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Anger Management and Assertiveness Skills: Use of a Curriculum in Supported Living Services

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Editors' Note: We are pleased to present this article by Bill McClain and Ellen Lewis describing an approach to anger management training for our IABA consumers receiving supported living services. Gary had an opportunity to attend one of these sessions on one of his field visits and was totally caught up in the process, as well as being very impressed in how the process engaged everybody who attended. Let us know if you would like more articles describing different aspects of our services.

Introduction

For the past few years staff at the Institute for Applied Behavior Analysis (IABA) in Ventura County, California have been facilitating “stress management” groups as part of supported living services (also known as Social and Community Integration and Participation, or SCIP) with adults who have developmental disabilities. These groups started as a variation of Personal Effectiveness Training (PET) (King, Liberman, Roberts & Bryan, 1977) sessions, which had been held regularly. It was observed that participants and staff were generally unmotivated to attend the PET groups. At the same time, many of the people participating in SCIP continued to demonstrate poor impulse control, aggression, explosiveness, and difficulty managing the stressors encountered while living and working in the community.

The first group started as an hour-long weekly session with three or four participants, one group leader and one or two support staff. Additional groups were started in other areas of the community because more people wanted to participate when they heard about or visited the original group. Interested staff persons were trained to run the groups. One group became quite large (seven to ten regular participants) due to the convenient location and effectiveness of the group dynamics. Locations were varied when possible in order to facilitate accessibility for as many people as possible.

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Editors' Note...

This year is turning out to be a busy one for us. We are fortunate to be engaged in a major, two-year training and consultation project in New Zealand. This is with Specialist Education Services, who are adopting our multielement behavioral model as well as the Periodic Service Review as part of their quality improvement system, and a number of adult service agencies as well. In addition, we are preparing for our regularly scheduled series of training programs in the United Kingdom this fall. We are very pleased to announce that the IABA courses we are offering in the UK will be sponsored by the Tizard Centre, University of Kent at Canterbury. The Tizard Centre is unparalleled in the role it has taken in advancing positive practices in the field of challenging behavior in the UK so we feel particularly honored to be sponsored by them. Finally, we are preparing for our Second IABA International Conference to Promote Positive Practices in the Field of Challenging Behavior. The conference will be in Orlando, Florida in January, 1999. We hope to see many of you there.

This issue of *Positive Practices* has three articles. One has to do with the provision of social skills training within the context of supported living services. This article was co-written by Ellen Lewis of our staff at IABA and Bill McLain of Tri-Counties Regional Center. The second article is co-authored by Mick Pitchford who has published previously in *Positive Practices*. Mick and his colleagues report the use of videotape in their efforts to understand and solve the problems of a student. They demonstrate a good example of where a time consuming assessment was not necessary. Finally, Peter Baker in his article describes a graphic means of displaying the results of a complex analysis to staff. We hope that you enjoy this quarter's issue.



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Rug Rats, Videos and the Use of Ecological Strategies in the Rapid Reduction of a Severe and Challenging Behavior Problem

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Editors' Note: We are the first to recognize that the resources do not exist to carry out a full behavioral assessment and functional analysis for every person who is referred for problem behavior. School systems in particular may assign caseloads to its psychologists and others with the responsibility that would preclude this time consuming process for every student. Rather, we say, the full assessment and functional analysis should be carried out, among other criteria, for those people for whom less time consuming efforts have failed.

In this article, Fiona Skinner, Hilary George and Mick Pitchford describe the use of videotape to facilitate the process of assessment and analysis. They make such a strong case that one might consider videotaping not just as a more time efficient alternative to a full assessment but, in addition, a possible additional tool in carrying out a full assessment. What do you think?

Introduction

Susan was an unhappy 12-year-old girl with mild athetoid cerebral palsy and severe learning difficulties who had recently transferred to a new school and had started to cause major problems to staff and children alike. Some of the reasons for Susan's distress were plain enough to see. The death of a grandparent, a neighbor, a pet and the death of Princess Diana had a profoundly unsettling effect on Susan as did the change of school. Susan's distress manifested itself in a number of ways but the one that we will concentrate on most was her assaults on staff and peers. In addition her lone parent mother reported major difficulties getting Susan to school and her attendance was also poor, making it difficult to help her settle happily into her new school or for her new teachers to get to know her.

Typically assaults constituted grabbing or pinching to other peoples' arms, necks and breasts.

These assaults could occur singly but often formed extended episodes involving as many as five grabs or

attempted grabs per minute. Staff found these assaults particularly hard to deal with emotionally because of their very painful nature and just as importantly because Susan would often apparently smile at the same time as she was hurting someone.

When asked how they could guarantee the problem would happen staff reported that a change from one classroom to the next seemed to have this effect as did placing demands on her. They added; "If you just let her sit and do nothing in her place all day you'd have no trouble with her."

Because of the urgency of the situation and the fact that the educational psychologist would not be able to do a full behavioral assessment and functional analysis (Willis & LaVigna, 1996 a; b) because of other local authority duties, it was decided to collect video data (with parental consent) as a way of accelerating the assessment process. A total of just under an hour's worth of video recording was collected on Susan in the space of one morning, some of it in her own classroom and some of it in the art room. There are ethical issues surrounding the use of video recordings and these will be dealt with in a later section but the video recording, together with a review of written records and interviews with staff, was instrumental in achieving a very rapid reduction in grabbing and pinching to the benefit of all those involved.

A Means to an End

The first section of video sees Susan sitting on her own appar-

ently quite happily. She is sat apart from the rest of the group of children on the advice of the educational psychologist so that it is more difficult for her to grab anyone. The situation gradually changes as the group gets ready to move to another classroom. As a child walks behind Susan she starts to look uneasy, twisting around in her chair to look at the people walking behind her. Her change of expression is fleeting, the sort of thing an observer could well miss, but with the facility a VCR has for repeated replays, quite clear and striking. As students walk past her to leave the classroom Susan looks increasingly tense and grabs at some of the children. For their part some of the children hold out their arms as though taunting Susan. Again, very fleeting behaviors which could easily be missed by an observer (especially if they are using a time sampling approach) but using the replay option very telling.

The next section of the video recording shows Susan in the art room where she is between two members of staff who are sat on either side of her to try and prevent her pinching any of the children. They do this because for Susan to play any meaningful part in the lesson she needs to be a part of the group. Consequently Susan is on a stool sat with the group of children, as the lesson progresses Susan's behavior deteriorates very sharply. In the space of a little under seven minutes there are at least a total of 33 actual or attempted grabs. It is decided that Susan's behavior is so bad that she should be taken back to her classroom. Susan immediately calms down and stops grabbing as she returns to the classroom.

The third section of the video shows the educational psychologist talking to Susan and working with her on progressive relaxation. However, before this starts she is asked where she wants to sit; she is very emphatic about sitting with her back to the wall and with the table in front of her to act as a barrier.

