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Self-Injurious Behaviors of Cognitively Disabled

Clients Within Residential and Vocational Settings

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Henry Joseph Svec

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Counseling and Educational Psychology

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# SELF-INJURIOUS BEHAVIORS OF COGNITIVELY DISABLED CLIENTS WITHIN RESIDENTIAL AND VOCATIONAL SETTINGS

Вy

Henry Joseph Svec A DISSERTATION

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Submitted to Michigan State University in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY

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Department of Counseling, Educational Psychology, and Special Education

#### ABSTRACT

SELF-INJURIOUS BEHAVIOURS OF COGNITIVELY DISABLED CLIENTS WITHIN RESIDENTIAL AND VOCATIONAL SETTINGS

Вy

#### Henry Joseph Svec

The purpose of this applied research study was to generate a naturalistic portrait of five selected cognitively impaired (severely retarded) individuals residing in a behavioral treatment ward program and attending a behavioral management vocational workshop. These persons exhibited a wide range of behaviors, including life-threatening self-injurious behavior (SIB). To document and understand how these behaviors interact with the individuals' natural environment, this study examined the generalization and inteactions of behavioral variables across three different continua: intensity/severity of SIB; settings (residential/vocational); and time (i.e. short/long term effects). This research is unique in that it examined these hitherto unexamined variables in а natural setting.

#### ACKNOWLEDGEMENTS

Dr. Harvey Clarizio has given me the opportunity to study and learn and the guidance to complete this goal. I appreciate his words of encouragement during times of need, and his support during the past three years.

Dr. Hapkiewicz, has been supportive and encouraging throughout my program. I thank him for his assistance.

I appreciate and will always remember fondly the words of encouragement and wisdom from Dr. Maheady.

To Dr. Clark, thank you for accepting me as I was, giving me challenges to let me grow, yet not extinguishing my enthusiasm.

For the guidance, support, knowledge and opportunity to experience, I thank Dr. F. J. Barrera, of the South Western Regional Centre. For the staff of the centre my special thanks to Doug Tolland, Madeline Jack, George Vandenburge Phil Warwick and George Teodoro. A thank you to research assistants Neal Garbe, Radhika Subramanyan and Lilian Burke.

Finally, to Mary, for her support, trust, encouragement and understanding, a special thanks. You saw me through times of self-doubt and worry and together we were able to complete this challenge. Thank you for standing by me and being with me all the way.

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#### CHAPTER 1

#### INTRODUCTION

Self-injurious behavior (SIB) has been described as a severe form of psychopathology, prevalent among mentally retarded children and adults (Carr, 1977). SIB may include scratching, eye poking, biting, head banging, pica, regurgitation, leading to injuries ranging from mild contusions to life-threatening injury (Carr, 1977).

Applied behavioral scientists have proposed a number of explanations for SIB including the positive and negative reinforcement hypotheses, and the organic and psychodynamic hypotheses (Carr, 1977). These differing views of the etiology of self injury have resulted in a number of distinct treatment modalities.

#### Treatment of Self Injurious Behavior (SIB)

Treatments for SIB have generally ranged from mildly instrusive behavioral interventions (e.g.,

differential reinforcement of incompatible behaviors) to intrusive practices (e.g., ammonia inhalation). more While the more intrusive techniques have proven effective in the reduction of life-threatening SIB, be a need to investigate the there appears to generalizability of these treatments to other naturalistic environments (Romanczy et al., 1980).

Likewise, there appears, unfortunately, to be no rules for relating severity to treatment. The set involved the application common practice has of behavioral techniques which progress on a continuum from minimally intrusive (e.g. extinction) to extremely intrusive (e.g. aversive practices). Operational definitions of the severity of the behavior, with specific descriptions of staff and medical intervention required to reduce SIB risk could assist in selecting better, more appropriate interventions. Such definitions could also assist in evaluating treatment effectiveness and generalization for specifically identified severities of injury.

# Environmental Determinants of Self Injurious Behaviors

Until recently, it was felt that active intervention for the reduction of SIB should focus on

the isolated manipulation of specific client factors. However, a number of researchers have suggested that specific environmental antecedents and consequential events may exacerbate the disorder (Iwata et al., 1982). Through the experimental manipulation of environmental variables researchers have suggested that non-stimulating, demanding, non-reinforcing, or reinforcing variables may effect the frequency of SIB. contradictory findings, suggest a Such possible interaction between client, environment and severity of injury. Few have examined such correlations within natural occurring environments (Edelson et al., 1983). Such research could provide valuable information regarding specific environmental settings which may be correlated with lower frequencies of SIB.

