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Motivational Analysis

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Introduction

If we were able to get a show of hands, we would venture to say that every one of you reading this article has used or is using reinforcement as part of a support plan for one of your consumers. The use of reinforcement may be either to increase the person's access to a high density of reinforcement and, accordingly, their quality of life, or, perhaps, as an incentive in a formal schedule of reinforcement. We would also venture to say that one of your frustrations has been that the use of **reinforcement sometimes just doesn't seem to work**. The consumer may take the reinforcer when it is provided, but its availability doesn't seem to influence his or her behavior.

There are a number of reasons why the events identified as potential reinforcers may not work. Here are only some of the reasons we have discovered in our clinical experiences.

- *Not Enough.* Events identified as potential reinforcers may not be effective because **enough** is not being provided to influence the person's behavior.
- *Too Much.* Reinforcement may lose its effectiveness because it is available in amounts that produce a satiation effect, in which a person's interest in that reinforcement is not maintained.

- *Not Individualized.* Events identified as potential reinforcers may not have been effective because the event was not individualized. That is, a group of events had been identified by the agency as things that they could afford, or things they had available at the time, without regard to the individual's personal preferences.
- *Mistaken Belief.* Another reason for the failure may be the mistaken belief that everyone is motivated by praise and edibles. Praise and edibles may be important for some, but not to others.
- *Failure to Follow the Basic Rules of*

Contingency Management. Since the 1950's, considerable research has been devoted to identifying the Rules of Effective Reinforcement. Many people who design reinforcement plans have not been taught these basic rules. They need to be revisited.

Barbara is not unlike many of the people who have been referred to us by community agencies. She has a history of physical aggression and property destruction that occurs in the context of what has been termed "tantrums." She actually has a fairly good assessment in place and the support plan is based on the findings of the assessment. Some of the elements of the plan include an improved quality of life, a structured, visual daily schedule, communication training, teaching community activities, and reinforcement for the absence of the problem behaviors as well as reinforcement for alternative behaviors. Reinforcement involves frequent "social praise" for following directions as well as small edible treats for the absence of the problem behaviors on an hourly basis. The communication

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Editors' Note...

Here we go with year two of *Positive Practices*. We are very pleased to include in this issue a contribution from Paula Miskuly, one of the participants in the two week training institute we provided in Montana two years ago. We are also especially pleased to include the results of a research study carried out by Heike Ballmaier. As part of her doctoral research, Dr. Ballmaier investigated the reliability and validity of the instrument we developed for evaluating assessment reports and recommended support plans. As many of you know, we use this instrument in many of our training, research and quality assurance activities. We think you will find her report interesting and relevant.

We also include a picture taken at this year's Summer Institute in Los Angeles. Although this was the 8th Annual Summer Institute, this is the first time we had a group picture taken of all the participants, faculty and support staff. We can kick ourselves for that, but look for subsequent pictures in the years ahead.

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Psychometric Characteristics of Evaluation Instruments for Behavioral Assessment Reports and Intervention Plans

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Editors' Note: Dr. Ballmaier completed her doctoral work at Pepperdine University in Los Angeles. She first became interested in our work during an internship she spent with us as part of her graduate program. We were very pleased when she decided to carry out her doctoral research around an area of our work. Specifically, she decided to investigate the reliability and validity of one of the tools we developed for supporting our training, research, and quality assurance activities. We were excited to learn of her results. We were also very impressed with her clinical skills and consider ourselves fortunate that upon graduation she accepted a position with IABA. If you have any question about the study you are about to read, write and let us know.

Abstract

An Assessment Evaluation Instrument (AEI) and an Intervention Evaluation Instrument (IEI) were developed to evaluate the quality of assessment reports and intervention plans generated to help support individuals who have challenging behavior associated with their developmental disabilities. The purpose of this study was to investigate the test-retest reliability, interrater reliability, and criterion validity of these instruments. Pearson r correlation coefficients were all significant at the $p < .01$ level for the three analyses. With psychometric integrity, such instruments can be useful for setting professional standards, for professional training, and for treatment utility research, which investigates the extent to which assessment can contribute to good treatment planning and implementation, and ultimately to better outcomes for people.

Behavioral assessment constitutes an important type of evaluation for developmentally disabled people. It differs from other types of psychological assessment

in that the quality of behavioral assessment is determined mainly by its contribution to the design of appropriate intervention procedures and beneficial treat-

ment outcomes (Ciminero, Calhoun, & Adams, 1986; Goldfried, 1979; Hayes, Nelson, & Jarrett, 1987; Matson & Mulick, 1983; Nelson & Hayes, 1979). If an assessment device, distinction, or strategy can be shown to positively influence treatment outcome, that device, distinction, or strategy has treatment utility (Hayes, Nelson, & Jarrett, 1987).

While the fundamental role of assessment and functional analysis in behavioral intervention represents a hallmark in the field of applied behavior analysis (Kanfer & Saslow, 1969; Schwartz, Goldiamond, & Howe, 1975), there is presently no evaluation instrument designed to rate the quality of a behavioral assessment or intervention plan, nor the quality of decision making that would be needed to produce durable treatment outcomes. Such instruments, if available, could be useful in treatment utility research, in professional training, and in setting and maintaining professional standards.

The Assessment Evaluation Instrument (AEI) and Intervention Evaluation Instrument (IEI) (Willis & LaVigna, 1990) were developed with the goal of providing formalized measures of the completeness of behavioral assessment reports and intervention plans. An outline of the content areas evaluated by the AEI and the IEI is shown in Table 1 (page 4). Versions of these evaluation instruments have been published (Willis and LaVigna, 1990; LaVigna, Willis, Shaull, Abedi, & Sweitzer, 1994) and there is considerable support for their content (e.g., Carr, 1977, 1979, 1988; Carr & Durand, 1985a, 1985b; Carr & McDowell, 1980; Carr, Newsom, & Binkoff, 1976, 1980; Ciminero et al., 1986; Cooper, Heron, & Heward, 1987; Kanfer & Saslow, 1969; LaVigna & Donnellan, 1986; Schwartz et al., 1975). However, their psychometric characteristics have yet to be determined.

Crucial to the usefulness of the two instruments would be a test of their reliability and validity. The purpose of this study was to carry out this test. Specifically, this research investigated the test-retest reliability, interrater reliability, and criterion validity of the AEI and IEI, as well as the relatedness of these two instruments.

Assessment Evaluation Instrument	
I.	General Format
	A. Format
	B. Identifying Information
II.	Reason(s) for Referral
	A. Source of Referral
	B. Referral Behaviors
	C. Key Social Agents' Reasons for Referral and Possible Discrepancies
III.	Data Source
IV.	Description of Services
	A. Service Settings
	B. Types of Services
	C. Date Provided
	D. Duration
V.	Background Information
	A. Learner Description
	B. Living Arrangements
	C. Day Setting
	D. Health and Medical Status
	E. Previous or Current Services
VI.	Functional Analysis
	A. Description of the Problem Behavior
	B. History of the Problem
	C. Environmental (Ecological) Analysis
	D. Antecedent Analysis
	E. Consequence Analysis
	F. Impressions and Analysis of Meaning
VII.	Motivational Analysis
	A. Method of Analysis
	B. List of Potential Reinforcers
	C. Prioritization of Potential Reinforcers
VIII.	Mediator Analysis
	A. Description of Agents
	B. Estimate of Abilities
Intervention Evaluation Instrument	
I.	Long-Range Goals
II.	Short-Term Behavioral Objectives
	A. Label of Target Behavior
	B. Decrease, Maintain, or Increase
	C. Degree of Change
	D. Time Interval
III.	Data Collection
	A. Methods
	B. Reliability
IV.	Intervention Procedures
	A. Environmental Changes
	B. Positive Programming
	1. General Skills
	2. Functionally Equivalent Skills
	3. Functionally Related Skills
	4. Coping Skills
	C. Direct Treatment Strategies
	D. Reactive Strategies
	E. Staff Development
V.	Comments and Recommendations
	A. Anticipated Difficulties
	B. Additional Resources and/or Services Requested
	C. Strategies for Evaluating Outcomes

Table 1 - Outline of Content Areas Evaluated by the Assessment Evaluation Instrument (AEI) and the Intervention Evaluation Instrument (IEI)

Method

Materials

This study involved the AEI and IEI evaluation of 150 reports from two agencies that provide services to developmentally disabled clients, 88 from one and 62 from the other. Criteria for inclusion of reports consisted of each having both assessment and intervention sections, as well as addressing at least two target behaviors in the assessment report and attached intervention plan. Five raters were recruited to test the reliability and validity of the two evaluation instruments under investigation. Careful procedures were used to ensure that ratings were independent, raters were qualified and rater bias was kept at a minimum in the evaluation of reports. The total pool of 150 study reports was randomly divided into three sets of 50 cases. For each of the reliability and validity procedures, a set of 50 reports was given to the raters.

Test-Retest Reliability

Test retest reliability is a measure of consistency over time. It is obtained by giving the same test twice to the same group of persons with a time lapse between administrations (Werner & Steward, 1984). In the present research, a rater (Rater 1) was randomly assigned to participate in the test-retest reliability of the AEI and IEI instruments. The raters were considered as competent and ready to begin the study when agreement between their scores and the investigator's equaled or bettered an 80% agreement for five reports scored in succession. Following training and a demonstrated level of competence, Rater 1 proceeded to score 50 reports using the AEI and IEI scoring instruments. Monitoring of the rater consisted of checking for fatigue effects and digression from the instruments' scoring criteria. Specifically, the investigator sampled one in every five reports rated. If the discrepancy between the rater and the investigator increased in increments of more than five points between monitoring, the rater was observed to indicate fatigue effects and asked to resume on another day. Alternatively, the occurrence of digression from the instruments'

scoring criteria resulted in the rater scoring another training report to demonstrate competency in using the instruments before resuming the study reports. The raw scores for individual items on the two evaluation instruments were collected by the investigator. The investigator then summarized the total number of "+"s or credits for each report. Following a three-week interval, Rater 1 scored the same reports for the second time. Monitoring and feedback proceeded as with the initial scoring of reports. The raw scores were collected and the total number of "+"s were summarized by the investigator. These summations were saved for subsequent analysis of the instruments' test-retest reliability.

The test-retest reliability coefficient for both the AEI and IEI was calculated. The actual items which received credit ("+") from Rater 1 on the first evaluation of the reports was compared with the actual items which received credit ("+") from Rater 1 in the repeat evaluation. Since the AEI and IEI data were treated separately, this study generated two test-retest reliability coefficients, one for each evaluation instrument. A scatter plot was used to check for the appropriateness of using a parametric test, and the Pearson Product-Moment Correlation Coefficient was used to calculate the magnitude of the relationship between the test and the retest scores.