With this video in the can, so to speak, our initial hypothesis was that Susan was insecure, probably suffering from separation anxiety and grief; found changes of room aversive and would therefore benefit from a corner of the classroom which she could identify as her own. For reasons we didn't fully understand she clearly liked to sit with her back to the wall. We therefore determined to make a part of the classroom as homely for her as possible, hanging a

cloth on the wall, placing her chair against the wall in a corner with her own table in front of her. Susan was also told that she could bring two soft toys into school with her and these could sit on a chair next to her in her home corner. She chose a rug rat and a gorilla: in more formal terms the presence of these toys could be seen as an ecological manipulation since it improved her environment by increasing non-contingent reinforcement (commonly known as fun). It was first thought that we would have to reconcile ourselves in the short term to Susan spending most of her time in her "home corner" while she gradually settled into her new school and a program of desensitization to movement around the school was started.

The use of videotape accelerated the pace of assessment so that we could start to implement a partial treatment plan, which included only ecological strategies and reactive strategies, the day after recordings had been completed. The impact on Susan's behavior of these purely ecological strategies was immediate and dramatic in foreseen and unforeseen ways. Not only did her rate of grabbing and pinching fall to much lower levels as from the first day of implementation — as the chart depicted in Figure 1 reveals — her attendance rate also improved from an average of 45% to 79%.

What was unexpected was her greatly increased willingness to leave her classroom. Providing she could take Tommy the Rug Rat with her she would go to other classrooms without the sorts of intense episodes of grabbing and pinching which had been a feature of her behavior previously. We decided to

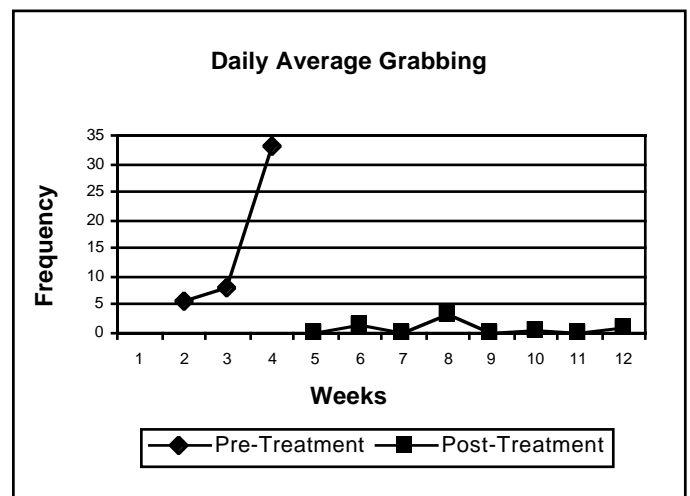


Figure 1 - Effects of Ecological and Reactive Strategies on Grabbing

shelve for the time being our previous plans to desensitize Susan to moving around the school. When problems did occur they tended to be at more unstructured times, for example in the corridors, in the school hall during lunchtime, in the playground. If problems occurred Susan would be told to go to her home corner which she was always pleased to do and this constituted our reactive strategy.

In the light of the experience gained and the information on videotape the educational psychologist again reviewed the file and talked to Susan's mother. At this point a highly significant piece of evidence came to light which completed the jigsaw. As a toddler learning to walk Susan had to overcome the problems caused by her cerebral palsy. In particular she had often had very painful falls because of her tendency to startle in response to sudden noises behind her (particularly sneezes) and topple over backwards. Her lack of saving reflexes exacerbated the situation and meant that what would have been no more than a sudden bump for most toddlers was experienced as a traumatic, painful and potentially dangerous loss of balance and control. Susan had eventually learned to save herself by reaching out sideways and grabbing the first thing she could as hard as she could. Susan no longer falls over backwards in response to loud noises but her early experiences will have constituted prolonged and intense conditioning the long-term effects of which we were beginning to understand.

With this knowledge we could again look at the videotape. Now the reason for Susan's tenseness when someone passed behind her was completely understandable, someone behind her might mean a loud startling noise, loss of balance and pain. The episode in the art room now appeared in a new light, we had inadvertently placed Susan in a nightmare situation, perched on a high stool with no back support and with people moving around behind her. In these circumstances, no longer was it surprising that she would grab, in ways she had learned as a toddler made her secure, it might even begin to explain the grin that staff found so irritating. Maybe, Susan was trying to communicate that she wanted someone to be her friend and help her out of this situation.

In the light of the mother's testimony and the clues given us on video it also became clear that one of the

children knew very well from his long experience of Susan in their previous school that he could tease and provoke her if he made sudden noises behind her. We think this has contributed to Susan's aversion of having children sit next to her - another antecedent we had found to grabbing and pinching.

The striking thing so early in the treatment program is the impact on Susan's behavior of such simple ecological and reactive strategies alone. Susan is clearly a much happier girl, her attendance has improved and she now routinely leaves her own classroom in ways that seemed impossible only weeks before. Much remains to be done but there is no doubt that Susan's quality of life has improved greatly. Presently a multi-element treatment plan (LaVigna & Willis, 1995) for Susan is evolving which amongst others contains the following elements that are pertinent to the present discussion.

Ecological Strategies

The main ecological strategy is the one already discussed, the provision of a home corner for Susan where she feels safe from disturbance from noises occurring behind her. The provision of the two soft toys could also be seen as an ecological strategy since

*Maybe, Susan was trying to
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out of this situation.*

it greatly increased the availability of non-contingent reinforcement in her environment.

Positive Programming

Susan is being taught the use of an assertive statement, "Please give me more space," to serve the equivalent function for pinching and grabbing when she feels crowded.

We have begun progressive relaxation training with Susan and will be preparing a tape of noise so that she can learn to tolerate sudden noises occurring behind her. Given the probable strength of Susan's

conditioned response to these noises tolerance training at meal times seems the best option. We will also need to teach Susan problem solving routines to use in situations in which she feels uncomfortable or vulnerable so that she can escape these situations without hurting people.

Direct Treatment Strategies

The use of rewards to date has been relatively loose and unstructured. Verbal praise with feedback is used

there are very real ethical issues to be considered and perhaps these should have priority before going on to discuss the advantages.

when Susan goes for periods without grabbing and pinching. Up until Christmas 1997 (the time of writing) Susan was also working towards obtaining a “good video” showing her in a good light which she could take home as a Christmas present providing the improvement in her behavior was continued in the judgement of her teacher.

Finally, given that an element in the problem of pinching and grabbing is peer teasing, one possibility we will be exploring is a group contingency in order to give the rest of the class an investment in the situation improving.

Reactive Strategies

The reactive strategies used presently include the reduction of demands and access to Susan’s home corner.

The Use of Video Recordings in Functional Assessments

Although not a substitute for a full functional assessment, the one hour video contributed very significantly to developing the depth of understanding that is necessary if attempts to help them overcome severe and challenging behavior are to be accurately and effectively focused. But there are very real ethical

issues to be considered and perhaps these should have priority before going on to discuss the advantages.

It needs to be recognized that videotaping someone, possibly when they are engaged in severe and challenging behavior, has the potential to be very demeaning. To undertake this sort of work there needs to be consent on the part of the child’s parents and a clear case that the urgency of the situation warrants this step (both conditions were met in our view in Susan’s case). How the issue of consent would be handled with adult clients is an area we are not competent to judge and leave to our colleagues in services for adults to consider.

Thought also needs to be given to whether or not the subject of the video should watch if it includes shots of their severe and challenging behavior. Our view is that this should not happen in any circumstances. It seems to us that

the person will either find watching their own challenging behavior aversive (which automatically precludes its use) or rewarding (which is not desirable for obvious reasons).