# Synopsis of the Present Investigation

The present research investigated the client and behavioral files of five selected cognitively impaired individuals in an attempt to analyze the incidence and severity of SIB within residential and vocational settings. The five clients investigated were selected from a group of approximately 20 of the most severe self-injurious clients in Ontario. The Applied Behavior

STB Trauma Units contain clients Analvsis and who such a severity that without exhibit injuries of treatment death would occur. Initially, an instrument was devised to identify differing levels of severity for specific self-injurious behaviors. For each client. daily recordings of SIB in the residence were compared behavior counts when within the vocational setting. to Next an examination of treatment files was conducted to investigate the application of specific therapies for the reduction of SIB. Finally the severity of the reported injury was identified by a review of documents on each client including injury reports, an analysis of video scenes depicting specific injury and consultation with residential and vocational staff. То investigate possible long term effects of faradic stimulation the status of a client originally reported in the literature (Gailbraith, et al., 1970) will be updated by referring to behavioral counts, treatment effectiveness and implications for quality of life.

In summary, the present study is unique in that is developed and utilized a systematic technique to identify the severity of SIB. Similarly, the present investigation explored the corresponding levels of self-injuriousness when clients were within a vocational and residential setting.

# CHAPTER 2

## LITERATURE REVIEW

## Overview

The literature which is associated with an analysis effects of the environment on the frequency of of the self-injurious behaviors as well as the impact of faradic stimulation on their treatment will be examined this chapter. A review of this work suggests that in researchers have not examined the impact of naturally specific occurring environments on self injury. Similarly a paucity of research has addressed the issue of SIB measurement and the impact of electric shock on the reduction of these behaviors in a residential and vocational setting. The literature reviewed underscores the need for further evaluation of the effects of

differing environments and treatments on self-injurious behaviors.

## Environmental Determinants of Self Injurious Behaviors

Horner (1980) concluded that enriching the environments of five MR female individuals, aged 9 to 15 years, increased the frequency of adaptive behavior 20 to 30 % and reduced maladaptive behaviors by 10 to 20%. Enrichment was defined as providing clients with a number of available toys or objects with which to play. Target behaviors for clients ranged from mild SIB (scratching) to aggression toward residential other clients and staff.

Carr, Newsom and Binkoff (1976) experimentally manipulated the environment of an eight year old mentally retarded boy who was exhibiting mild SIB. In this study Free Time (nonstructured activity), Tacts (lists of simple sentences which required no response from the subject) and Mands (designed to simulate a structured classroom activity) conditions were applied within a multiple schedule design with reversals in each phase. Results of this study suggest that when demands were placed on the child, SIB increased from near 0 to 90 per minute. However, when demands were placed within

a positive story context, SIB decreased to baseline conditions. The authors concluded that while demands placed on clients exhibiting SIB behaviors may lead to an initial increase in self injury, gradual associations within a positive context may reduce such behavior. Similarly, Weeks, Gaylord and Baer (1981) report that deviant responses are a direct result of demanding tasks and environments.

The research cited suggests that MR clients may exhibit different levels of SIB behaviors dependent on specific experimental manipulation of demands. However, the literature does not specify as to the type of demands placed upon clients. It may be that differing levels of demands may evoke different response from selected clients.

Few studies have investigated the behaviors of clients in natural settings which may make differential demands on them. Weeks, Gaylord and Baer (1981) point research that future out need investigate the "ecological validity" of experimental findings with specific application to natural settings and activities. Edelson, Taubman, and Lovaas (1983) observed 20 mentally retarded clients exhibiting self-injurious behaviors in residential, cafeteria and school activities. A total

of 5½ hours of observation over three months indicated exhibited more SIB following a staff that clients exchange. This result suggests that demand situations increase self injury in clients. Lewis (1981) mav investigated the impact of aquatic, classroom and gymnasium settings on stereotypic (including mild self injury) behaviors of 8 mentally retarded clients. While difficult to interpret definitional due to and methodological shortcomings, the research implies different levels of misbehavior for clients within the differing environments.

While the studies presented provide some insight into the frequency of self injury within specific environments for mentally retarded clients, they fail to define the behavior with regard to severity of injury. Specifically the research has not examined the frequency of self injury among clients within a residential and vocational setting. The literature also fails to investigate such behaviors for clients exhibiting life threatening mutilation.