Interrater Reliability

Interrater reliability provides a measure of consistency of agreement across observers or scorers. When the scoring of an instrument requires the subjective judgment of a rater, it is necessary to have some estimate of the level of agreement among scorers who are supposedly using the same set of scoring criteria (Werner & Steward, 1984). In this study, two raters (Rater 2 and Rater 3) were randomly assigned to participate in the interrater reliability test of the AEI and IEI. These raters completed the training and demonstrated a level of competence prior to receiving the study reports. The raters appreciated that they were to rate the reports independently. Rater 2 and Rater 3 then received the same 50 reports. Methods for training, monitoring and pro-

viding feedback proceeded as described earlier. The individual raw scores were collected from the two raters. The number of “+”s was summarized for each rater’s reports. The two sets of summarized scores were then retained for subsequent analysis of the instruments’ interrater reliability.

Two interrater reliability coefficients were computed. One was computed for the AEI, by comparing the actual items which received credit (“+”) for each report from Rater 2 with the actual items which received credit (“+”) for each report from Rater 3. The interrater reliability coefficient for the IEI was obtained in the same way. The data met the assumptions for the use of a parametric test and the Pearson Product Moment Correlation Coefficient was used to calculate the magnitude of the relationship between the two raters’ scores for the evaluation instruments.

Criterion Validity

Criterion related validity refers to the extent to which an instrument relates to an appropriate criterion that is external to, but not part of the test itself (Garret & Woodworth, 1960). In order to measure the criterion-related validity of the AEI and IEI, two raters (Rater 4 and Rater 5) were employed. Rater 5 was selected for his professional credentials, his practice as a behavior specialist, and his utilization as a behavior specialist by responsible state agencies.

The method for collecting, recording, and monitoring for Rater 4 followed the procedures described for the other raters. In contrast, Rater 5 engaged in a practice session of rating ten reports to assist in familiarizing himself with two separate rating scales. These involved Rater 5’s clinical impressions of completeness of reports, which were quantified by utilizing the format of two 5-point rating scales, designed specifically for the purposes of this study. The practice session also afforded Rater 5 the opportunity to gain awareness of the range of reports he could expect to find among the actual sample in this research.

Following this orientation, the two scales provided separate measures: (a) the completeness of an assessment report

and, (b) the completeness of a behavior intervention plan. Both scales used a Likert type design, ranging from 1 (unsatisfactory) to 5 (excellent). For each report, Rater 5 was required to circle the numbers on the two rating scales: one scale score reflecting the completeness of the assessment section, and one scale reflecting the completeness of the intervention plan. Monitoring of Rater 5 proceeded with the investigator and the rater sharing feedback with one another to ensure that the standard rater definitions employed by the expert stayed consistent throughout the course of this research. In summary, the two sets of scores for each report were collected by the investigator and retained for subsequent analysis.

Two criterion validity coefficients were computed. One was computed for the AEI, by correlating the total credits (“+”) for each report from Rater 4, with the ratings for each report by the expert rater (Rater 5) who used the 5-point, criterion-rating scale. The criterion validity coefficient for the IEI was obtained in the same way. The data met the assumptions for the use of a parametric test and the Pearson Product-Moment Correlation Coefficient was used to calculate the significance of the relationship of scores from each of the AEI and IEI instruments with an external measurement of completeness (the rating scale).

Analysis of the Relatedness Between the AEI and IEI Ratings

All the raw data scores obtained throughout the entire study were utilized

to measure the magnitude of relatedness between the ratings produced by the two instruments. This provided the investigator with a total of 250 scored assessment reports (using the AEI) and 250 intervention plan reports (using the IEI). The raw data obtained from Rater 5 who used the criterion rating scale were excluded from this data set. The number of “+” scores obtained for every report evaluation using the AEI instrument (n=250) was correlated with the number of “+” scores obtained for every report evaluation using the IEI (n= 250). The data met the assumptions for the use of a parametric test and the Pearson Product-Moment Correlation Coefficient was used to calculate the magnitude of the relationship between the ratings produced by the two instruments.

Results

Table 2 presents the correlation coefficients obtained for the measures of test-retest reliability, interrater reliability, and criterion validity and the level of significance achieved for each. Correlation coefficients were based on pairs of raw scores consisting of sums of items checked present in reports on the AEI and IEI.

Test-Retest Reliability

This was assessed by asking Rater 1 to rate 50 reports at two times separated by a three-week period. As can be seen in Table 2, Pearson r correlation coefficients were .97 for the AEI and .96 for the IEI. The reliability coefficients calculated on each instrument were found to be

Results	AEI		IEI	
	Pearson r	Significance	Pearson r	Significance
Test-retest Reliability	0.97	0.01	0.96	0.01
Interrater Reliability	0.82	0.01	0.46	0.01
Criterion Validity	0.54	0.01	0.43	0.01

Table 2 - Reliability and Validity Measures on the Two Instruments

statistically significant at $p < 0.01$. Thus, the extent to which items checked present on each instrument could be generalized over different occasions appeared to be high.

Interrater Reliability

Interrater reliability was assessed by asking Raters 2 and 3 to score a different set of 50 reports independently. Pearson r correlation coefficients were .82 for the

ity coefficients, agreement on the completeness of reports appeared to be slightly higher on the AEI than on the IEI. Since the validity of an instrument is affected by its reliability, the lower interrater reliability coefficient indicated earlier for the IEI might have also lowered the criterion validity of this instrument. Generally speaking, it seemed likely that scoring criteria were less clear on the IEI, reflecting greater ambiguity and producing more subjective judgments in scoring across raters, as measured by the absolute value of the correlation coefficients obtained. However, a .01 level of significance was achieved by both.

The Relationship between AEI And IEI Raw Scores

The degree of relationship between the scores obtained on the behavioral

assessment reports and the associated behavioral intervention plans was determined by correlating AEI and IEI raw scores on a total of 250 scored protocols. The correlation coefficient obtained was .42. This value was significant at $p < .01$. These results are not displayed in Table 2.

Discussion

This study involved the evaluation of the psychometric properties of the AEI and IEI by conducting four major analyses: test-retest reliability, interrater reliability, criterion validity, and correlating raw scores obtained from the instruments with each other. Results generally indicated that the test-retest reliability for both instruments and the interrater reliability for the AEI were statistically significant and within an acceptable range for reliability coefficients (e.g., $> .80$; Anastasi, 1988).

The interrater reliability coefficient, though statistically significant, dropped to .46 on the IEI. When the interrater reliability coefficient for the IEI was calculated separately for raw scores obtained from each agency, a significant difference was observed in correlation coeffi-

cients measured for each agency. For raw scores obtained for reports from Agency 1, the coefficient was .82. For raw scores obtained for reports from Agency 2, the coefficient was .07.

An analysis of raw scores on reports from Agency 2 revealed that 17 out of 19 scores given by one rater were generally lower than scores provided by the other rater. Primarily due to the fact that reports from Agency 2 did not follow the organizational structure incorporated into the instrument, it may have been difficult to find the information called for on the instrument since it would not have necessarily appeared under the same heading as identified on the AEI. This observation was confirmed by Rater 3 whose scores were generally lower on reports from Agency 2 than the scores of Rater 2 involved in this analysis. Specifically, Rater 3 stated that it was difficult to use the IEI for identifying and evaluating information in reports from Agency 2, despite the impressions that completeness of general report content appeared similar across agencies.

The training procedures used in this research appear to have influenced the discrepancy in interrater reliability coefficients calculated for each agency. Training involved the evaluation of four reports from Agency 1 but only one report from Agency 2. The limited exposure to evaluating differently organized intervention plans may not have affected the ratings of reports from Agency 1 but produced variable results on the ratings of reports from Agency 2.

One could generally conclude that the IEI might be used more easily and accurately with report evaluations that follow the organizational structure of the instrument itself. Based on the present results, training procedures for raters may need to be expanded to include a carefully selected set of reports that are equally complete in content but reflect differences in their organizational structure. This would reduce later disagreements in report evaluations across raters. In addition, scoring criteria may need to be revised on the IEI to specify that the information to be evaluated may appear under a different section or heading than is called for on the instrument.

Results generally indicated that the test-retest reliability for both instruments and the interrater reliability for the AEI were statistically significant...

AEI and .46 for the IEI. Both reliability coefficients obtained were found to be statistically significant at $p < 0.01$. Results indicated that scoring judgments were consistent on the AEI across raters. The reliability coefficient on the IEI, however, reflected a larger number of interscorer differences.

Criterion Validity

The measurement of criterion validity involved correlating AEI raw score ratings obtained by Rater 4 with raw scores obtained by Rater 5 using an independent 5-point rating scale for evaluating assessment reports. A similar procedure was followed for calculating the validity coefficient for the second instrument by correlating IEI raw score ratings obtained by Rater 4 with raw scores obtained by Rater 5 on a 5-point rating scale for evaluating intervention plan. A third sample of 50 assessment reports was provided for this analysis.

Pearson r correlation coefficients were .54 for the AEI and .43 for the IEI. Both validity coefficients calculated were also found to be statistically significant at $p < 0.01$. As noted previously for reliabil-

Results further revealed that criterion validity coefficients were .54 for the AEI and .43 for the IEI. These coefficients were statistically significant and reflected a moderate level of agreement on completeness of reports across each of the instruments under investigation and the 5-point rating scale.

A number of factors may have reduced criterion validity coefficients calculated for the two instruments. First, criterion validity typically asks whether the instrument under investigation correlates with other relevant measures. Usually, these other variables are already established as valid measures. In this research, the expert opinion of reports expressed by Rater 5 on the rating scales, represented the criterion measure conducted independently from report evaluations on the two instruments. A panel of experts or one certified behavior analyst, rather than one well-experienced rater who participated in this research without the official qualifications of a behavior specialist, may have enriched the validity of the independent ratings of reports.

Second, the moderate agreement found in ratings of reports across examiners may have been partly due to difficulties encountered during monitoring of Rater 4 who conducted report evaluations on the two instruments. During monitoring, that rater had to be retrained twice because agreement measures obtained between the researcher and the rater had dropped to a level below .70. The monitoring of that one rater also indicated greater overall discrepancies with the researcher's ratings than was found for any other rater.

Third, it appeared that the checklist of items on the IEI was generally too short to address all major components that are needed to write a complete and comprehensive multi-element treatment plan. Based on the expressed reaction of raters, scoring criteria seemed too global, lacking in a detailed breakdown of criteria that define the presence or absence of each item in a written plan. The latter observations are also reflected in a general trend towards lower reliability coefficients obtained for the IEI than those calculated for the AEI. Revisions of the IEI toward expanding its length and pro-

viding a more detailed explanation of scoring criteria may enhance the reliability and validity of the instrument.