Although we tried to maintain the fiction that we were videotaping the class as a whole, the children soon realized that the focus of recordings was in fact Susan. Therefore some time was spent recording the children and letting them view a video of themselves. They were also actively involved in the recording of Susan’s “good video” looking through the camera viewfinder, sitting next to Susan and taking part in role plays where she uses the assertive statements we were teaching her. Clearly then the impact that videotaping may have on others present in the person’s environment needs to be considered.

One area, which needs to be treated very carefully, is the issue of staff expectations regarding video recordings. There are two points here: the first is that it needs to be emphasized to staff that they are not expected to provoke severe and challenging behavior deliberately so that it can be videotaped. If they are in a position to do this then videotaping is partly redundant as we can find out from a conventional interview what the antecedent conditions for severe and challenging behavior are. The second point is that if severe and challenging behavior does occur they should do

whatever they think best and would normally do to make the situation safe as soon as possible. Without this injunction staff, in our experience, have a tendency to let the situation run longer than they normally would as they think it will be helpful to the psychologist to get as much on video as possible. Consequently the fact that safety has an absolute priority over everything has to be emphasized to all of the staff involved.

Staff feelings need to be addressed particularly if it becomes clear from the video recordings that their behavior is inadvertently contributing to problems. Experiencing severe and challenging behavior is stressful enough without the added stress of being caught on video as you struggle to cope with the situation. It is perhaps significant in this respect that the staff involved with Susan on a daily basis expressed great satisfaction (shouts of laughter) when the psychologist is seen on video getting pinched and grabbed as well as just the regular staff. Clearly trust and mutual respect will make this process a lot easier. If it is an outsider such as a psychologist who is involved in doing the recording then we would suggest they get involved in the activities being videotaped and become a participant rather than “director.” Riding breaches, horsewhip and megaphone are definitely not required.

Other Issues That Need to be Thought About in Advance

Whose property is the video recording? If the recording is deemed comparable to file notes, what measures will be taken to store and then destroy it when the person becomes an adult? If consent (including staff consent) is obtained for using the video for training purposes who will and will not be allowed to see it?

So far we have concentrated on the problems of videotaping and the safeguards and issues which need to be decided upon. However, there are very real advantages to be gained from this technology and we will try to give some flavor of these by using illustrations from this and other casework.

Staff Training

The power of video to reveal during assessment the stimulus conditions for the occurrence and non-occurrence of problem behaviors in assessment also gives it

great power as a training tool.

One child we recently worked with had a history of severe assaults and non-compliance. In the video we took of her she is given instructions on two occasions. On one occasion she responds happily on the second she tantrums. The key to her tantrums was the way in which tasks were introduced to her. If the adult placed their face close to Tracey’s and used the sort of tone of voice a playful parent would to a baby or toddler, e.g. “Trraaacceeeeyyy, who’s a lovely girl?....you are....yes you are.....yyyyyessss youuu are! Look what I’ve got for you (showing Tracey her tray of work)....’..Then Tracey would show every sign of pleasure and comply with adult requests framed and delivered in this way. If, on the other hand, the adult used a stereotypical and entirely reasonable teacher approach—“Tracey go and sit at the table. It’s time to do your work”—a severe and intense tantrum, which might escalate into assault, occurred within four seconds of the instruction being given. Being able to show staff how to and how not to give instructions to a particular child can be invaluable, particularly when, without the sort of vivid evidence only video can provide, staff could be forgiven for being reluctant to put their face close to the face of someone with a history of assaults.

The Video Allows Calm Reflection of the Child’s Behavior

Observing children in situations where they and the staff who support them are under stress is in itself stressful and so it is very easy to miss or fail to understand the significance of events. For example, in the present case, the educational psychologist and

Experiencing severe and challenging behavior is stressful enough without the added stress of being caught on video as you struggle to cope with the situation.

other staff were often on tender hooks trying to observe and contribute to making the situation safe with a student who was very volatile. At the end of the videotaping session the educational psychologist had a “feeling” that Susan’s peers were sometimes teasing

her although he could not say why he thought this. It was only when he viewed the videotape away from distractions that he realized this “feeling” was based on an incident that lasted for three seconds on the videotape. Presumably he had glimpsed the situation but it had not fully registered because of the combination of stress and the large number of distractions inevitably present in a busy classroom.

The Videotape Allows the Repeated Viewing of Critical Incidents

Some of the behavior we observe is not only severe and challenging it is also complex and easily misinterpreted - the ability to view the same critical incident repeatedly and in juxtaposition with other incidents can be invaluable. In the case of Tracey this was fundamental in understanding the function of some of the behavior which constituted a part of a complex chain of tantrum behavior. One of Tracey’s favorite activities was tickling games. Because she has no functional language her way of communicating this was to grab someone’s hands and place them on her tummy. During tantrum behavior in response to instructions Tracey would run around the room, beat the floor with her hands, scream, grab adults’ hands and pull them towards her and then sometimes bite her own hands or the teacher’s hands. It had always been assumed that when Tracey was pulling someone in this way it was because she wanted to bite them. With repeated viewing of the video and by juxtaposing the videotaped tantrum behavior with that of Tracey “requesting” a tickling by pulling someone’s hands, a new interpretation of her tantrum behavior emerged. The message value of which was— “I don’t want to do x but I would like a tickling game...if you carry on trying to pull away from me and so not listen to me I’ll get so frustrated I will bite myself or maybe even you.” This is quite a different message to the one we had assumed Tracey was giving during these episodes, which was— “I don’t want to do anything and I’ll bite you if you try to make me.” This insight enabled us to start working on ways of de-

escalating tantrums when they did occur as staff realized they could respond to Tracey grabbing them by, in effect, saying, “Okay what do you want? Show me.” Thereby reducing the risk of Tracey biting herself or others.

Viewing the Videotape on Fast Forward Can be Very Revealing

For many years city planners have realized that viewing videotape on fast forward dramatically highlights traffic flows and bottlenecks. The same holds true for classrooms. It can also reveal very quickly which children are never in their seats, which children never leave their seats, which children get high rates of teacher proximity and which children get low rates of teacher proximity. It can highlight “down time” when there is nothing for the child to do. As a prelude to data collection using a videotape the educational psychologist always views the tape on fast forward first because of clues this gives on which particular behaviors or situations should be focused on in detail for data collection.

...the ability to view the same critical incident repeatedly and in juxtaposition with other incidents can be invaluable.

Videotape is a Potent and Underused Quality Assurance Tool

In a previous study the educational psychologist was involved in videotaping a teacher while a Rules Praise Ignoring (RPI) approach was used together with a group contingency using differential reinforcement of low rates of responding (DRL) in order to help a highly challenging class of 15-year-olds (Frankland, Pitchford & Pitchford, 1985). In the course of three weeks dramatic improvements were obtained which were maintained two months after the DRL was faded out. It was only some months later that the educational psychologist realized that what was remarkable about this particular video was not the improvement in the classes behavior (gratifying though that was) so much as what might be termed the teacher’s 100% compliance with the methodology recommended by the educational psychologist. Anyone who works in the field of advising staff will know that such a very high level

of compliance is, well, unusual. Although the educational psychologist concerned would like to ascribe this phenomenon to charisma, it seems more likely that the process of agreeing to and being videotaped was the most significant factor.