## Faradic Stimulation and the Reduction of S.I.B.

A variety of techniques and procedures have been utilized to decrease self-injurious behavior among

mentally retarded clients including overcorrection (Mohr & Sharpley, 1985) differential reinforcement of other or incompatible behaviors (Gellis, 1983; Cavalier & Ferretti, 1980) ammonia inhalation (Altman, Haavik & Cook, 1978; Baumeister & Baumeister, 1978) water mist squirts (Singh, Watson & Winton, 1986; Dorsey, Iwata, Mcsween, 1980) pharmacotherapy (Durand, 1982) 0 n v & timeout (Rolider & Van Houten, 1985; Solnick, Rincover & Peterson, 1977) and electric shock (Sherman, Swinson & Lorimer, 1984; Duke, 1975; Lovaas & Simmons, 1969). While controversey exists regarding the use of electric shock to decrease mild self-injurious behavior, those investigating its effectiveness have concluded that i t may be the only technique to eliminate specific life threatening self-mutilations (Barrera, 1987; Favell, 1982: Cohen, 1976; Harris & Ersner-Hershfield, 1978). Researchers suggest the need to evaluate the effectiveness of electric shock in multiple settings (Harris & Ersner-Hershfield, 1978). More specifically, previous studies have not evaluated the effectiveness of faradic stimulation on life threatening self mutilations within a residential and vocational setting. Similarly, long term followup, generalization to other environments and adequate research design are all lacking in

evaluative studies of aversives (Harris and Ersner-Hershfield, 1978).

Romanczyk and Goren (1975) suggest that important differences exist between experimental and clinical control of behavior. These authors argue that while experimental control implies a reduction in levels of SIB (to statistically significant levels), clinical control requires a supression of behaviors for extended periods of time (a change which may not be statistically significant). In fact, the authors ciet the case of a client whose SIB was experimentally controlled, yet not clinically supressed. Galbraith et al. (1970) report of the case of a thirteen year old mentally retarded male who exhibited life threatening chronic vomiting. In this study, the subject work a belt wired to electrodes emitted a mild shock when vomiting occurred. which Results of this investigation suggest that minimal experimental control of behaviors was possible. Favel1 et al. (1982) identify successful treatments for SIB as those which reduce the frequency and intensity so that the individual refrains from injury and is able to participate in habilatative activities. In the Galbraith al. (1970) study it appears that while clinical et control (complete suppression of behaviors) of behaviors

was not achieved, the client was able to function more normally as a result of the treatment. This suggests that with extreme cases of SIB, complete clinical control of behaviors may not be possible. In such cases, the goal may be a reduction of behaviors to increase the frequency of more "normal" functioning.

#### Classification of SIB

To date, the majority of research has relied on narrative descriptions of behavior without regard to the specific severity of the injury. Descriptions of SIB have revolved around reports of the frequency of the occurrence or anecdotal accounts describing behaviors (Whitehead, Johnson, & Ferrence, 1973; Fielding & Cole, 1971). The lack of a systematic technique to classify SIB makes a comparison of treatment effectiveness difficult due to the inability to match subjects with respect to behavioral severity. In fact, none of the studies previously mentioned identified the severity of the self-injurious behaviors.

# Implications for The Present Study

A review of the literature on SIB has revealed numerous substantive gaps and methodological problems.

Prominent among the substantive gaps are the failure to investigate levels of self-injuriousness in different natural occurring environments, the effectiveness of therapies within these settings, and the paucity of follow-up data on the long term affects of faradic stimulation. Foremost among the methodological shortcomings is the failure to identify the specific severity of the self injury.

The proposed study differs from previous research in that it addresses selected and substantive gaps and methodological difficulties. More specifically, this study:

1)Utilizes operational definitions of SIB, with specific emphasis on the severity and risk of the injury and of the staff and medical interventions required.

2)Investigates the incidence of SIB in a residential ward and vocational setting, with clients exhibiting extreme forms of SIB.

3)Explores possible interaction effects between environment, type of injury, severity of injury and treatment procedure. 4)Evaluates the effectiveness of aversive treatments in the reduction of operationally defined severe behaviors within a vocational and residential setting.

5)Evaluates the effectiveness of long term application of aversive techniques to the reduction of behaviors. This analysis will focus on a specific client exhibiting an extreme form of SIB. This client, now 30 years of age, was originally reported in the literature when he was 13 years old (Galbraith et al., 1970).

#### CHAPTER 3

#### METHOD

## Procedure

The data for the present study were collected by residential and vocational staff from 1985 to 1987. The data reporting consisted of daily record keeping of specific client behaviors within a residential and vocational setting. All staff working within these settings have been trained in the observation and recording of specific client behaviors. Daily behavior count sheets, as well as client historical files were analyzed in this study.