The final analysis of this research involved the correlation between AEI and IEI raw scores. According to treatment utility research, the usefulness of an assessment device cannot be measured against itself but must be investigated for its relevance in treatment planning (Hayes et al., 1989). The quality of a behavioral assessment report, if it has treatment utility, should therefore influence the quality of the resulting intervention plan. The final analysis of this research was based on the assumption that the AEI results for the behavioral assessment reports should be directly proportional to the IEI results for the corresponding intervention plans. Results of this analysis indicated that the correlation coefficient calculated was statistically significant at $p < .01$.

There are two reasons for interpreting the obtained correlation coefficient with caution. First, the two sets of AEI and IEI scores did not reflect report evaluations of independently obtained measures. Instead, scores were based on reports written by one behavior specialist who conducted and wrote both assessment and treatment plans. Consequently, the correlation coefficient measured between pairs of scores on the two instruments provided a preliminary measure of the treatment utility of behavioral assessment reports for plans specifying behavioral intervention strategies.

Second, results generally revealed more variable scoring on the IEI than on the AEI. Evaluations using the IEI appeared to have been influenced by the organizational structure in reports, due to the limitations in training discussed earlier on the interrater reliability findings of the IEI. In addition, insufficient instrument length and a lack of detailed breakdown of scoring criteria on the IEI may have influenced some scoring inconsistencies across raters. Revisions of training procedures and the IEI, as well as two sets of separately written reports may therefore need to be incorporated in the design of future treat-

ment utility research with the two instruments of interest. The present findings are promising, however, in that the level of completeness of assessment reports appeared to be proportional to the completeness of treatment plans.

Conclusions

In summary, the correlation coefficients calculated for all four analyses were found to be significant at $p < .01$. This means that, despite some limitations in the present findings, it is possible to generalize beyond the particular sample of reports evaluated, to the larger population of reports that are written in the clinical field of applied behavior analysis and/or utilized for research purposes. Therefore, preliminary applications of the two instruments may move forward in a number of ways.

The two instruments evaluated for their psychometric properties in this study could be applied in clinical practice by enhancing accountability for effective service provision to clients with developmental disabilities. By imposing a standard and setting guidelines and expectations for format, structure, and content in report writing, the AEI and IEI serve to define a standard by which reports could be evaluated for completeness, both within agencies and across service pro-

The two instruments...could be applied in clinical practice by enhancing accountability for effective service provision...

viders. The use of the instruments in clinical practice, along with the enhancement of their construct validity, could be strengthened further by designing a standardized training package that assists potential raters to familiarize themselves with differences in level of content, completeness, and different ways that infor-

mation can be organized, as is typically practiced across agencies.

The AEI and IEI could further be used to set goals and individualize instruction in the process of training psychologists and other professionals who assume the role of a behavior specialist to undertake assessments, and to determine whether

It is recommended that a training manual be designed for using the AEI and the IEI that contains the basic principles of behavioral assessment and the design of treatment plans. Emphasis should be placed on major definitions and terms that are discussed in the scoring criteria of the instruments, and examples should be provided that illustrate the use of scoring criteria for evaluating reports. A manual could thus be designed to address judgment calls that a rater typically needs to make when scoring reports.

A training manual for the use of the AEI and IEI should further include a standardized set of training reports

chosen and organized along the dimensions of varying content and organization. This would allow potential raters to familiarize themselves with differentially complete reports, as well as different ways that information can be organized as is typically practiced across agencies. Raters would be required to reach a specified level of agreement on the training reports before they could proceed with the actual ratings of reports for clinical practice or research purposes. Training procedures that describe and illustrate the use of the instruments, together with a standardized set of reports that need to be mastered during training, could enhance the applicability and accurate use of the two instruments.

It is further recommended that scoring criteria be refined and the number of items on the IEI be expanded to improve clear and confident decision-making in the evaluation of intervention plans. An item analysis should further be conducted on both instruments so that individual weak items can be identified and revised accordingly. Qualitative recommendations for content and form of both instruments have already been conducted through informal interviews with those raters who used the AEI and IEI to evaluate reports. Their comments are described in the original version of this study (Ballmaier, 1992) and could thus be ex-

amined for statistical verification in a follow-up item analysis of both instruments.

Finally, internal consistency data of an instrument have been described as representing potentially useful information for its construct validity (Anastasi, 1988). Internal consistency correlations represent measures of homogeneity. It is therefore recommended that the internal consistency of the AEI and IEI be measured, to collect further reliability data on the instruments and to investigate their homogeneity as it contributes to construct validity. This could be accomplished by correlating scores on individual items or sections of report evaluations with total credits on each instrument.

The AEI and IEI appear promising in their potential to contribute psychometrically sound instruments for the purpose of evaluating behavioral assessment reports and intervention plans for individuals challenged by a developmental disability and who also have behavior problems.

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The AEI and IEI appear promising...for the purpose of evaluating behavioral assessment reports and intervention plans...

training goals have been met under predetermined standards. To take this further, a separate formal future study indicating a significant difference between pretest and posttest scores when evaluating progress in the training of professionals would also contribute to the construct validity of the instruments, indicating that they do in fact evaluate the assessment and treatment planning for behavior problems exhibited by clients with developmental disabilities.

Finally, applications of the AEI and IEI are potentially useful in treatment utility research when investigating the treatment utility of behavioral assessment for treatment planning (Hayes et al., 1987). Treatment utility research proposed in the literature typically involves group comparison designs in which the relationship between assessment and treatment is examined across groups. Results based on such group comparison approaches that identify relevant criteria for treatment planning, and ultimately treatment outcome could be enhanced by the use of measures with good reliability and validity to define groups. Group experimental research utilizing the AEI and IEI could also strengthen the construct-related validation of the instruments if they were indeed found useful for purposes of reliably differentiating and drawing conclusions across groups.

Continued from page 1

training seems to be proceeding well and she seems to be learning the community skills that have been identified. But, the problem behaviors, i.e., “tantrums,” have not really been impacted. She takes the reinforcers when they are provided, but does not seem to be “delighted” when they are made available. She sometimes doesn’t eat the treats and sometimes just doesn’t pay attention to what is being offered. This has been going on for years in one form or another. What may be happening?

To answer this question, we would like you to answer these: “What makes us believe that she would be willing to give up her tantrums for a small edible treat every hour when her tantrums command immediate attention and environmental change?” Further, “how important would such treats be to her if she has access to her own refrigerator and she can fix herself a snack anytime she wants, and she has a choice of what she wants to prepare for each of her meals, including desert?” “What makes you believe that the people we serve generally would be willing to give up behaviors such as tantrums, self injury, property destruction, and the like, for a smile, a pat on the back, an edible treat, a nickel, or a token, when their behavior serves such powerful ends for them?” A person may be described as enjoying or liking what is being given; but “will they be willing to **work** for the identified reinforcers?” (This is further complicated if we are independently providing a high density of attention, praise, affection, enjoyable activities, frequent access to favorite foods, etc., simply to assure that the person enjoys a warm, supporting and nurturing interpersonal environment and enjoyable life-style, not because it has been *earned*, but rather because this is a basic need that everybody has and deserves.)

Let’s take a personal example that very likely will apply to all of us. We would venture to say that all of you enjoy money. Indeed, your days are usually spent in the pursuit of money through your work. OK, here is a problem for you. A friend or acquaintance is willing to offer you money to wash his car. How

many of you would be willing to wash his car for \$1.00? \$5.00? I would bet that you would not consider it. But, here is the dilemma; you like money, so why are you not willing to work for it? How about if he offered you \$10,000? There would be a stampede getting to the car; as a matter of fact, you would probably offer to wash it a few extra times for free. (Of course, the dynamics would be totally different if you had just been informed the night before that you had just inherited \$5,000,000 from a long forgotten uncle.)

Yes, you like money, but it requires a certain amount to “activate” us to action. It may also take a certain amount to improve our quality of life sufficiently to influence our behavior. Perhaps this is the problem with Barbara. She may be interested sometimes in what is available, but not be willing to work to achieve the rewards. Thus, a key in the effectiveness of reinforcement as part of a support plan may not only be **WHAT** is identified; but also **HOW MUCH** is presented or provided, and in the context of **WHAT DENSITY OF REINFORCEMENT**.

In this article, we will discuss some of the issues and methods around identifying effective reinforcement. This is not new information; but we would venture to say that much of it has been forgotten. Vance and Marilyn Hall (1980) wrote of the importance of reinforcement “...the systematic use of **reinforcement** is the most powerful tool in strengthening or teaching new behavior... Some persons have difficulty selecting and delivering **reinforcers** and are disappointed in the results of their behavior management efforts.” In other words, identifying powerful rewards to facilitate behavior change is **important**, whether this information is used to structure formal schedules of reinforcement to provide an incentive for the person to engage in a variety of alternative behaviors, in lieu of the target behavior, or it is used to increase the person’s access to a high density of noncontingent reinforcement and to improve their overall quality of life.

Methods for Identifying Potential Reinforcers

Ask the Person/Ask Others

A very basic strategy, but sometimes overlooked, is to ask the person what **interests he has**, what she would **like to have**, what he would **like to do**, what she would **like to earn**, and where he would **like to go**. We asked one of our consumers, a young man with the problems associated with autism, to write down the things he would like to earn as part of his support plan. He asked for a pencil, took a steno pad, and nearly filled the pad with things he considered worth working toward. Interestingly, over 90 percent of what he wrote was junk food. As part of asking, some creative strategies may be needed. For example, ask “If you had \$10 what would you buy?” “If you could go anywhere for dinner, where would you go?” “How much money would you like to have each day?”

Of course, it is important to ask those who are with the person often what the consumer likes. Not just one person, but several if it is possible. This is important since what may be reinforcing may differ in the presence of different persons. This is not new to you. It is not surprising that some kids *may* not want to play basketball or surf with mom, since these *may*

“...the systematic use of reinforcement is the most powerful tool in strengthening or teaching new behavior...”

not be something she does or does well (NOTE: This is not meant to be sexist. We do know some women who are excellent at both). Some specific questions we might ask of someone about potential reinforcers include the following:

- What does he do often?
- Where does he like (ask) to go?
- Who does she prefer to be with?

- What does he request most often?
- What does she purchase when she has money?
- Where does she request to go when she has the choice of where to eat?