This is what was happening; the educational psychologist would give the teacher briefing notes containing a rationale for and description of the techniques to be used before each of the four lessons videotaped. They would then be discussed, modeled and clarified if necessary. The lesson would be videotaped and then the teacher, not the psychologist, would take the video to view it before the next session; the educational psychologist only looked at the video in detail at the end of the project in order to collect data. The combination of notes, discussion, modeling and explanation, followed by an opportunity to practice and get extremely vivid confidential feedback on the teacher's own performance and its impact on the class seems to have led to this high level of compliance.

In his discussion notes about the experience later, the teacher noted that the video was crucial in helping him come to terms with the fact that a high rate of praise did not seem artificial as he had feared it would. It seems likely that without this video feedback he would have found it difficult to maintain the high rates of praise required. What struck the educational psychologist was that even incidental "off the cuff" comments could be seen to have had an impact on the teacher's behavior. At one point the psychologist made the comment that simply pointing to some work and saying, "That's right," could be considered as praise (or more accurately feedback) and so would tend to increase time on task. No more was said on the matter and it was not included in the written notes. Nevertheless, in the next video after this discussion, the teacher can be seen walking down the rows of desks going: "That's right, good, that's right. Good Steve, you got that right. That's right Anne. That's right." Given the right climate of trust and respect it is clear that using the video camera as a means of providing feedback as part of training could lead to

very real improvements in expertise and quality. Its impact in conjunction with three-tier training (LaVigna, Willis, Shaull, Abedi & Sweitzer, 1994) would be a particularly interesting area to explore.

Being videotaped is very rewarding to children and enables them to model and get feedback on alternative ways of behaving

A good example of the way in which video can be used as a teaching aid with children is the work of Edwards and Proulx (1997) where they report the use of edited videotape in the treatment of selective mutism so that the child could watch herself engaged in speaking. They report that this strategy produced rapid and lasting change in the child concerned.

In our own more modest way we included in Susan's good video shots of her role playing one of the functional equivalents for grabbing, asking people to leave

her table because she felt crowded. In our view if video is used to collect data on a child, then one way of making recompense for this intrusion would be the production of a "good video," which then becomes the child's property.

...without this video feedback he would have found it difficult to maintain the high rates of praise required.

Conclusion

To conclude, the video camera has great potential in our field and it is surprising how rarely it is used for the purposes of data collection, analysis, training and quality assurance. In areas associated with security the video camera is becoming ubiquitous, perhaps therefore now is the time to come up with a code of practice on its use before somebody decides to do it for us. If a code of practice is developed then it will have to reconcile the power the video camera has with the need to protect the dignity and confidentiality of those we seek to serve.

Footnote: Fiona Skinner is an Education Care Officer, Hillary George is a Teacher at St. Andrews School in Derby, U.K. Mick Pitchford is the Principal Educational Psychologist for Derby City Educational Psychology Services, Derby, U.K.

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Continued from page 1

The groups utilize the framework of an anger management curriculum originally developed for use through Tri-Counties Regional Center, based in Santa Barbara, California. Subsequent to its development and use with adults in the Santa Barbara area, the curriculum was adapted for use and piloted with school-age students in a special education classroom (see McLain & Lewis, 1994). This guideline and curriculum for an instructional group was originally developed to assist individuals with developmental disabilities who have difficulty controlling their anger in their home, work, school or community environments. It was an outgrowth of the behavior intervention efforts at Tri-Counties Regional Center to assist persons to remain in community living arrangements, to integrate physically and socially into the community, and to obtain and maintain employment.

Since being implemented within the context of supported living services at IABA, the curriculum has been modified to fit the needs of many different individuals, and has evolved from a relatively short-term program into a long-term skill acquisition, skill maintenance and support group. The use of the curriculum has also provided fertile ground for group members to develop supportive relationships that have persisted outside of the group environment.

While developing supports for individuals who

have difficulty controlling their anger, it became apparent that most of the research literature on teaching anger management skills was addressed to persons without developmental disabilities (e.g., Hains & Szyjakowski, 1990; Glick & Goldstein, 1987). This curriculum represents an effort to utilize the approaches which have appeared most promising for all populations, adapt them for use by persons with varying degrees of cognitive disabilities, and present them in a flexible group format that can be adjusted to the participants' abilities and learning style.

The concepts are based upon behavioral and cognitive behavioral frameworks and incorporate the work of Novaco's Stress Inoculation Therapy (1977), Kaufmann and Wagner's Systematic Treatment Technology for Temper Control Disorders (1972), Benson's (1986) approach to self-instructional training and problem-solving skills, as well as Personal Effectiveness Training described by King, Liberman, Roberts, and Bryan (1977). In addition, the curriculum addresses arousal management through relaxation training, recognition of internal and external cues to manage anger, demonstration and practice of problem solving skills and self-instructional training. This program is an eclectic blend of various anger management strategies. The approach has been successfully used with children, adolescents, and adults who possess the following prerequisite skills:

1. The ability to attend in a small group setting (4 - 8 participants) for at least fifteen minutes at a time.
2. The ability to receptively and expressively communicate verbally, with signs or pictures or through a communication device.

The curriculum is designed to be modified to fit the specific needs and abilities of the group members. For example, when presenting the program to a group of adolescents who have mild disabilities and who are able to read and write, the focus should be on changing the internal thoughts that precede an anger outburst. Written homework exercises would also be useful with such a group. A group of children who have moderate disabilities and limited abilities to read and write would benefit from an emphasis on role playing and behavior rehearsal of appropriate behavior following exposure to provoking situations. The cognitive-behavioral aspects of the program may be simpli-

fied in order to suit the children's cognitive abilities. For people with severe disabilities, a focus on relaxation training and a specific, prescribed plan for responding in challenging situations may be most beneficial.

The effective and consistent use of learned anger management skills is, like many other skills, dependent upon the individual's retention, application and generalization of these skills in natural environments. It has long been documented in the behavior analysis literature (e.g., Wahler, 1969) that persons with developmental disabilities have difficulty generalizing newly learned behavior across environments. To reduce the problems associated with failure to generalize, this anger management curriculum is designed with special attention to promoting, shaping, and generalizing self-control and problem-solving skills from simulated to natural environments.

One of the most effective strategies for promoting generalization involves planned training and exposure to the naturally occurring contingencies in the natural environment (Stokes & Baer, 1977). To achieve this end it is essential to include persons from each participant's natural environments in the program. These social agents are enlisted to assist in cueing individuals to frequently practice newly learned skills, and most importantly, to reinforce and support individuals when they spontaneously use these skills under naturally occurring provocations. This works very well when the group participants are also service participants and group facilitators have access to and regular communication with support staff, peers and families.

Facilitation of generalization and maintenance is a primary reason that training is done in a group rather than individual context, although specific group members often benefit from "booster" sessions, which could be done individually or in dyads. When anger management and assertiveness skills training is done in a group context, members are provided with opportunities to practice self-control and appropriate responses to others with whom they typically interact on a regular basis. The leadership of the group by a staff person and attendance at group sessions by support staff as well as roommates and acquaintances increases the likelihood of opportunities to reinforce and shape desired behavior outside of

the group. Regular communication with additional involved service providers and families provides a foundation for generalization and maintenance.