In the construction of the severity index (Appendix A) a list of self-injurious behaviors with levels of severity graded from "minimal" to "extreme" were devised with the assistance of staff and a psychological expert

treatment. Staff involved were in the field of SIB Developmental Service Workers, with community college training in developmental disabilities, and an average 5 years of experience in working with clients who of exhibit severe self-injury. They were considered expert among their colleagues due to their continued professional development training, as well as performance appraisals bу their superiors. The psychologist had extensive experience in the field of developmental disabilities, particularly the assessment and treatment of severe life threatening injuries. Specific behaviors were selected on the basis of their incidence (Schroeder et al., 1980) among the population, their frequency of occurrence on the High Risk Unit and present facility. Cells which (Appendix B) in the reflect the severity of the injury were devised with consultation from staff physicians, nurses and emergency Anderson, 1986). room manuals (Klippel & Three Services Workers from the vocational Developmental workshop (Appendix C), with extensive experience in with self-injurious behaviors, observed dealing six different video scenes of clients exhibiting regurgitation, bite to self, head bang on objects and eye pokes. Overall the judges were able to agree on the

severity of the injury for the scenes presented (W=.94, p .01). For the purposes of the present inquiry, frequency of behaviors was considered as a separate reportable dimension, where not included specifically within the severity explanation (i.e. rumination topography).

#### Sample

Five mentally retarded clients, having resided in a specialized unit for treatment of self injury, and simultaneously involved in a vocational program served as the subjects for this study. The five clients were selected from the High Risk and SIB Trauma Units, which consist of 22 cognitively impaired clients, exhibiting life threatening self-injury, and referred from facilities and communities across Canada. All clients had been unsuccessfully treated while within their previous residential placements. The High Risk and SIB Units are unique in that their population Trauma consists of clients exhibiting behaviors of such a severity that without immediate treatment, death would occur. Other selection criteria included having had a treatment program including the use of electric shock or other aversive procedures for the reduction of

Name	Age	$\underline{I \cdot Q \cdot I}$	<u>lst Admission</u>	<u>SIB</u>	<u>Severity</u>	<u>Multi-Problem</u>	<u>Period</u>
Kelly	24	36	1967 B	ite to self	*MINIMAL*	Yes	1985
David	30	20	1960 H	ead Slaps	MILD+	Yes	1985
Tommy	23	30-40	1986 S.	IB	EXTREME*	Yes	1987
Gladys	36	30-40	1985 H.	BO	EXTREME*	Yes	1986
Doug	30	30-40	1973 R	egurg.	EXTREME*	Yes	1985
*Severi scenes	ty rat of inj	ced by th uries, a	rree Development and their famili	al Service arity with	Workers, f the client	collowing a revie :.	w of video taped
+As rat staff f	ed by amilia	the auth Ir with t	lor with referen the case.	ce to prima	ıry documer	itation and consu	ltation with

self-injurious behavior. Entrance criteria for the vocational setting includes being at least eighteen years of age, involvement in a behavioral program to change SIB, and not appropriate for any other vocational programs within the facility (due to behaviors). In addition. clients would have to have had involvement in the vocational and residential programs from March to September of any year from 1985 to 1987. These months were selected as they reflected the period of time where the most consistent programming took place. The five clients selected were the only ones who met the above criteria for inclusion in this study.

# Rationale for Data Analysis and Methodology

In investigation of the initial hypothesis an daily self-injurious behaviors for the residential setting were calculated from daily shift summary sheets. These counts were transformed to hourly rates for clients with high frequency behaviors so that comparisons could be made with vocational rates as gathered from comparable sheets. When investigating low frequency yet record severe behaviors, total daily rates were compared. This due to the life threatening characteristics and low is frequency of these behaviors. For each client, rates

month period for were graphed for а seven the residential and workshop setting. September was chosen as the starting point for data analysis in an attempt to avoid the possible effects of changes in program due to summer holidays and summer leave for clients. March was chosen as the final month, to avoid any changes as a result of budgetary allocation. The data for three clients were analyzed in 1985, one in 1986 and another in 1987.

To evaluate the effectiveness of electric shock and other aversive techniques in reducing self-injurious behaviors in the two environments, an evaluation of baseline and treatment conditions was conducted. Such design permits a functional analysis of behavior, and a replication with other subjects allows for further substantiation. However this technique is not immune to various threats of internal and external validity. Other factors (i.e. medication changes) may have impacted behaviors for clients during reversal, and treatment phases. Similarly others have argued of the ethical constraints in removing an apparent successful treatment in the hope of returning to maladaptive behaviors. However government standards which guide the use of electric shock as a treatment necessitate

experimental manipulation to insure the usefulness of the procedure. As a result, brief reversal periods are required within the setting for the proposed study.

Specifically, behavior record sheets for residential and vocational settings were analyzed for the various baseline and treatment phases. Treatments were applied and withdrawn simultaneously in both settings. The frequency of self-injurious behaviors for each client were calculated, within each treatment Subsequent analysis of treatment effects were phase. then initiated on the basis of the analysis of this historical documentation.