Questionnaires

Another quick strategy for identifying many potential reinforcers would involve giving several people structured questionnaires to complete. For example, Tharp and Wetzel (1969) developed the Mediation-Reinforcer Incomplete Blank (MRB). The MRB contains 34 incomplete sentences that a person would com-

plete, such as “The thing I like to do best with my (mother/father) is ____.” “I will do almost anything to get ____.”

rate as “Not At All” are not the place to start. Rather, if there are 10 or 20 items rated as “Much” and “Very Much” these may be the items first used as contingent or noncontingent reinforcement.

Observe the Person

Observing a person at times through the day can be an effective way of identifying potential reinforcers. The assumption here is that if a person **does it often** it may be a potential reinforcer. The basis of this was presented in 1959 by David Premack. He noted that the behaviors a person engages in frequently can be used

to reinforce behaviors that occur at a low frequency. Thus, he was able to reduce the unmanageable behavior of nursery school children by giving them the opportunity to run around and yell and scream (high frequency behavior) if they sat quietly for short periods of time (low frequency behavior). So, the questions to be answered here include

“How much time does the person spend in various activities throughout the day?” “How often during the hour, day, week, month does the person use the object or engage in the activity?” How often does the person request, demand, argue for various objects, foods, activities, or events?”

Here are some methods for **observing** that we have found to be useful:

1. *The Asking Log.* Sometimes, when you ask kids what they would like to have or work for, they **freeze**. They just can’t think of a thing. So, we ask the parents to keep a pad of paper and pencil close to them when they are with their kids. We ask that they listen to their kids when they are driving, when they are watching TV (especially commercials) and when they are walking in the mall. We ask them to write down what the kids ask for (e.g., “I want ____.) and what they demand and tantrum over.
2. *Structured Location Record.* In classrooms with small children, we have

found it sometimes useful to draw a diagram of the classroom; the major areas (e.g., science, exploratory, art, etc.), seating arrangements, mats, eating area, teacher location, aide location, etc. This can be done very quickly. A time period for observing is then selected (e.g., every 30 seconds). Subsequently, every 30 seconds throughout the observation time, the observer puts a “/” on the diagram at the point where the student is located at that moment. This may be helpful in identifying a location where some potentially reinforcing event may be located.

3. *Structured Observation Record.* Similar to the above example, we frequently ask teachers and staff to observe the person at regular intervals throughout the day for several days. Ten minutes has been a good time period in our experience. At the end of each 10-minute period during the day, we ask that the following information be recorded:

- *Time.*
- *Location.* Where the person is at the moment of the observation.
- *Persons.* The people who are present or close or interacting with the person.
- *Objects.* The objects the person is holding, interacting with at the moment of the observation.
- *Activity.* The activity, event (e.g., math, pin ball) the person is engaged in at the moment of observation.
- *Behavior.* The person’s reaction (e.g., smiling, intensely involved, appears nervous) at the moment of the observation.
- *Other.* Any significant observation at the moment.

After a few hours of observation, then the records can be analyzed (This is very important!) to determine the locations where he spends most of his time; the people she hangs around with and seeks out most often; the objects he interacts with most often; the activities she participates with most often.

The advantage of questionnaires and surveys is that they give a good starting point for probing the effectiveness of reinforcement.

plete, such as “The thing I like to do best with my (mother/father) is ____.” “I will do almost anything to get ____.”

The Adult and Child Reinforcement Inventories (Willis, LaVigna, and Donnellan, 1993) is based on the original work of Cautela and Kastenbaum (1967). They contain over 200 items that a person would rate on a five-point-scale from “not at all” to “very much.” They also contain sections in which the respondent would describe what a consumer “does” more than 5, 10, 15, and 20-times a day. In a third section, the respondent is asked to rate how much time the consumer engages in common activities such as “watching television,” “listening to music,” sleeping,” “reading,” etc. A final section asks the person to answer questions such as “What is the person’s most favorite thing to do?” “What does the person ask for most often.”

The advantage of questionnaires and surveys is that they give a good starting point for probing the effectiveness of reinforcement. Those events that people

Reinforcer Sampling

We can't assume that just because a child asks to do something that it is going to be reinforcing. A child might think that it would be a great idea, but may be unwilling to work for it or may be hesitant for lack of experience. Sulzer-Azaroff and Mayer (1991) describe Shirley who "was hesitant the first time she went water skiing, rode a roller coaster, and performed before an audience; but afterward she really began to enjoy these activities." The way this might be described is that she didn't know what she was missing until she tried it. In other words, an event may lack reinforcing properties until the person has an opportunity to "sample" it.

By providing a sample of the identified event, it may now be used as contingent or noncontingent reinforcement. This is what Ayllon and Azrin (1968) established in their original research. In addition, by providing a small amount of something that is already reinforcing, performance might be enhanced. This is perhaps best illustrated in the "free samples" we receive in the mail and when touring the super markets. In addition, reinforcer sampling might be used to establish an event as reinforcing when it is situationally dependent. For example, we were working with a young man in his home using Coca Cola as a reinforcer. We had determined that he would "do anything" to get the opportunity to drink a small amount of Coke. But at school, Coke was not working. An analysis showed that at home we were delivering the Coke as "sips from the red can." At school they were delivering Coke in "clear plastic cups." Reinforcer sampling involved having him watch the Coke being poured from the can into the cup and then giving him the opportunity to drink it (NOTE: Before this, he refused to drink the dark fluid in the clear plastic cups). Once he tasted the Coke from the clear plastic cup, the Coke was used as an effective reinforcer.

Finally, the Reinforcer Sampling Rule states: "Before using an event or stimulus as a reinforcer, require sampling of the reinforcer in the situation in which it is to be used" (See Sulzer-Azaroff and Mayer, 1991).

Stimulus Preference Method

For many, potential reinforcers may be easily identified by asking the person (Barrett, 1962) or by exposing the person to an array of events and recording the duration or frequency of interaction with each event (Quilitch, Christophersen, and Risley, 1977). But these strategies may be less effective with people who have severe disabilities.

Pace, Ivancic, Edwards, Iwata, and Page (1985) evaluated a procedure for identifying potential reinforcers with people who had a profound level of learning difficulty. They began the study by identifying the stimuli for which they would determine preferences. There were 16 different events including a mirror, light, song, beep, coffee, flower, juice, graham cracker, vibrator, fan, heating pad, cool block, swing, rock, clap, and hug. Each item was presented individually ten times in interspersed fashion. Approach was the sign of preference. Preferences were established clearly. The second phase of the study set out to determine whether the preferred events actually acted as positive reinforcers for novel behaviors. This was done by establishing a novel (new) response to be learned by each participant (e.g., reach, raise hand, look, touch my hand, say eat). Each participant had the opportunity to receive a preferred or non-preferred stimulus as a consequence for engaging in the new response. The results of the study clearly established that preferred events showed in this way can act as reinforcers.

Choice Methods

Another way to establish potential reinforcers is to give people the opportunity to choose what they would like. There are a number of ways to do this:

1. *Multiple Choice*. Using this method, the person is repeatedly given the opportunity to choose from an array of potential reinforcers. This strategy involves the following steps:
 - The first step is to identify an array of events to be tested. These might be selected from interviews or from

questionnaires as described above.

- The array of events is then presented repeatedly, perhaps 10 to 20 times.
- The items are placed in front of the person; or the person is taken to where they are laid out.
- The person may be asked to "pick something" or he or she may be simply given the opportunity to approach and use.
- Choice can come in many forms. It will need to be determined individually for the person. For example, a person may approach and stand in front of the object. Another person may just stare at it for a period of time. A person may approach and pick up the object. A person may point at an object. The form of approach will depend on the person's abilities.
- Once the choice is made, the person is given a limited time to use what they have selected (e.g., a couple of minutes).
- During the session, once the choice is made, other objects are removed while he or she uses the selected item.

...an event may lack reinforcing properties until the person has an opportunity to "sample" it.

It will be important to record the person's choices. We use the "Reinforcer Preference Record." For each trial, the following information is recorded:

- The trial.
- The number or name of the reinforcer selected.
- The time that the reinforcer was used.
- The person's reactions to and interactions with the item selected.

Sometimes, when using this strat-

egy, the person chooses the same object or activity each time. In this event, after a few trials you may want to eliminate this selection and replace it with another.

2. *Forced Choice.* Using the 2-way choice procedure, two items are presented to the person at a time. The person is given 2-way choices among a variety of events. Paclawsky and Vollmer (1995) used this method to determine reinforcers for children with developmental disabilities who were also visually impaired. They found this procedure to be superior to the “preference” procedure described above in determining effective reinforcers. Indeed, they found that the Forced Choice method showed greater differentiation of preference among different potential reinforcers. They subsequently confirmed that the Forced Choice procedure accurately identified reinforcers since they were used to improve skill acquisition in the second part of the study.

Issues and Guidelines in the Selection of Potential Reinforcers

Age Appropriate Reinforcers

It is important to consider the person’s chronological age when selecting reinforcers. “Happy faces” for a teenager may be insulting and numbers for a 2-year old may not be understood. But, don’t be dogmatic in this. In recent times, the tendency has been to eliminate all child-like reinforcers from the lives of adults. This is unfortunate since the item being removed may be the only event in which the person has interest or enjoys.

Contingent vs. Noncontingent Reinforcement

Before establishing formal schedules of reinforcement, we should consider increasing the person’s access to high density, noncontingent reinforcement. We

recommend this for a number of reasons:

1. As a general rule, a high density of reinforcement is a setting event for lower rates of problem behavior and a low density of reinforcement is a setting event for higher rates of problem behavior.
2. Most of the people we work with have a lower density of reinforcement in their lives than do their age peers who

It is important to consider the person’s chronological age when selecting reinforcers.

do not face the challenge of a disability.

3. Most of the reinforcers in our lives are essentially noncontingent. For example, the desert we eat after a meal, the TV show we watch, the movie or restaurant to which we go, the new article of clothing that we buy, the book that we read, the people we see and spend time with, the music we listen to, etc.

The introduction of a high density of noncontingent reinforcement goes directly to our prime objective, i.e., **improving the quality life of the people we support.** If contingent reinforcement is to be used, it should represent reinforcers that are above and beyond what that person would properly have noncontingent access to, given an already established, quality of life that is comparable to the quality of life shared by others of that person’s age, who are not challenged by a disability.

Individualized

In order for reinforcement to be effective, the person must “buy in.” In other words, the person must have an interest. We might have no interest in earning a “liver dinner.” But we might put out considerable effort for a one kilo steak at Vlado’s Steak House in Melbourne, Australia (which we have done). We know

people on the other hand who would prefer the liver. The purpose of the assessment strategies discussed above was to suggest ways to identify such individualized reinforcers.