Forming the Group

It is usually not difficult to identify the people who may benefit from participation in an anger management group. These are people who, in a school, work or living environment, are identified by peers, teachers, support staff, school psychologists, counselors, job coaches, parents, case managers (i.e. key social agents) as having trouble controlling their anger. Additionally, these are people who may have already been referred for the development of a behavior assessment and support plan. Persons appropriate for this group evidence verbal and/or physical aggression to the point that these behaviors interfere with the person's achievement of personal goals or their ability to function or remain in regular environments. For some people, behavior challenges emerge as they adjust to major life changes. There are a number of stressors that people who are new to living in community settings may be experiencing for the first time. People's coping abilities may be challenged by these experiences (for example, the difficulty of surviving on a poverty-level income or the challenge of starting a new job).

When forming the anger management group, an

To achieve (generalization) it is essential to include persons from each participant's natural environments in the program.

individual could be invited to participate by finding out whether or not they are satisfied with the way their day-to-day life and/or personal relationships are going. Suggesting that the individual participate in the group because they have an anger problem may prove an unsuccessful strategy. This is one of the reasons that the groups that operate in Ventura County are called "stress management" groups rather than "anger

management” groups. A positive approach is to introduce participation in the group as a way for the person to more effectively get the things they want, have more friends, have access to desired activities, and also as an opportunity to discuss stressful situations as they occur. Exploration of the individual’s short-term and

The key social agents can promote generalization and support the individual’s efforts to improve self-control by recognizing and reinforcing the skills that are taught in the group.

long-term goals is a way to accomplish this.

It is essential that the people who most frequently interact with the group participant support the work that is done in the group. Key social agents can do this by providing information, communicating with the participants about their progress, providing subtle prompts in natural settings, collecting data on behaviors targeted in the teaching sessions, and participating in sessions as requested by the group leader. The key social agents can promote generalization and support the individual’s efforts to improve self-control by recognizing and reinforcing the skills that are taught in the group. Group participants are encouraged to share their progress with key social agents. These persons must be kept informed on a regular basis by the group leader about how to support the anger control plan and about individual progress. Therefore, it is necessary to secure, preferably in writing, the permission of the participant to contact family members or people outside of the support system on a regular basis. The formal curriculum includes suggestions for what information should be communicated each week to these people.

Certainly, people with developmental disabilities present with a wide range of verbal, reading, social and cognitive abilities. In addition, a number of the adults participating in community based services through IABA also experience symptoms of various forms of mental illness such as depression, schizo-

phrenia and manic-depression. It is therefore necessary to adapt this curriculum for individuals depending on their abilities to process and retain information and monitor and reflect on their own thought processes. For people who have difficulty with the cognitive aspects of the curriculum, instruction should focus on behavioral approaches of developing and rehearsing problem solving skills as alternatives to temper outbursts. For persons who do not read, pictures or a tape recorder may be used during training in a variety of ways (e.g., flow charts, self-monitoring procedures).

The curriculum may be presented effectively with one or two people in leadership roles. With two leaders it is possible to do a large group presentation of the session topic, then break into smaller groups for discussion and practice of individualized application of the material. The use of two leaders provides the participants with greater opportunities to practice the target behaviors, identify individual problem situations, and allows more time for questions and discussion of the material. If two leaders are used, they should have a solid understanding of the material to be presented and be in regular communication regarding individual participant progress. If a small group format is used, the members of the small groups should be varied from session to session in order to facilitate generalization across individuals.

Assessment and Progress Monitoring

Prior to participation in an anger management group utilizing these guidelines, preliminary assessment information should be obtained in order to appropriately adapt the curriculum. Certain participants may become involved with the group as a recommendation of their behavior support plan, in which case background information should be found in the assessment. Some of the curriculum sessions demand higher level cognitive skills than other sessions. It is essential that group leaders utilize ongoing as well as preliminary assessment procedures to determine whether the individual is able to encode, retain, access, and utilize the specific strategies taught through the exercises and most importantly, under naturally

occurring conditions. There are some guidelines for assessing the individual's success in retaining and utilizing learned strategies provided in each session.

The preliminary assessment may include documentation of the frequency, duration and intensity of the anger problems. If a behavior assessment has not been completed, prior to attendance at the first session, key social agents in all environments should collect at least this basic information. One method for collecting information consists of an antecedent-behavior-consequence format. The key social agent observes the individual's behavior and documents the time and place that the behavior occurred, the antecedent to the behavior (what was happening in the environment just before the behavior occurred), and provides a detailed description of the observed behavior, including its duration. An account of the events immediately following the behavior (the consequences) should also be noted.

Brief interviews with participants and key social agents can be used to obtain information about the individual's medical status, sleeping and eating patterns, means of communication, environment and daily schedule with its concomitant demands. Information about activities and items that may motivate the individual is important when developing an array of reinforcers for use during the program.

Overview of Training Sessions

Goals of the Group

The primary goal of training is to give each person the tools that they need to effectively manage their anger. Inadequate anger management may result in temper outbursts, verbal or physical aggression, property destruction, self-injurious behavior, and a range of other individualized behaviors. In addition to other factors, these behaviors may occur in part because of a person's inadequate repertoire of non-aggressive problem solving skills or because of a lack of motivation to engage in pro-social behavior. Many individuals have learned that aggressive behaviors meet their needs for attention or help them escape or avoid undesirable activities. Many persons who have developmental disabilities manifest poor impulse control

and simply are unable to interrupt an arousal response in the face of provocation.

The curriculum includes skill training and practice in appropriate social skills (e.g., assertive behavior) and behaviors incompatible with aggressive behavior (e.g., relaxation) which have been demonstrated to effectively replace inappropriate social behavior (e.g., verbal or physical aggression). Through the cognitive-behavioral aspects of the program, individuals learn to interrupt the chain of behaviors that may lead to loss of self-control. Improvements in self-control have been observed to lead to increases in positive self-concept, which may have an entire range of positive effects on a person's quality of life.

Structure of Sessions

The sessions are divided into two parts. The first portion of each session consists of a short presentation and discussion of a specific topic followed by exercises presented by the group leader to illustrate the use of the skill being taught during that session. The exercises are an essential component of the session if the individual is to translate the information into personal practice, that is, adapt it for their own daily use in natural environments. Information presented to

The primary goal of training is to give each person the tools that they need to effectively manage their anger...

the group is *italicized* and structured so that the leader can give individuals information that is easy to understand and retain. Of course, it is often necessary to rephrase, repeat, and in some cases, greatly simplify the information to insure that it is understood.

The second portion of each group meeting is presented in a format similar to Personal Effectiveness Training (King et al., 1977). In a small group setting (it is useful to have two leaders here to allow for even smaller groups) antecedent situations are presented via narration (to set up the situation) and role played (to present the identified antecedent) by the group leader. The participant is coached through modeling and instruction in developing an appropriate alterna-

tive response as identified for that individual. If possible, sessions should be videotaped, the best performances of the individual selected and repeatedly played for the individual, accompanied by comments on the best aspects of the performance. This “self-as-a-model” approach (Hosford, 1976), is quite useful for youth with developmental disabilities.

Individuals begin to develop problem solving skills which help them to discriminate which situations warrant assertive responses.