# Limitations of this Study

The present study is not an attempt at investigating the social acceptability of the utilization of aversive practices to reduce severe forms of self injury.Ethical provisions do not allow for the administration of electric shock for experimental inquiry. In fact, an investigation of more recent research (Mueller et al. 1986) suggests that the controversial nature of the subject has lead researchers to resort to lower primate research. As a result, an investigation of this phenomena requires the

retrospective analysis of behavioral record sheets and other primary documentation of clinical attempts at self-injurious behaviors. The reducing time and resource requirements of monitoring daily self-injurious behaviors for а twelve month period, within the vocatinal and work environments, also necessitates the retrospective analysis of primary documentation. However, the accuracy of the daily record keeping of staff (inter judge reliability rate of .97 for behaviors) as well the experimental manipulation of variables treatment within clinical intervention procedures for some clients may help reduce possible threats to internal and external validity as a result of the proposed methodology.

However, the proposed research design is limited to observations regarding the five clients in the study, with possible confounding results due to medication, nature of staff, and other environmental factors not accounted for in this research. Similarly, differential punishment and reward schedules may also impact client behaviors.

The proposed study is designed as the initial step in further investigating the impact of naturally occurring environments on self-injurious behaviors.

Future research would investigate: 1)Specific environments (as identified by the proposed research) where clients exhibit a reduction in self-injurious behaviors; 2)Specific characteristics of those may increase or decrease such environments which behaviors; 3)Experimental manipulation of specific environmental factors which may lead to a decrease in self-injurious behaviors.

This research is limited to a description of events and conditions which may have influenced behavior. Although the design does not permit causal statements (Tawney & Gast, 1984) Hersen and Barlow (1976) cite several advantages of the case study approach. It investigations, assists fosters clinical in the evaluation of theoretical assumptions, permits the study of rare phenomena, assist in the development of new skills, refine theoretical techniques technical and assumptions, and provides clinical data to be used in future research (Tawney & Gast, 1984). Clients suffering from self-injurious behaviors present differing levels of maladaptation and symptomology. It may be that the "case study" approach is the only appropriate technique for investigating such phenomena. (Romanczyk, Colletti & Plotkin, 1980).

Relevant Definitions of Terms in This Paper

<u>Severely</u> <u>Mentally Retarded</u> refers to clients which make up from 3% to 4% of people with Mental Retardation, a characteristic being an IQ of between 20-40. Most can adapt to life in the community, in group homes or other supportive care (American Psychiatric Association, 1987).

Self-injurious behavior is a term which is used to various repetitive self-inflicted describe non-functional behaviors which include, face may slapping, head banging, biting various parts of the body, pinching, scratching, poking, or pulling various body parts, repeated vomiting or regurgetation, and consuming nonedible substances. (Favell, Azrin, Baumeister, Carr, Dorsey, Forehand, Foxx, Lovaas, Rincover, Risley, Romanczyk, Russo, Schroeder & Solnick, 1982)

<u>Electrical</u> <u>stimulation</u> refers to a harmless but unpleasant electrical stimulus (115 Volts, .5 amps.) delivered by an inductorium to the client's limb or back for less than 3 seconds, immediately following SIB (Butterfield, 1975).

<u>Vocational program</u> (Appendix C) refers to the behavior resource center, which utilizes behavior principles within a work environment to reduce self injury and increase socially acceptable behaviors. In this setting specific demands are placed upon clients to complete functional tasks related to a work setting.

<u>Residential</u> <u>setting</u> refers to the applied behavior analysis units (Appendix B) where specific behavioral techniques are utilized to reduce SIB. It is presently the only facility licensed in Canada to use shock within its behavioral program.

<u>Definition of SIB</u> <u>Severity</u> (Appendix A) refers to an instrument designed specifically for the present investigation, which attempts to rate severity of injury from "minimal" to "intense".

<u>Clinical Control of Behavior</u> refers to a treatment effect which indicates a reduction in aberrant behavior of significance to the client's well being yet which may or may not result in statistical significance. <u>Experimental</u> <u>Control</u> <u>of Behavior</u> refers to a treatment effect which indicates a statistically significant change in behavior, yet a change which may/may not be considered clinically significant.

<u>Self-Injurious Behaviors Selected for This Research</u> was for each client: 1)The behavior that was consistently reported for the time period selected; 2)A behavior to which faradic stimulation or other aversive was applied;

3)A behavior that was life threatening, or an antecedent to other more life threatening self-injury.