Select Reinforcers That Will Be Used

1. *Consider the Mediator’s Philosophy.* There are many teachers and parents who do not believe in using food as a reinforcer. They believe that if food is used; the person will become a “food junky.” Consequently, if you recommend food as a contingent or noncontingent reinforcer it is unlikely that they will use it. Your reinforcement plan will never have the chance to have an impact. Similarly, some professionals see contingent reinforcement as “bribery.” One way of handling these problems is to select other forms of reinforcement. Another strategy is to re-educate them regarding the likelihood of a person becoming a “food junky” and the difference between contingent reinforcement and “bribery.”
2. *Consider the Daily Routine.* Select reinforcers that fit into the natural flow of the day. At school, for example, the reinforcer coincides with recess, lunch, breaks between subjects, and the end of the day. At home, the reinforcer coincides with some of the natural transitions and events such as TV in the morning before school, a prize when returning from school, play time after school, dessert at dinner, evening television watching, bedtime, weekend events and privileges.
3. *Consider the Financial Ability of the Mediator.* We have seen reinforcement programs fail because the parents could not afford what had been recommended. This is also a very real problem in agencies that are strapped for funds. It may be necessary to find events naturally available in the environment, to shop at thrift shops for inexpensive/novel items, or to design lottery systems in which the person has only one chance in 100 of getting something expensive; the rest are conciliation prizes.

A number of years ago, we were providing training to teachers who worked in a very poor inner city school serving students who were believed to be incorrigible. They expressed their frustration over the lack of available funds to purchase potential reinforcers and their reluctance to pay for such items out of their own pocket. We helped them organize a “Barriers Resolution Meeting” in an effort to identify “low cost” or “no cost” reinforcers with the potential of being of interest to their students. The two rules of a barriers resolution meeting are that (1) anything goes, and (2) no criticism is allowed. The reason for these two rules is that somebody’s impractical, stupid, or even illegal idea, may prompt a brilliant idea from somebody else. If you don’t allow and encourage one set of ideas, you may not get the second. Once *all* the ideas are listed on the board, the group chose by consensus the ideas it wanted to adopt. Without any prompting from us, the teachers were in fact able to identify three full pages of “low cost/ no cost” reinforcers that they believed had great potential for motivating their students.

4. *Consider Using Natural Reinforcers.* These are events that are naturally available in the setting. According to Hall and Hall (1980): “They are to be used if we are clever enough to make them contingent reinforcers for the behaviors we wish to strengthen.” Examples of natural reinforcers which may be appropriately used contingently for children include the following:
 - free time in the class
 - homework free day
 - academic game
 - being monitor for the hour or day
 - tutor another student
 - special dessert
 - extended bedtime
 - bedtime story

Consider the Basic Rules of Reinforcement

Some of you may remember having taken a basic course in Behavior Modification (as it used to be termed) or Applied

Behavior Analysis. In those courses we were taught the rules that determined the effectiveness of reinforcement. Today, many people use reinforcement who have not had the opportunity to take the basic courses. Frequently, reinforcement does not work because one of these rules has been violated. We would just like to review some of these rules below. A full description is beyond the scope of this article.

1. *Meaningful.* As mentioned above, reinforcers need to be individualized so that “meaningful” reinforcers can be identified. A “meaningful” reinforcer is one that a person is willing to work for or which influences behavior when it is available on either a contingent or noncontingent basis.
2. *Contingent.* For reinforcement to strengthen a behavior, it must be contingent on that behavior. In other words, it must be delivered **for** a behavior, and typically not otherwise be available. Another way of saying this is that the person must **know why they have received the reinforcer.**
3. *Timing.* Contingent reinforcement can be delivered on a continuum from immediately to much later. It has been established that “immediate reinforcement is more effective than delayed reinforcement.” This is especially important for people with severe cognitive impairment, people who have a very short attention span, and people who have memory problems.
4. *Amount.* The amount of reinforcement received also has an impact on its effectiveness. As we noted above, it is unlikely that you would be willing to wash my car for \$1.00; but you would rush to do it for \$10,000. This is only common sense. Generally speaking, the amount of reinforcement must be proportional to the amount of work being required.

In contrast, providing too much of a reinforcer can also render its use ineffective. Part of a motivational analysis should be devoted to deter-

mining the level of reinforcement at which satiation effects may occur. In the contingent use of reinforcement, these levels should be avoided. In the noncontingent use of reinforcement these levels can be approached and even exceeded. (See the discussion of deprivation, below.)

5. *Quality.* The quality of the reinforcer can have an impact on its effectiveness. While this is well supported in the experimental literature, for us to understand this principle, it may be best to put it in everyday terms. All coffee is not equal; a cup of 7-11 coffee vs. a cup from Starbucks. Listening to Les McCann (a jazz artist) is OK on a Walkman; but on a \$5000 Technics system it is very different. Traveling to London on “El Cheapo” air gets you there; but traveling on the Concord is great. Thus, you may be able to improve the effectiveness of a reinforcer by improving its quality.
6. *Amount of Work.* Sometimes contingent reinforcers fail because we ask too much for too little. The reinforcer may have been effective at the start, but we kept increasing the required effort. As the effort increased, there may be a point beyond which the reinforcer can no longer support per-

The introduction of a high density of noncontingent reinforcement goes directly to our prime objective, i.e., improving the quality life of the people we support.

formance. Behaviorally, this point has been termed “schedule strain.” In the workaday world, we call it a “strike.” Doesn’t this sound familiar? Thus, if we notice this happening, we may be able to reinstall the effectiveness of the reinforcer by reducing the work or by increasing the amount of

reinforcement available.

7. *Novelty.* The more varied and different the contingent and noncontingent reinforcers used, the more likely they will be effective. Even everyday,

has eaten a large meal. In other words, for reinforcement to be effective, the reinforcer cannot be freely available outside of the program or from unplanned sources.

In addition, a reinforcer can be made to be less effective by giving too much of it. By doing this, the person may become satiated for that reinforcer. We talk about the "free access" rule. In that rule we say that the amount of reinforcement given at any time should not exceed 60 percent of that which the person would use if they were given total and complete free access to the reinforcer. This rule is designed to prevent "satiation" from occurring.

We have used a harsh word like deprivation to

bring home an important technical requirement in using contingent reinforcement effectively. This does not absolve us from the important responsibility we have of designing our support strategies in such a way as to respect the person's rights, their need for relatively free access to a high density of noncontingent reinforcement, and their need for autonomy. To use the principles of reinforcement in such a way as to satisfy the technical rules, without respecting the person or obtaining their collaboration and consent, would be to use this technology in ways that conflict with our values rather than in a way that supports our values (LaVigna and Willis, 1996).

mundane, reinforcers can be made more effective through delivering them in novel ways. Hall and Hall (1980) have noted that persons who are skilled at identifying and using novelty and novel reinforcers seem to be more effective when it comes to changing behavior.

8. *Deprivation.* For contingent reinforcement to be effective, there must be some level of deprivation for that reinforcer. With the exception of money (and some others) there are few reinforcers for which this is not true. For example, if a child had free access to television, why would he be willing to work for it. A person is less likely to work for a special meal just after he

Conclusion

In conclusion, if we are going to use contingent or noncontingent reinforcement as part of a support plan, then we need to take the time to locate events that are meaningful to the individual; in other words, we need to identify effective reinforcers. In addition, once we have identified these events, we need to provide them in ways that produce the effects we plan. This not only means improvement in the person's challenging behavior but also improvement in their overall quality of life.

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This does not absolve us from the important responsibility we have of designing our support strategies in such a way as to respect the person's rights, their need for relatively free access to a high density of noncontingent reinforcement, and their need for autonomy.

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Definition of a Problem Behavior

Paula Miskuly, Developmental Disabilities Program, Montana Department of Public Health and Human Services, Billings, MT

Editors' Note: The following definition of a problem behavior was submitted to us by Paula Miskuly. Paula participated in the two-week training institute that we provided in and for the State of Montana. She was one of 30 state consultants we trained through that process. Paula did an excellent, detailed job in defining the referral problem. She also did an excellent job in reviewing the history of this problem, which we have also included below. We look forward to newsletter contributions from many of you in the months to come.

Description of Behavior and Operational Definition of Anxiety Outbursts

A. *Topography.* Ed's anxiety outbursts include his loud vocalizations and/or hitting himself or damaging property.

1. *Loud vocalizations* include vocal/verbal behaviors at increased volume such that they are above conversational level at a distance of ten feet from Ed. These verbalizations may include statements related to the source of the anxiety (e.g., if the vacuum cleaner belt breaks, Ed may be yelling "the vacuum" or "belt") or a question such as "what is going on?" Additional loud vocal behaviors include yells, groans, whining/crying sounds and screams. If Ed is asking a perseverative question or repeating a comment (as described in Perseverative Speech) and the repetition is at heightened volume which is not above conversational level at a distance of 10 feet, it shall not be considered part of an anxiety outburst.

2. *Hitting himself* includes slapping or punching his chest or leg. At present, the behavior manifests itself by Ed striking his upper chest with a closed right handed fist. Historical data reflects self-injury which included slapping and punching his thighs. This definition is to include attempts to hit or slap. An attempt is defined as an event which would have resulted in impact had there not been a

verbal distraction or physical interruption of the movement.

3. *Damaging property* includes Ed hitting, throwing or otherwise defacing inanimate objects (e.g., ripping, kicking, knocking over, etc.). There must be an intent to damage involved in order for it to meet the definition. Therefore, if during an outburst Ed inadvertently bumps into a chair and it tips over, it does not meet the criteria and should not be considered as a heightening of severity of that incident.

B. *Cycle.* The onset of one of these outbursts is defined as the moment Ed's volume of vocalization is above conversational level at a distance of ten feet. Although this increase in volume is generally coupled with self-hitting and/or aggression and property destruction, in the event that any one of these behaviors occurred without a loud vocalization this too would indicate an onset of an outburst. In general, an event occurs which "sets Ed off" (refer to the Antecedent Analysis section for more information) and he immediately either yells (verbalization or vocalization) and hits himself/damages property or, exhibits one of the above behaviors singularly.

The discrete outburst can be considered over (offset) when Ed has accepted and repeats back staff's explanation of the event (at a conversational level of volume) and aggres-

sion toward self/others/property has ceased and he is able to continue with scheduled task **or** he moves on to the next task for one minute without exhibiting target behaviors.

C. *Course.* Once begun, the duration of an anxiety outburst can be anywhere from 30 seconds to 30 minutes. Ed responds positively to verbal interventions which cue him to stop, to relax, and to take deep breaths (verbal interrupters). Depending on how quickly staff are able to intervene and the significance of or confusion associated with the upsetting event, Ed will calm immediately or the loud vocalizations, self injury and/or property destructive behaviors will reoccur.