Outline of Sessions

During sessions 1 and 2 the rationale for learning to manage one’s anger is presented to increase motivation and commitment to the process. Individuals are then assisted with identifying individual behavior patterns and antecedents to temper outbursts that are targeted during group or dyad role-play sessions. The term “antecedents” is replaced by the term “barbs” (from Kaufmann & Wagner, 1972) to simplify the idea.

Sessions 3 and 4 continue antecedent identification and cover the fundamental skills required for anger management, namely, recognizing internal cues and developing relaxation skills. Relaxation procedures consist of modified Jacobson (1938) Progressive Muscle Relaxation. The goal is to help each person identify a deep state of muscle relaxation and produce it quickly in the natural environment. Session 5 focuses on the physiological changes that should cue individual’s self-regulatory behaviors. Session 6 reviews all previous material in order to help participants integrate it through review, exercises and instruction.

The advanced cognitive-behavioral aspects of temper control are explained in Session 7. Modifications of the cognitive-behavioral treatments for persons with developmental disabilities have been explored by some researchers (Benson, Rice, & Miranti, 1985). These modified treatment approaches are presented and adjusted to fit the needs and abilities of each group participant.

Basic assertiveness skills are taught in Session 8 with a special emphasis on discriminating assertive from aggressive responses. Individuals begin to develop problem solving skills which help them to discriminate which situations warrant assertive responses, differentiate appropriate from inappropriate requests from others and practice effective communication skills.

Session 9 focuses on strategies for identifying and defining problems, generating behavioral alternatives, and evaluating the outcome of those decisions. Part of this session focuses on the positive evaluation of outcomes and constructive self-evaluation that promotes behavior change and self-esteem enhancement.

Session 10 focuses on the more subtle aspects of social skills involved with assertiveness responses. Topics such as dealing with repeated criticism, reinforcing others for desirable behaviors and communicating feelings without blaming are practiced. Making requests for behavior change from others is incorporated into a sequence of behaviors.

The final session (11) reviews all material and role-play situations. Individuals are encouraged to set personal goals and continue anger management strategies on their own.

Additional Considerations

This outline can be modified to include additional strategies or to extend the number of sessions for difficult topics. There should be ongoing evaluation of the need for individual, topic-specific sessions to augment the group sessions. Special modifications for presentation of material to group members who, for example, do not read, is the responsibility of the group leader. The group leader should assess through questions and role-plays, the amount of time needed for individuals to master the material and extend the number of sessions per topic as needed. Individuals may develop anger management strategies that do not follow the exact skills presented here; the group leader should allow this flexibility if the strategies are useful for the participant. It is the adjustment of the curriculum to meet individual needs, which contributes greatly to its effectiveness, although this also necessitates a certain level of sensitivity and sophistication in the group leaders.

Initially group leaders may choose to create incentive systems to motivate individuals to attend sessions and complete homework assignments. This can also be done in conjunction with key social agents. At IABA, several people have protocols for attending stress management sessions on a regular basis. Their protocols specify reinforcers that can be earned for achieving their attendance goals. Incentives may be arranged to occur in natural settings during and after the training period when key social agents observe an individual using a strategy practiced in training. Group members may reinforce each other as they see each other use appropriate problem solving skills in natural settings. This is another reason for regular communication with key social agents regarding the current training topic and weekly goals of each person.

Once group members have been through the entire curriculum, the framework can be used to work through each week's "barbs" on a regular basis. Often group members can relate to another person's "barb" and can provide feedback from their own experience, further developing an atmosphere of empathy as well as generating practical solutions to real-life problems. Soon the group members are taking more active, directive roles in the group and the leaders can move more into the background.

Staff persons other than the group leaders should be encouraged to participate as group members without dominating the group with tales of their own "barbs." Staff persons can assist as models during relaxation and role-plays and can assist with keeping the group on track. A discrete amount of appropriate self-disclosure goes far in dispelling any sense of "us" (staff) vs. "them." Participants have always seemed to appreciate it when staff persons open up. The stress management groups have also taught support staff practical coping skills for themselves as well as fostering future group leaders and encouraging follow through outside of the group environment.

For longer-term groups, the routine of the format can be broken up by taking "stress management field trips" to relaxing settings, or by playing a social skills game such as the Ungame (Dobson). With the original

Ventura County group, participants had learned progressive muscle relaxation and had moved to guided imagery. During a guided imagery session, the leader described a waterfall and later learned that none of the group participants had ever seen a real waterfall. A field trip was made to a waterfall, where group members were encouraged to use all of their senses to experience the setting so that they could subsequently call upon their memories to achieve a relaxed state.

The use of the curriculum with adults in supported living has proven to be extremely effective and has resulted in improved self-control and self-esteem for participants. Each group leader has brought their own unique style and personality to the groups, resulting in a flexible approach with long-lasting results. Participants have demonstrated their ability to learn the basic way to work through "barbs" even when they are not in the group setting. Support staff report improvements in their ability to manage challenging work loads as a result of participation in the groups.

The first session is included in Figure 1 (see page 16) as an example.

As can be seen, the sessions are set up to engage the participants in the purpose of the work, let them know that they are not alone in experiencing such difficulties, and provide concrete direction for recognizing and addressing the impact of anger and loss of control

Often group members can relate to another person's "barb" and can provide feedback from their own experience, further developing an atmosphere of empathy as well as generating practical solutions to real-life problems.

on their lives. The homework serves as a solid reference point for the previous week's session. The curriculum has been successfully used in a flexible manner, tailored to individual needs and specific group dynamics. This requires a certain level of sensitivity on the part of group leaders. We have typically found that group leaders are excited by the curriculum and by

SESSION 1: RATIONALE FOR TRAINING

WHY IS IT IMPORTANT TO LEARN TO CONTROL YOUR ANGER?

This discussion should focus on problems created by poor anger control. Discuss each of these facts with the group.

- *When people lose their jobs it's usually because they can't get along with their boss or co-workers, not because they can't do the work.*
- If you hurt someone and the police are called the person you have hit may wish to press charges, which can result in you having to go to court. If it has happened before, you may be asked to move to a different place. If you get really mad and are hurting people, you may have to go a special hospital called a psychiatric facility.
- You may lose friends or relationships. Your family may not want to spend time with you. People may not want to be around you. This can be very lonely.
- You can lose your job and lose the chance to get a new job. If your boss fires you because you fight with others, it may be hard to get another job.
- You may be kicked out of school for a few days (suspension), or be sent to a different school (expulsion) if you can't get along with others around you.
- You may not be allowed to continue to ride a bus independently if you have problems with your temper while you are riding the bus. This cuts down on your independence.
- People who stay angry may get sick more often and may even die at a younger age. Getting angry is hard on your body.
- When you yell a lot or hit others you might have to move out of places where you like to live.
- Most of you have decided you want to have a happier, better life by learning ways to control your anger and solve problems better.

EXERCISES

Have individuals list and discuss events in their lives in each area that have been affected by their anger:

- | | |
|------------------|-----------------|
| • School | • Jobs |
| • Transportation | • Relationships |
| • Legal | • Roommates |
| • Friends | • Family |

HOMEWORK

List the things that happen this week that make you feel angry and write down or dictate how you handled them. Use this format:

Date	Time	Situation	What You Thought and Did
1. _____	_____	_____	_____
2. _____	_____	_____	_____

NOTES TO THE GROUP LEADER

Provide practice for the homework assignment in class by demonstrating from your personal life an event you might include on the worksheet. Have each individual complete at least one entry and assist as necessary. Fade prompts so that the individual is able to demonstrate independent completion of an item.