<u>Manual Restraint</u> is any procedure by which staff use only their strength, weight, etc. (i.e. not mechanical restraints) to restrain a client (e.g., holding hands to sides; holding client in a chair, in a corner, or on a bed). (Ontario Ministry of Community and Social Services, 1987)

<u>Forced Tooth Brushing</u> is a form of contingent exercise, defined as the repeated practice of specific movements contingent on maladaptive behaviors (Ontario Ministry of

Community and Social Services, 1987). In this case, the application of forced tooth brushing contingent upon self-injurious behavior.

<u>Fixed Ratio 1 (FR1)</u> is the application of a treatment each time the self injury occurs.

<u>Variable Ratio 2 (VR2)</u> is the application of treatment on average, following the second incident of self injury.

#### Hypotheses

1)Self injurious behaviors will be more frequent in the demand vocational setting than they are in the ward setting. (As evaluated by inspection of graphs.)

2)Electric shock and other aversive techniques will be effective in reducing self-injurious behaviors within the residential and vocational setting. (Where applicable, by viewing withdrawal of treatment in ABA designs implemented.)

3)Long term use of aversive practices will have no adverse effect on clients. (A follow-up of a client
originally reported by Gailbraith et al., 1970. This follow-up will consist of an investigation of the client's present levels of self-injury as compared to previously reported levels, as well as observations related to quality of life.)

# CHAPTER 4

## **RESULTS AND DISCUSSION**

#### Overvew

The major focus of this research was to investigate the differential levels of self-injurious-behaviors for clients within a residential and vocational setting.

In the first part of this chapter, behavioral rates for the seven month period, for each client will be compared. Next the impact of various behavioral interventions will discussed with Ъе specific implication to possible differential effectiveness within these two settings. Finally, the long term effects of electric shock will examined, by be evaluating treatment effectiveness in the case of a client exhibiting life threatening regurgitation.

David

David, is a 31 year old mentally retarded male, functioning at a severe level of retardation for both intellectual and social functioning. Institutionalized 5, David has a history since the age of of Self-injurious self-injurious and aggressive behaviors. behaviors included head bangs on objects, which resulted in lacerations of such a severity that all layers of the skin were penetrated to the bone. Such behaviors would classify David's SIB as EXTREME (Appendix A). Head slaps also resulted in severe contusions to the face and head. It was felt that these were antecedent to the more extreme forms of self injury. For the purposes of this study, head slaps, a high frequency form of self injury were selected as the target behavior for David due to its' consistent reporting by staff, and being antecedent to more severe forms of self injury. The severity of David's head slaps were rated as MILD by utilizing the Severity Index (Appendix A) developed specifically for this investigation. Figures 1 to 3 show the frequency of behaviors for David while within the residential and vocational setting.

The graphs suggest different levels of behavior, with fewer incidents of self injury within the

vocational setting. This difference appeared first while Restraint was utilized as a treatment (Figure 1) Manual and again when faradic stimulation was used to treat the behavior (Figures 2 and 3). As an example, on Day 13 (Figure 1) David displayed on average, 6 head slaps per hour on the residence, yet did not display any SIB while within the vocational setting. This result does not lend support to hypothesis one (Hol) which suggested that self-injurious behaviors would be greater in the workshop setting.

An analysis of the effectiveness of shock, for the reduction of self injury, is demonstrated in the return baseline treatments on Day 63. This technique to in increase in behaviors within resulted the an residential setting. However the behaviors did not return when in the workshop setting, despite this absence of faradic stimulation. A return to shock treatment on Day 73 again returned behaviors to minimal levels. Apparently, David, experienced "problem days" such cases, the treatment was effective and in in reducing the frequency of self injury. On Day 5 and 18, David experienced such days while on the residence. However during these same days head slaps in the workshop were minimal. A possible antecedent to such

propensity, could be a change in medication. On Day 10 Tegretol was increased from 100 200 to mg., and Phenobarb decreased from 130 to 100 mg. On Day 13, David engaged in 83 head slaps while on the residence. in any behaviors while within the He did not engage workshop however. On Day 47 and 48, following another change in medication, David exhibited a greater number of behaviors while in the vocational setting as compared to the residence. This suggests that medication changes account for "problem days" for him, yet not explain may his selection of environments to displays such behaviors.

Overall, the data suggest that for David, fewer instances of SIB occurred in the vocational setting as compared to the residence. This result does not support initial hypothesis of more behaviors the in the vocational workshop. The data also support the effectiveness of electric shock in the reduction of self injury (Ho2) and different response to medication changes within the vocational and residential setting.







Doug

Doug is a thirty-three-year-old male, functioning at the Severe level of retardation. Originally reported in the literature at the age of thirteen (Galbraith et al., Doug has continued regurgitation within 1970) the EXTREME level of severity. Such classification suggests compulsive projectile or induced vomiting with severe dehydration, weight loss and death risk. A variety of treatments had been attempted throughout his life time including intravenous and tube feeding, pharmacotherapy, extinction and one to one staffing (Gailbraith et al., 1970). Electric shock was moderately successful in reducing the frequency of the behavior, yet the severity remained (compulsive projectile or induced vomiting).

