C

Figure 7. CLIENT SKILL VS. ENVIRONMENTAL REQUIREMENT PROFILES
(Community Living)

pill organizer ("pill box") and pull over bras. Environmental modifications have included barrier free environment; hand rails in the bathroom; color coded appliances (washer/dryer); cupboard lowered; rubber mat in tub; and a hydro bed for increased relaxation. Assistance includes providing transportation and sensitizing staff to Annabel's "utterances" when a phone call for needed assistance is received.