Contact the key social agents in the participants' home, school or work environments and share with them any pertinent information that came out of the first session. Give them information about the homework assignment, and ask them to provide social reinforcement to the group member following daily completion of the homework.

Figure 1 - Session 1: Rationale for Training

the progress of participants. It is a dynamic process that allows a creative approach.

Footnote: For additional information, or a complete copy of the curriculum, please contact Dr. Ellen Lewis by writing to *Positive Practices*, Institute for Applied Behavior Analysis; Attention: John Marshall; PO Box 5743; Greenville, SC 29606 USA.

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The Use of Contingency Diagrams in the Functional Analysis of Challenging Behavior

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Editors' Note: In the following article, Peter Baker describes a method to communicate a complex understanding of challenging behavior to direct service staff. He rightfully points out that the formal assessment report is typically too wordy and off putting to accomplish this aim. Writing the report may be an important and perhaps critical part of the assessment and analysis process, and represent an invaluable contribution to the person's case file for future reference. In contrast, a visual portrayal may help current staff obtain a mutual understanding of why a person does what he does and, from this common attribution, a platform from which the team can work in a coordinated way to support the person. We thank Peter for his very thoughtful contribution.

Introduction

The importance of identifying the factors which may have given rise to, or maintain, an individual's challenging behavior has repeatedly been recognized as crucial if a successful intervention is to be devised (Carr & Durand, 1985; Didden, Duker, & Korzilius, 1997; Repp, Felce, & Barton, 1988; Scotti, Evans, Meyer, & DiBenedetto, 1991). Indeed, intervention

without this sort of understanding may well be harmful and therefore unethical. Reaching an understanding of individuals who present challenging behaviors, to a degree that enables the construction of intervention plans, is not without its difficulties. Not only is an understanding of the immediate contingencies affecting an individual's behavior required, but in addition it is necessary to understand how this has been shaped by their history and concurrent personal and environmental factors. Much has been written regarding the collection of information required to carry out a functional analysis. However, less attention has been paid to the process of synthesizing this vast array of information, beyond fairly unspecified instructions to summarize the information (O'Neill, 1990; Willis & LaVigna,

1996 a; b). The complex multi-variate nature of causation was recognized by LaVigna & Willis (1995), who suggested that this complexity needs to be matched by multielement support plans, in order that intervention with such individuals is maximally effective.

The reality for many people involved in the design of support plans for individuals who present challenging behavior is, to a greater or lesser degree, a reliance on others. These mediators are required not only to supply information to assist functional analysis, but are also required to implement the interventions devised. The latter raises almost inevitable problems with regard to consistency of implementation. Researchers using a cognitive - behavioral paradigm have begun to demonstrate that staff responses to challenging behavior may well be influenced by contingencies that are related to how they experience that behavior, in particular, attributions regarding causation and their emotional response (Dagnan, Trower & Smith, 1998; Hastings & Remington, 1994; Oliver, 1993). It is feasible that inconsistent responses may well be determined by individual differences in conceptualization. For example, the response by carers who believe the function of the individual's behavior is to elicit attention would be very different from carers whose perception of function is that of social avoidance. In addition, Toogood & Timlin (1996) demonstrated the influence carers' perceptions of severity might have on the process of functional analysis. They found that the perception of the severity of the challenging behavior affected the degree to which informant based functional analysis methodologies were able to identify functions. Clearly a shared understanding of the individual would greatly improve the likelihood of consistent program implementation and consequently maximize the chances of success. Thus any aids to the process of understanding, especially those which assist synthesis of infor-

mation and the communication of formulations, should be welcome.

Willis and LaVigna (1993) produced the *Behavior Assessment Guide*, an extremely comprehensive assessment procedure involving gathering information from a wide range of sources and summary, synthesis and analysis in the form of a written report. The results

of these assessments can often be written reports of telephone book length, using complex terminology that British care staff, at least, find inaccessible or off-putting. There is no doubt as to the value of these written reports to the author or those with a similar degree of sophistication, but the extent to which they really meet the need to communicate complex formulations to direct care

staff could be questioned.

The Challenging Needs Service in Hastings, East Sussex, England have found contingency diagrams to be an invaluable additional tool in their efforts to present and communicate relatively complex formulations. These diagrams are not considered to be a replacement of the more traditional narrative forms of presenting the results of functional analysis, but rather as an adjunct. Additionally, the discipline of producing these diagrams has been found to aid the process of synthesis of information in order to arrive at the formulation. Contingency diagrams are now routinely included in the initial reports and are commonly used, usually in the form of an overhead projector slide, in presentation of the formulations to groups of carers.

The following example illustrates how quite a complex array of information gathered from interview can be represented on a single sheet of paper. Information is presented regarding Tom in a manner that would resemble the initial stages of hypothesis generation based on information gleaned from staff through interview.

Tom is a 22-year-old man with severe learning disabilities who has recently moved into a new staffed house with three other adults with

These (contingency diagrams are not considered to be a replacement of the more traditional narrative forms of presenting the results of a functional analysis, but rather as an adjunct.

learning disabilities. Previously he had lived since the age of 4 years in an institution for people with learning disabilities. He has a long history of self-injurious behavior; he frequently hits his head on the floor, on walls, on furniture and other hard surfaces.

Tom has very limited speech, just a few words which he may use for a variety of needs. For example, “dinner” may mean food in general, and “toilet” may mean that he wants to be on his own. All the residents’ rooms are locked, at times, to prevent “trespass.” Tom can’t use his key and staff always carry keys to all rooms. He also has a small repertoire of Makaton (British signing system), mainly “please” and “drink”. In general, it is not always clear from Tom’s communications what it is he wants and this can lead to self-injury if his requests are misunderstood.

Tom needs help with his self-help and personal hygiene skills, and assistance through most of his activities. He is, however, the most able resident in the house and sometimes misses out on staff interactions because they are kept very busy with those who need a lot of help.

Tom is a very mobile young man who can move at great speed when he wants to. Once or twice he has slipped out through the back door, and through the garden, and has been found wandering up the road towards the town center. He has very little road sense, so he needs to have staff with him at all times when out in the community. Similarly, he has on occasions got into the kitchen, which is usually locked, and raided the larder; he has a voracious appetite!

Tom enjoys being out and about — walks, trips into the community and letting off steam in the park. Indoors he particularly enjoys activities involving food - cooking and eating meals, and even clearing away and washing up! He’s not so keen on sedentary activities - watching TV and playing table games etc. However, he loves

his personal stereo, though can’t operate the controls effectively and has broken two already. He now only has access to his new one when a member of staff is available to help him. When he’s wearing his personal stereo he will happily listen for long periods humming to the music and may even sit down for quite a while. He also had

a full size cassette player in his room that he liked to listen to, but this was broken by another resident and hasn’t been replaced yet.