Ed's anxiety outbursts frequently include an intense level of eye contact from Ed. Further, most incidents involve Ed acknowledging, during the calming process, that he is sorry or asking if he is in trouble. If the antecedent event involves the environment not meeting Ed's expectation (see Antecedent Analysis), the course may include precursor behaviors in which Ed demands that he receive what he expected or that the environment be modified to his expectations.

After the discrete incident has ended, Ed may continue to verbally re-process the explanation over the remainder of the day and possibly into the next day. This re-processing can fall into the definition of perseverative speech.

D. *Strength.*

- *Rate.* Historical data and current data do not provide accurate estimations of frequency. Referral information and staff interviews consistently report that outbursts occur once or twice per month. Reports are consistent that frequency is directly proportional to the amount of changes/flux in Ed's daily routines and environment. Other than this fact, there is no routine cycle of increases or decreases in the frequency of outbursts. It is important here to note that Ed's Habilitation Aide and Job Coach each reported separate outbursts on December 6, 1995

and that I observed an outburst myself on the afternoon of December 7, 1995, suggesting a current rate of five to ten per week.

- *Severity.* At this time, Ed's outbursts are of short duration (ranging from two minutes to ten minutes). They do not include aggression against people or property destruction. As noted, in the past, Ed had engaged in frequent aggression and occasional property destruction. However, due to his eviction from an apartment, the severity of the behavior is better measured by its potential to jeopardize independent living or supported employment options for Ed. For example, the McDonald's manager has recently requested that his Job Coach remain on site.

History of the Problem

The history of this behavior is so longstanding that it is impossible to ascertain the onset. Historical data reflects that Ed has "always" had issues with environmental and schedule change as well as with not having his expectations being

met. As discussed, the manifestations of his outbursts have at times included more severe, intense, and dangerous acting out behaviors. During previous attempts to solve these problems, Ed may have learned to avoid more intense punitive measures by tailoring his outbursts to occur without posing risk of harm to people or property. However, he has not learned the necessary responses to replace the function(s) served by these outbursts. No cyclical pattern has been identified through this analysis. However, actual frequency data over time was not available. Nor was correlation information available, in terms of environmental and programmatic changes associated with changes in Ed's behavior. As mentioned earlier in this report, there may have been a decrease noted when Ed began receiving medical treatment for allergies. There is no suggestion that illness or malaise effects Ed's ability to cope with his environment. Staff have discussed the possibility that when issues involving major environmental or life changes are occurring, Ed's independent problem solving skills and processing abilities may decrease in their effectiveness. This situation can be noticed too if

the target of Ed's perseverance cannot come to closure. For example, if he perseverates on when to buy his bus ticket, you can set a designated time to purchase the ticket and this can resolve the problem. Alternatively, if he perseverates on buying a bus ticket and you cannot set a time with him until you check with Peg, Karen, etc., such vague cues to wait can cause a period of chaos for Ed. In such cases it is common to see decreased ability to problem solve or process information. In the past, such situations appeared to be related to Anxiety Outbursts. This is discussed further in the antecedent analysis section of this report.

Staff acknowledge a recent increase in outbursts but are unsure as to the reasons. Some state it may be a delayed reaction to his recent move to independent living. Others hypothesize that Ed may be aware that a change in his employment status is forthcoming. While no one has addressed the issue with him, he is aware that his co-worker at the maintenance job has been fired. Alternatively, his co-worker's removal may in itself be related to the increased outbursts.



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will be presented. For more information, contact Rose Holsey at TASH (410) 828-8274 x100.



29 W. Susquehanna Avenue, Suite 210, Baltimore, MD 21204

Procedural Protocols

Editors' Note: This issue's protocols come from a support plan developed on behalf of a 15-year-old boy challenged with the problems associated with autism. He was referred because his extreme physical aggression toward others had resulted in his placement in an out-of-state, 24-hour residential school. Among the interesting things we discovered in carrying out our assessment was that his 101 IQ obscured the fact that he had some major cognitive difficulties. On some of his psychological sub-tests he had scores as high as "16," while on others he scored as low as "2" and "3." These latter scores were in the areas of comprehension and understanding. The implications of this scatter were important in understanding the meaning of his behavior, especially since his parents and teachers had the impression that he had a very good understanding of the things that were said to him and the things he was being asked to do.

A major component of his support plan included his moving back home and enrolling in his neighborhood school. Table 1 shows an outline of his entire support plan. We include here the detailed protocols of two of these strategies. Specifically, these are the protocols we developed to teach him how to cope with and tolerate denial and to guide staff on how to use active listening when working with him.

Protocol #1

Name: Paul Redlands

Date Protocol Developed: June 25, 1995

Protocol Name: Learning How to Tolerate and Cope With Denial

Materials

This instructional program requires a series of photographs portraying the following scenes, each with an attached word caption:

Scene #1:

Photo: Paul is in close proximity to his father and appears to be saying or asking for something.

Caption: Paul is telling his father that he wants something, e.g., to go swimming with his brother, money, watching TV, renting a video, etc.

Variations:

- Each time the scene is reviewed, the desired item should be changed, e.g., Paul might be asking for money, asking to watch TV, asking to rent a movie, asking to go into the swimming pool with his brother, etc.
- Alternatively, this scene should be described as Paul asking for something, e.g., "Paul asks his father for money" and as Paul telling his father what he wants, e.g., "Paul tells his father to give him money".
- There should be six different photos of this first scene, with variations in settings (e.g., different rooms in the house, at the store, etc.) and a limited number of other adults, for example, his mother, Frank, etc., although the majority of the pictures should be of him and his father.

Scene #2:

Photo: This should be similar to photo # 1, but with minor variations in pose.

Caption: Paul's father or other adult portrayed says no, with some surface explanation.

Variations: The variations of this photo and corresponding caption should correspond to those described for photo # 1.

- | |
|--|
| <p>A. Transitional Protocols</p> <ol style="list-style-type: none"> Paul's <ol style="list-style-type: none"> Redlands Rules Brotherly Phrases Cognitive Restructuring Gift Stephen's <ol style="list-style-type: none"> Cognitive Restructuring Brotherly Phrases Gift <p>B. Ecological Strategies</p> <ol style="list-style-type: none"> Placement in Home School Move Home Interpersonal Style <p>C. Positive Programming</p> <ol style="list-style-type: none"> General Skills <ol style="list-style-type: none"> Domestic Skills - Dinner Preparation Community Skills - Shopping for Dinner Recreational Skills <ol style="list-style-type: none"> With Brother With Peers Vocational Skills <ol style="list-style-type: none"> Small Motor Repair Oil Change Academic Skills - High School Diploma Curriculum Using Individualized Methods Functionally Equivalent Skills <ol style="list-style-type: none"> Expressing Negative Feelings Communicating Confusion Functionally Related Skills <ol style="list-style-type: none"> Understanding and Empathizing with Others Discrete Trial Compliance Training Coping and Tolerance Skills <ol style="list-style-type: none"> Tolerating Criticism Tolerating Delay Tolerating Denial Tolerating Interruption Tolerating Pressure to Perform a Nonpreferred Activity Tolerating Frustration Dealing with Jealousy <p>E. Focused Support Strategies</p> <ol style="list-style-type: none"> Antecedent Control <ol style="list-style-type: none"> Scripts <ol style="list-style-type: none"> Making requests to perform nonpreferred activities Denial and saying no Delay of Gratification Interrupting a reinforcing activity Confrontation about misbehavior Avoiding Aversive Stimuli DROP <p>E. Reactive Strategies</p> <ol style="list-style-type: none"> Active Listening Stimulus Change Geographic Containment Physical Management |
|--|

Table 1 - Outline of Paul Redlands' Support Plan and Protocols

Scene #3:

Photo: This should be similar to photos # 1 and #2, but with minor variations in pose.

Caption: Paul says O.K., I can live with that.

Variations: The variations of this photo and corresponding caption should correspond to those described for photo # 1.

Scene #4:

Photo: This should be similar to photo #3, but with minor variations in pose.

Caption: Parent/other adult says “Thank you for being so understanding, you are really learning to be quite a nice young man.”

Variations: Same as above.

Schedule

At least once a day, as scheduled.

Responsible Person

Assigned specialist.

General Statement

There are a number of antecedent control and reinforcement strategies in place to minimize the number of times that Paul gets so upset that he escalates to a Tantrum with its associated behaviors. However, the ultimate solution to these problems will be when he learns to tolerate and cope with the fact that he cannot always have everything he wants upon demand. This instructional program is designed as one of many to teach him to cope with and tolerate the fact that he can't always get his way, and to deal with his frustration in socially acceptable ways.

Steps

1. *Verbal Competence.* Review scenario with Paul until he is familiar with it and he can tell the story.
2. *Prompted Role Play.* Once Paul becomes familiar with the “scenario,” staff and he should play their respective roles, with staff providing the necessary prompts to Paul for him to play his part.
3. *Unprompted Role Play.* Reliance on the prompts should be gradually faded until staff and Paul can role play the situation without them.
4. *Prompted Generalization Trials.*

Generalization trials should be scheduled throughout the day in which the “scenario” is reenacted by staff and Paul. Initially, this may require the use of prompts for Paul to do his role.

5. *Unprompted Generalization Trials.* Prompting should be gradually faded until staff can initiate the “scenario” any time during the day and Paul will respond appropriately.
6. *Use of Sufficient Exemplars.* A sufficient number of “scenarios” should be developed to allow variations in the person interacting with Paul and what Paul is asking for, so as to assure generalization.

Suggestions

1. This process and, in fact, each session needs to be primed with Paul. For example, he could be engaged by pointing out to him how all adults, including his father and mother, need to learn how to tolerate frustration and not always getting everything they want and being asked if he is ready to learn and practice such grown-up behavior and make his father proud.
2. While Paul’s father needs to be a part of this training, especially later on, he may need to be recruited to engage Paul in the process to begin with.
3. The reactive strategy for dealing with Paul’s request for something, such as money, a video, or anything else, could be resolved by redirection to the alternate solution described above, once the situation is brought under control by active listening, problem solving, stimulus change, etc.
4. The guidelines listed in Appendix G of the *Periodic Service Review: A Total Quality Assurance System for Human Services and Education* (LaVigna, Willis, Shaull, Abedi, & Sweitzer, 1994) should be followed, as applicable, in implementing each instructional session.