From Day 1 to Day 116 (Figures 4 to 6), Doug displayed self-induced regurgitations predominately in the residence. In fact following Day 32 Doug while did not display a single incidence of regurgitation while within the workshop setting. Such data suggest a different level of behavior favoring the vocational setting. This result does not support the initial hypothesis of more self injury in the workshop setting (Hol). It is important to point out, however, that the opportunity to regurgitate for Doug was greater when in

the residential environment (14 hours versus 5 hours). Such data may also imply that specific time periods or tasks exclusive to the residential setting (getting up, meal time, snack time) may have contributed to this difference.

Electric shock (FR1) was applied as a consequence regurgitation which was followed by a decrease in to behaviors from previous levels. While the risk for а return to an INTENSE level of self injury was prevalent, Day 32 to Day 116 (Figures 4 to 6), the level of from regurgitation could be classified as MILD within the vocational setting and MODERATE to INTENSE while within residential setting. Such results imply the а of severity for SIB differential level within а vocational and residential setting for Doug.

The data also suggest no visible long term side effects a result of the use of electric shock. as Negative side effects of shock have been defined as '..generalized fear of the environment, temporary of depression or withdrawal, concomitant reduction previous desirable behaviors or identification with the shock apparatus.' (Ontario Ministry of Community and Social Services, 1987). The records indicate a decrease in the severity of self-injury as a result of the

procedure and an improved quality of life for this client as originally reported (Gailbraith et al., 1970). Apparently the treatment procedure was effective in reducing the severity of the injury and allowing Douglas to become involved in recreational activities, work and outings in the community.









Gladys

Gladys is a thirty-six year old, severely retarded female exhibiting a number of self-injurious behaviors including nose picks, picking of fingers or throat, bites to self, bites inside of the mouth, pulling out hair, intentionally straining her eyes (no blinking), and forced regurgitation. Her major self injury consists of head bangs on objects, particularly sharp edges of doors or walls. Her head bangs are of such a severity as to be classed as EXTREME, with injuries often resulting in concussion, compound skull or vault fractures and high death risk. For the purposes of this inquiry Head Bang Objects (HBO) will be the observed behavior from Day 1 to Day 127. This behavior was selected due to its' consistent reporting by staff, and the life threatening nature of the resultant injury.

The results suggest that during this time period, Gladys did not exhibit any HBO's within the vocational setting (Figures 7 to 9). In contrast behaviors were noted while on the residence. Major self-injury was observed on Days 13, 29, 42, 50, 109, 114, 116, and 124. This result does not support the initial hypothesis which predicted more behaviors for the vocational setting.

The fading of electric shock to a variable schedule 2 on Day 73 and variable schedule 4 on Day 82 gives some indication as to the effectiveness of the shock Day 73 when shock was not procedure. On applied contingently upon SIB, Gladys experienced an increase in behaviors. This result would lend support to the prediction that faradic stimulation was effective in reducing self injury. However, in this case the treatment did not have an impact on the severity of the resultant injury. It is also important to note that as behavior occurred in the vocational setting, no conclusions regarding its' effectiveness within this environment cannot be made.







Tom

Tom is a 23 year old male functioning at the severe level of retardation exhibiting a wide range of minor and major self injurious behaviors. SIB included biting his tongue, arms, hands and shoulders, scratches to arms and hands and eye pokes. Нe presented as а multi-problem client also exhibiting severe aggressive and destructive episodes which prior to his admission at the present facility, resulted in а variety of pharmacological and mechanical interventions. For the purposes of this inquiry "self injury" was the observed behavior as this was the term used by staff when recording. It is important to point out that the wide range of behaviour for Tommy may have made individual recordings difficult and prevent the classification of his specific topographies. Ιt had been reported however, that scratches and bites to self, were of such a severity on admission, that all layers of tissue were penetrated to the bone, placing them on the EXTREME level of severity.

An examination of self injurious behavours is difficult to interpret in Tom's case, due to the general terms used to describe his behaviors. Figures 10 to 12

suggest that from the time period of Day 1 to Day 140 Tom exhibited a fluctuation of self-injury while within the workshop and residential setting. While the data suggests fewer problem days while in the vocational setting, Tom also apparently experienced "problem days" while in the workshop. This could be attributed to the method of data transformation (a division of behaviors by the hours with an opportunity to display such action-5 hours in the vocational setting and 14 on the residence). The data does not suggest support for Hol. which states that clients will exhibit more behaviors while in the workshop setting.