Tom’s self-injury can be quite serious at times. Staff have kept records of this and have formed some ideas

about what “sets it off.” Apart from occurring when he is frustrated by misunderstood requests, there are also other times when it seems likely to happen. These include situations where Tom is denied food. On one occasion recently he made it clear that he wanted another sausage with his meal but, unfortunately, there was only enough for two each and Tom had already had his; this led to a major bout of self-injury. He also gets very upset when he cannot have his personal stereo, or when he breaks it while using it. The other two factors that are likely to affect his self-injury appear somewhat contradictory. That is, Tom sometimes wants to be on his own, but can’t always find the peace and quiet he’s after, either because his room is locked, or because the toilet is engaged. All other areas of the house are communal. This can lead to serious self-injury. Conversely, there are other times when Tom is receiving very little staff attention and he may get distressed because nothing’s going on. Staff feel that self-injury at these times may be a form of self-stimulation because he’s bored.

Figure 1 (page 20) would represent a preliminary hypothesis, in particular illustrating the interactive and dynamic nature of the variables.

The advantages of these diagrams in comparison to a lengthy written formulation are:

(This) example illustrates how quite a complex array of information gathered from interview can be represented on a single sheet of paper.

- complex concurrent phenomena can be presented simultaneously rather than one.... word.... at.... atime (Mattaini, 1995).
- the expected impact of each element of intervention can be illustrated. For example, enhancing Tom's communication skills and training staff to understand Tom will result in fewer requests being misunderstood, with a consequent reduction in self injury.
- people with learning disabilities and their carers often feel more comfortable with information that

is presented visually rather than in writing. As a result a shared understanding and a working partnership are more likely to be achieved (Murphy & Clare, in press).

Construction of the Diagrams

There are no set rules for the construction of contingency diagrams and examples of differing methodologies can be found, e.g. Clare & Murphy (in press); Mallot, Whaley & Mallot (1993) & Mattaini (1995).

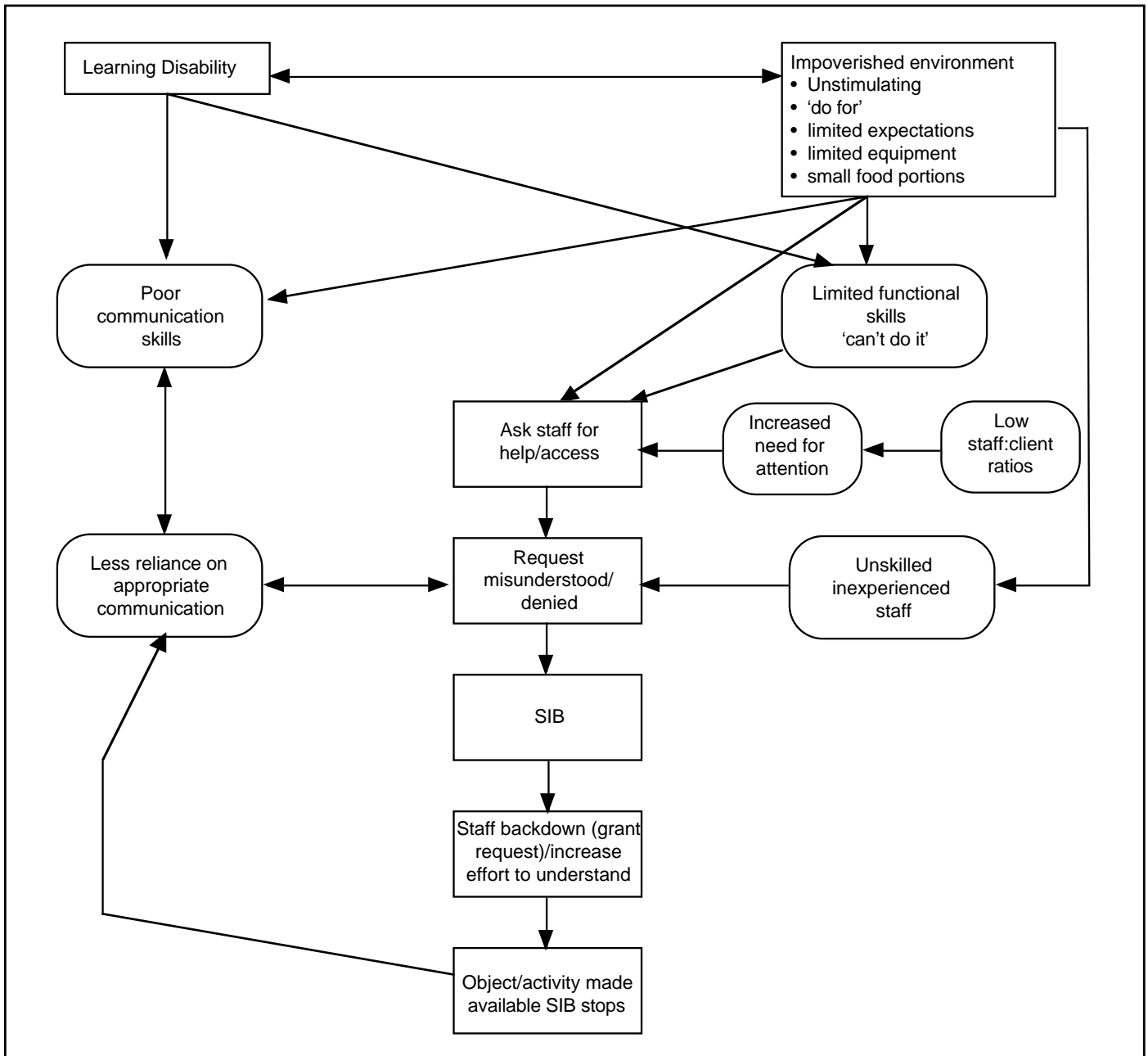


Figure 1 - Tom's Contingency Diagram

However, our experience has shown that the following steps are the most straight forward.

1. The starting point should be the immediate operant contingencies. In the case of Tom, it appeared that his self-injurious behavior was maintained by access to tangibles. That is, self-injury would be preceded by a request being denied (either deliberately or through misunderstanding) and followed by the object of the request being made available.
2. After the three term contingencies have been represented, the environmental (both current and historical) and personal variables can be added. These variables often function as establishing operations (Michael, 1982) or setting events, i.e., they serve to increase the momentary potency of the maintaining reinforcers. In the case of Tom, a complex array of historical, environmental and personal variables would be implicated. In particular, the unstimulating nature of the environment would enhance the reinforcing properties of, for example, his personal stereo. These types of factors can be seen as concurrently influencing the contingencies surrounding his self-injury.
3. In addition to the immediate consequences more delayed or less direct consequences of the behaviors can be represented. In the case of Tom, the relationship between his challenging behaviors and gaining access to tangible reinforcers will potentially result in less reliance on appropriate forms of communication, resulting in the increased likelihood of future misunderstandings. These often present as vicious circles and may well be identified as a priority for intervention, given that if left unaddressed, they may well become more ingrained.

Summary

As an adjunct to more traditional narrative presentation of the results of functional analysis, contingency diagrams have been found to be a useful tool in the assessment of individuals with learning disabilities who present challenging behavior. They have proven to be useful both as an aid to synthesis of potentially enormous complex and inter-related infor-

mation and in the communication of formulations to direct care staff.

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Gary W. LaVigna & Thomas J. Willis

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G.W. LaVigna & A.M. Donnellan

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The Behavior Assessment Guide

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

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