Data

The results of each session, at least one each day, should be recorded in an “instructional log” created for this purpose. The entry should include:

1. A description of which scenario was employed.

2. An indication of what instructional Step was worked on.
3. A general indication of Paul’s level of participation and cooperation.
4. An pass/fail indication for the session.
 - a. Pass: Paul seems to have mastered the scenario and is ready to move ahead to the next Step.
 - b. Fail: Paul still seems hesitant and uncertain in working through the scenario and is not ready to move ahead to the next Step.
5. General comment by staff (optional).
6. A summary chart should be kept up to date, showing which scenarios have been introduced, the date introduced, and the date each Step was mastered.

Pass Criterion

After a session has been passed, Paul can move to the next step for that particular scenario. However, each scenario that is used for training purposes should move through each of the Steps in turn.

Fail Criterion

If one week goes by without Paul moving ahead to the next Step on at least one scenario, this protocol should be reviewed and revised accordingly.

Protocol #2

Name: Paul Redlands
 Date Protocol Developed: June 21, 1995
 Protocol Name: Active Listening

Materials:

None

Schedule:

Active listening should be used as a standard interactional style and, in addition, specifically, whenever Paul is upset and agitated about something and there is a risk that trying to move on with the scheduled activities will result in an escalation of behavior. (i.e. escalation of a “tantrum”)

Responsible Person:

Primary support staff.

General Statement:

Actively listening should be incorpo-

rated into the basic style of interaction that staff use with Paul. In addition, reflecting his feelings to him so that he knows he is being heard, should be used as a strategy for when he exhibits precursor behavior. This should be effective in preventing escalation to a full blown episode of aggression. In preventing escalation to aggression, active listening can therefore be viewed as an additional antecedent control strategy. Active listening is also to be used as a reactive strategy, and as a way of de-escalating an actual episode of either minor or major aggression. When using active listening as a reactive strategy, having reached a point in the interaction where transition can occur, Paul should be encouraged to move on to the regularly scheduled activities.

Method

General

1. Obtain Paul's attention before beginning to talk to him. (This is particularly important when he is being distracted by surrounding stimuli.)
 2. Assure that his body is oriented toward you and you are facing him, but that you are no further than six feet away and no closer than three feet away.
 3. Speak slowly.
 4. Use clear, concise and simple language.
 5. Use a friendly, warm, engaging tone of voice.
 6. Convey openness non-verbally, using body language and gestures.
 7. Use non-authoritarian interactional style.
 8. Convey respect for Paul as an active teenager.
 9. Avoid using a bossy, confrontational, demanding manner.
- ### Specific
1. *When:*
 - a. *Style:* Active Listening is not just a strategy but a non-judgmental style to be used in all your interactions with Paul.
 - When something good happens
 - When you are providing information
 - When you are trying to prob-
 2. *Listening:*
 - a. *General Guidelines:*
 - Before verbally interacting with him, you should try to understand what Paul is feeling or what his message means. (e.g. "I don't want to take a shower," or "I am upset because I could not pick the video I wanted.")
 - You should then put what you understand Paul to be saying into your own words in order to verify your understanding of what he is feeling (i.e., reflect back what he is saying in your own words).
 - **DONOT** evaluate, give an opinion, advise, analyze, or question (see roadblock section for more details).
 - You should feed back only what you feel Paul's message meant, nothing more, nothing less.
 - b. *Examples:*
 - *Paul says,* "I hate this, I want to stop!"
Staff says, "It sounds like you are unhappy with this activity and you don't want to do it anymore."
 - *Paul says,* "I've had it with Susan, she's such a slob!"
Staff says, "It seems like you are fed up with Susan and that you think she is very messy!"
 3. *Staging:*
 - a. *General:* When using active listening as a reactive strategy, try your best to get to an area which is free from distractions.
 - b. *Home:* Rather than trying to actively listen to Paul when he is upset in front of his parents, or in the living room or other area of the house where the issue may have developed, try to get him to a quiet room, specifically, his bedroom.
 - c. *Community.* When using active listening as a reactive strategy in the community, again, try to go to an area that is both uncrowded and uncluttered. For example, if you are in the grocery store, try to walk out to the parking lot or at least go to an uncrowded part of the store.
 4. *Avoiding Roadblocks:*
 - a. *General:* Remember, active listening is only feeding back to Paul what you think he is saying, nothing more, nothing less. Try to avoid the following responses or roadblocks to active listening (Gordon, 1970):
 - 1) ordering, directing, commanding
 - 2) warning, admonishing, threatening
 - 3) exhorting, moralizing, preaching
 - 4) advising, giving solutions or suggestions
 - 5) lecturing, teaching, giving logical arguments
 - 6) judging, criticizing, disagreeing, blaming
 - 7) praising, agreeing
 - 8) name calling, ridiculing, shaming
 - 9) interpreting, analyzing, diagnosing
 - 10) reassuring, sympathizing, consoling, supporting
 - 11) probing, questioning, interrogating
 - 12) withdrawing, distracting, humoring, diverting
 5. *Monitoring:* During the active listening process, try your best to track the progress you are making e.g., is Paul beginning to calm down or continu-

ing to escalate. The indicators that Paul is escalating is that his face will stay flushed and begin to darken and he will begin to gesture with his arms. There are also reliable signs that Paul is beginning to calm down:

- a. *Verbal Indicators*: Voice tone should start becoming closer to a normal volume and the speed with which Paul is speaking should become closer to a normal pace.
 - b. *Nonverbal Indicators*: Paul begins to seem calmer (less frenetic body movements) and begins to look physically more relaxed and less tense (body not as stiff and rigid).
6. *Transition Appropriately*:
- a. *Timing*: The timing as to when to switch from active listening to another mode, such as using one of the prepared scripts developed for a specific problem situation or general problem solving, is vital to

the success of the reactive strategy. There are some specific signs to look for which indicate Paul may be ready to move on:

- Paul's affect comes down; his voice has a normal tone and he is talking at a normally paced speed.
- There are physical signs of relaxation; Paul is not moving about restlessly, his shoulders are relaxed, etc.
- Staff has made sure that all the nuances of the message Paul is trying to communicate have been reflected. It is important to not stop at generic reflection such as, "You sure are angry."
- Staff should review with Paul the issues that were brought up during the active listening process. This could be done in a list fashion such as, "Let me make sure I understand all we

talked about; you said you were upset because your brother came in your room without permission and because you do not want to cook dinner tonight. Is there anything I missed?" Paul should then indicate if he feels he has been heard and is ready to move on.

- b. *Next Strategy*: Once you have been through the above process move on to another strategy listed on Paul's plan, such as using one of the prepared scripts.
7. *Reinstate Active Listening*: If you move on to a new strategy and Paul begins to escalate, return to active listening. Remember it can take a long time for a Paul to feel that all his concerns have been listened to, so take your time and be patient. You may need to listen to the same concerns over and over.

Continued on page 22

1996 Summer Institute Participants

Editors' Note: We would like to introduce to you the participants of the 1996 Summer Institute held in Los Angeles between July 28 through August 10. Listed alphabetically by surname:

Jessica Beasley, LRE for LIFE Project, TN; **Tim Bordsen**, Integrity, Inc., AR; **Melissa Brown**, LRE for LIFE Project, TN; **Andrew Burton**, Central Interior Family Foundation, BC, Canada; **Andy Carden**, Glenwood Mental Health Services, AL; **Gregory Chesnutt**, LRE for LIFE Project, TN; **Mark Chumbler**, The

Rehabilitation Center, IN; **Darcy Day**, LRE for LIFE Project, TN; **Robin Draves**, Hiawatha Valley Education District, MN; **Mary Ann Garfold**, Berkeley County Public Schools, WV; **Sally Harte**, Belford College, England; **Sue Hines**, Allied Health, New Zealand; **Ayndrea LaVigna**, Institute for Applied Behavior Analysis, CA; **Carole Morritt**, Allied Health, New Zealand; **Bruce New**, River Crest, PA; **Elizabeth Pardo**, North Palos Elementary Schools Dist. 117, IL; **Wynelle Roberson**, University of Florida, FL; **Neil Rothwell**, Robert Fergusson Unit, Scotland; **Kenneth Rutten**, Central Interior Family Foundation, BC, Canada; **Jayne Stooksbury**, LRE for LIFE Project, TN; **Duren Thompson**, LRE for LIFE Project, TN; **Marina Valerio**, OPARC, CA; **Jill Vaughan**, Southwest Cook County Cooperative for Special Education, IL; **Peter Waddington**, Central Interior Family Foundation, BC, Canada; **Brigid Walker**, Dundee Healthcare NHS Trust, Scotland; **Kelley Woodside**, LRE for LIFE Project, TN; and IABA Staff: **Gary LaVigna**, **Tom Willis**, **Brenda LaVigna** and **John Marshall**.

Profiles in Courage: An Introduction to Three People Who Inspire us to Reach for Our Inner Most Potential

Stacy L. Daniels and Gary W. LaVigna, Institute for Applied Behavior Analysis, Los Angeles, CA

Editors' Note: In 1985 we established and now sponsor Community Services Institute (CSI) to carry out our not for profit activities. Recently, IABA was the sole sponsor of a fund raising event in support of CSI. The proceeds of this event went to two purposes: one was to establish an endowment fund, the income from which would be made available directly to our clients to help them with some of the financial challenges they face in living and working in the community, and in trying to provide for themselves and their families. The second was to provide them with assistance in making a down payment on, or with the closing costs they would incur in purchasing, their own home.

At the dinner dance which provided the focal point of our fund raising efforts, we presented the inspiring story of three of the people we help support, one of whom received our "Life Achievement Award." In our field of challenging behavior, we sometimes can lose sight of the person. We wanted to take this opportunity to introduce you to three people who can inspire all of us by printing below an edited version of our presentation that night.

If any of you would like to make a contribution to CSI for the purposes described above, we have enclosed envelopes for your convenience.

Introduction

When the Institute for Applied Behavior Analysis was established 15 years ago, we dedicated ourselves to a vision: that people who are challenged with a developmental disability would have the opportunity to live regular lives, with the dignity that comes from a real job for a real paycheck, and the self esteem and independence that comes from living in their own homes. Since then we have been able to help hundreds of people to work at jobs in the community: To date the folks we serve have earned more than three million dollars. Additionally, we support almost 100 people to live in their own homes.

We still have two remaining needs that must be met. It is always a struggle to help our folks move into a new place, with all the expenses involved. Additionally, many people need the stability in their living situation that is only possible as a home owner. Thank you for being

here tonight and helping us with the full realization of our vision. Half of the proceeds from tonight's event will be put into an endowment fund, the interest from which will be used to help people move into and keep up with their own apartments. The other half will be used to help

people put a down payment on a house or condominium so they can own a place of their own.

The philosophy of services for people with developmental disabilities has gone through a virtual revolution over the last two decades. Just over twenty years ago, adults who faced life with the challenge of a developmental disability mostly found themselves living in state-run or private institutions, with nothing constructive to do during most of the day. A decade ago, while many remained in institutions, licensed group homes were being established, which provided the possibility of some degree of community presence and participation. However, the day to day existence of even the people who lived in group homes was regimented and often devoid of productive and dignified activity. We would now like to tell you the story of three people who met these challenges. Every day is still a struggle for them and yet they have gone on to build exciting, productive lives for themselves. Booker T. Washington said "I have learned that success is to be measured not so much by the position that one has reached in life as by the obstacles which he has overcome while trying to succeed." These individuals not only have overcome large obstacles in their lives but on a daily basis inspire all who come in contact with them.

Zeke's Story

The first person we would like to introduce you to is Zeke Fernandez. When we first met Zeke four years ago he said to us "I'm a man and I want to work." This is especially exciting considering that Zeke, who is now a senior citizen, spent the first 30 years of his life locked up in a state hospital. Zeke is a good example of what happened to people in the earlier part of the century when people with disabilities were isolated from society because of fear and ignorance, and had few opportunities to be productive. Since we have been serving Zeke, he has had many opportunities to work and for the past year has been working diligently at Burger King. Zeke's job includes keeping the dining room clean during the

lunch rush and keeping the condiment canisters full. Zeke is very social and sees friends everyday at work.

In addition to work, Zeke enjoys a very active community life. Being involved in his local church is very important to him. He has made many friends and although he can walk to church now, if he needs a ride to special activities he has friends who are happy to give him a lift. One of Zeke's Saturday morning hang outs is a local donut shop. He is such a regular there that everyone knows him by name.

Zeke lives in an apartment in Ventura with one roommate. He is no ordinary housekeeper, but has been known to spend hours cleaning and doing laundry. Zeke enjoys cooking too, and is always excited when he learns a new meal.

Natalie's Story

When we met 27 year old Natalie Cole in the state hospital, where she grew up and continued to reside, the "experts" predicted that she could never successfully live in the community. With the proper kinds of support and activities, Natalie has now been living in her own home for the past four years. She lives in a duplex in Culver City with two house mates. One of the most exciting experiences for Natalie was having a key to her own front door. She takes pride in keeping a neat apartment. She even enjoys gardening.

Natalie enjoys her community surroundings and especially likes to walk to

the park to keep in shape. She loves having friends over for meals and parties. Natalie has had several job opportunities and experiences. Her strong preference is to work in the food service industry.

Leonardo's Story

Leonardo Castillo is a portrait in courage. Challenged since birth with cerebral palsy, a life long developmental disability which affects his speech, muscle control, and coordination, Leo's hopes for successful opportunities seemed slim. We first met Leo in 1987 when he was graduating from high school. We assisted him in obtaining his first job bussing tables in a restaurant in Malibu. For nine months he took two busses daily to get to work, while waiting for an opportunity in Santa Monica, where he lived. Leo's patience and perseverance paid off when he got a full-time position close to home at an architectural firm doing administrative and clerical functions.

Over the next two years, Leo proved to be a conscientious and productive employee who received numerous outstanding evaluations and pay raises. His work was so consistent that he soon graduated from support services funded by the Department of Developmental Disabilities to those funded by the Department of Rehabilitation, which are geared toward more independent workers. Leo also soon received an even better job opportunity initiated by a boss who had changed companies. He now works for KPFF, an engineering consulting firm. His job

description includes copying, mailing, running errands, stocking and lots and lots of filing. He takes advantage of a benefits package which includes full health benefits. He is valued by his co-workers and supervisor. (In fact his supervisor was in the audience during this presentation.)

In addition to successful employment, the most important part of life for Leo is relationships and his family. He was able, with the help from his support staff, to fulfill his biggest dream: he became a US citizen. He was then able to sponsor his childhood sweetheart to come and live in America. They later married and have two young daughters. As you can see, Leo lives a full and productive life.

Finally, we would like to end with a quote from Muriel James and Dorothy Jongeward, "Born to Win." "It takes courage to be a real winner-not a winner in the sense of beating out the other guy by always insisting on winning over him-but a winner at responding to life. It takes courage to experience the freedom that comes with autonomy, courage to accept intimacy and directly encounter other persons, courage to take a stand in an unpopular cause, courage to choose authenticity over approval and to choose it again and again, courage to accept the responsibility for your own choices, and indeed, courage to be the very unique person you really are."

The Life Achievement Award was bestowed upon a man with a lot of courage... Leonardo Castillo.

Continued from page 20

8. *Fail Criteria:* If you have been actively listening using this protocol for at least 15 minutes and there are absolutely no physical or verbal indicators that Paul is calming down and he is becoming more and more upset, you may need to stop active listening and move on to an alternative reactive strategy (see below).
9. *Fail Strategy:* If active listening has failed in this instance (see above definition) move to an alternative reactive strategy listed in Paul's protocol, e.g.,

stimulus change or, possibly geographic containment.

Comments

It is important to remember the judgment involved with active listening, particularly with regard to the timing and in moving from stage to stage. One could move too early or too late. In general, as long as the situation is not getting worse, you should take as much time as necessary to resolve the process without feeling the need to get on with the schedule. This may mean staying on the topic for

longer than indicated in the fail criterion above. On the other hand, if the situation is dangerous because of attempted or actual property destruction or aggression, you may appropriately decide to move on to the next strategy before the 15-minute criterion, and come back to active listening later.

References

- Gordon, T. (1970). *Parent effectiveness training*. New York: P. H. Wyden.
- LaVigna, G. W., Willis, T. J., Shaull, J. F., Abedi, M., & Sweitzer, M. (1994). *The periodic service review: A total quality assurance system for human services and education*. Baltimore: Paul Brookes Publishing Co.

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Resources

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Gary W. LaVigna & Thomas J. Willis

This competency-based training practicum provides participants with the clinical skills required to design and implement person-centered multielement nonaversive support plans.

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Enrollment limited to previous participants in IABA's Summer Institute and Longitudinal Training.

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Positive Approaches to Solving Behavior Challenges and The Periodic Service Review

Gary W. LaVigna & Thomas J. Willis

Positive Approaches... are 2 and 3 day seminars that present IABA's multielement model for providing person centered nonaversive behavioral supports to people with challenging behavior. These seminars cover Basic Principles of Nonaversive Behavior Support, Behavioral Assessment and Emergency Management. Assuring

Staff Consistency Through the Periodic Service Review: A Quality Management and Outcome Evaluation System is a 1 day seminar that teaches participants a staff management system that ensures the agency/school is providing quality services.

November, 1996 - Australian Seminars (Perth, Melbourne); Canadian Seminars (Halifax, NS)

December, 1996 - US Seminars (Sacramento, CA)

January, 1997 - US Seminars (New York City Area)

Other venues will be arranged and announced at a later date. For detailed, current information on any seminar, contact:

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Printed Resources Available from IABA

Alternatives to Punishment: Solving Behavior Problems with Nonaversive Strategies

G.W. LaVigna and A.M. Donnellan

"(This book) provides a comprehensive treatment of alternatives to punishment in dealing with behavior problems evidenced by human beings at various levels of development and in various circumstances. Based upon their own extensive observations and a thoroughgoing analysis of relevant experimental studies, (the authors) have put together a document that is at once a teaching instrument, a summary of research, and an argument for the use of positive reinforcement in the treatment of inadequate or undesired behavior... a landmark volume which should forever lay the ghost that aversive methods (even the ubiquitous 'time out') need to be applied to the delinquent, the retarded, or the normal 'learner,' whether in the home, the school, the clinic, or other situations." — Fred S. Keller (From the Preface to *Alternatives to Punishment*) - paper, \$19.50/ISBN 0-8290-1245-1

The Behavior Assessment Guide

T.J. Willis, G.W. LaVigna and A.M. Donnellan

The Behavior Assessment Guide provides the user with a comprehensive set of data gathering and records abstraction forms to facilitate the assessment and functional analysis of a person's challenging behavior and the generation of nonaversive behavioral support plans. Permission has been granted by the authors to reproduce the forms for professional use. -spiral, \$21.00

Progress Without Punishment: Effective Approaches for Learners with Behavior Problems

A.M. Donnellan, G.W. LaVigna, N. Negri-Schultz, L. Fassbender

As individuals with special educational and developmental needs are increasingly being integrated into the community, responding to their challenging behavior in a dignified and appropriate manner becomes

essential. In this volume, the authors argue against the use of punishment, and instead advocate the use of alternative strategies. The positive programming model described in this volume is a gradual educational process for behavior change, based on a functional analysis of problems, that involves systematic instruction in more effective ways of behaving. The work provides an overview of nonaversive behavioral technology and demonstrates how specific techniques change behavior through positive means. The extensive examples and illustrative material make the book a particularly useful resource for the field. -paper, \$17.95/ISBN 8077-2911-6.

Social Skills Training for Psychiatric Patients

R.P. Liberman, W.J. DeRisi, K.T. Mueser

This guide to the application of social skills training with psychiatric patients systematically provides clinicians with the ingredients necessary to start and run their own social skills groups. Case examples, transcripts of social skills training sessions and exercises aid the reader in applying the training methods. -paper, \$28.95/ISBN 0-08-034694-4

The Role of Positive Programming in Behavioral Treatment

G.W. LaVigna, T.J. Willis, A.M. Donnellan

This chapter describes the role of positive programming in supporting people with severe and challenging behavior. After discussing the need for positive programming within a framework based on outcome needs, variations of this strategy are delineated. Then, assessment and analysis are described as critical for comprehensive, positive, and effective support. A case study of severe aggression is presented to illustrate the process of assessment and analysis, the supports that follow from this process, and the long term results of this approach. - spiral, \$5.00

The Periodic Service Review: A Total Quality Assurance System for Human Services & Education

G.W. LaVigna, T.J. Willis, J.F. Shaul, M. Abedi, M. Sweitzer

Evolving from more than a decade of work at IABA, this book provides the tools needed to enhance and maintain high quality service delivery. Translating the principles of organizational behavior management and total quality management into concrete policies and procedures, the *Periodic Service Review (PSR)* acts as both an instrument and a system. As an instrument, the PSR provides easy to follow score sheets to assess staff performance and the quality of services provided. As a system, it guides managers step-by-step through 4 interrelated elements — performance standards, performance monitoring, performance feedback, and systematic training — to offer an ongoing process for ensuring staff consistency and a high level of quality for services and programs. Practical examples show how the PSR is applied to group home, supported living, classroom, and supported employment settings, and the helpful appendices provide numerous tables and charts that can easily be tailored to a variety of programs. - \$37.95/ISBN 1-55766-142-1

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