The nature of the data reporting does not provide for specfic conclusions to made with regard to be treatment effectiveness. As an example, on Day 43, Tommy was given aversive oral hygiene and auromatic stimulation which appeared to reduce the frequency of SIB. In fact, a removal of oral hygiene for bites resulted in an increase in behaviors, suggesting that treatment for aggression was effective in reducing the the frequency of self injurious behaviors. The lack of specific descriptions with regard to the nature and severity of the behavior makes interpretation of such treatments difficult.

The data do suggest a multitude of treatment attempts to reduce the frequency of aberrant behaviors. However, the data collected suggest that these changes and alterations were not made on the basis of specific treatment effects. From Day 1 to Day 140 shock was applied for each incident of SIB for Tommy. Since treatment was not withdrawn during this time period, conclusions regarding treatment effectiveness cannot be made.

With regard to differential levels of behavior within vocational and residential the setting, apparently Tom displayed varying degrees of self injury. However, the results suggest some consistency with regard to "problem days" as viewed in other clients (i.e. David). As an example, Days 4, 7, 12, 28, and 29 were days in which problems behaviors occurred within both settings. This may indicate that for Tommy. environmental factors may be less contributory to self injury than other possibly more biological or psychiatric causality.







<u>Kelly</u>

Kelley is a 27 year old female functioning at the level of retardation. Self-injurious behaviors severe included headbangs to her face with her hands, bites to herself and headbangs on objects or walls. Eye pokes were of such a severity to be classed as EXTREME with injuries resulting in total blindness. Kelley also displays temper tantrums, aggression and non-compliance. For the purposes of this inquiry bites to self were chosen as the behavior observed within the vocational and residential setting due to its' consistent reporting by staff, and it being an antecedent to more severe forms of self injury. Bites to self as they occurred at that time were MINIMAL, with injuries consisting of teeth marks, contusions-skin not broken and no blood drawn (Appendix A). It had been reported that on some occassion, bites to self were antecedent to more extreme forms of self-injury.

Figures 13 to 15 illustrate the frequency of Kellys' bites to self, averaged per hour. The graphs imply variable levels of behavior within each setting. As an example, Days 8, 9, 11, 12, 13 and 17 were days in which more behaviors were recorded on the residence, while Days 24, 27, 28, 29, 30, 33 and 35 behaviors were

greater in the vocational setting. This may suggest, that for Kelly, differential levels of behavior could be based on an interaction of a host of factors which could include physiological changes, (i.e. menstration) tooth extractions, program changes for other behaviors or within specific demands the different settings. However, apparently Kelly experienced greater levels of injury while in the vocational setting. self This result supports Hol, which suggested that clients would experience greater levels of self injury while within the vocational setting.

Forced tooth brushing was utilized as the treatment in an effort to prevent bites to self. The data presented evidence as to does not provide the effectiveness of this procedure. This result does not support Ho2, which indicated the effectiveness of aversive therapies in reducing self injury.







Summary

suggest that other than Kelly, the The results clients examined in this study exhibited greater levels of self injury while within the residential setting. result contradicts the literature which implies This greater levels of self-injury when clients are placed in demand settings (Carr, et al., 1976; Weeks et al., et al. (1976) point 1981). However, as Carr out, gradually with continued exposure to demands within a positive environment clients exhibit pre-baseline levels self-injury. This could account for, in part, fewer of incidences of self injury despite the demands placed on clients in the workshop. Other than Kelly, the results do not support Hol, which suggested an increase in behaviors within the workshop setting. Apparently this occurred for both high frequency low severity as well as low frequency and extreme severity self injury. In the Douglas, different levels of self injury were case of occurring in the two settings. This results implies а possible interaction between client, environment and severity of self-injurious behavior. For Tom and Kelly, inspection of graphs suggests a covariation of an behaviors on selected days. This implies that a n

increase or decrease of SIB in one setting was proportionally similar to changes in the other environment.

In three of the cases examined, some limited support was given to the hypothesis that faradic stimulation was effective in the reduction of the frequency and severity of self injury. This result supports Ho2 which predicted this result. Table 2 summarizes the conclusions drawn, with regard to the hypothesis proposed. Table 2. Summary of Findings With Respect to Hypotheses

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	David	Doug	Gladys	Tom	Kelly
Hol	-	-	-	-	+
Но2	+	+	+	?	?
Co.	no	no	no	yes	yes

+ A review of data suggest support for the hypothesis.

- A review of data does not suggest support for the hypothesis.

? The data does not provide adequate information to make a determination.

Co. Covariation of behaviors across settings.

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### CHAPTER 5

# SUMMARY AND CONCLUSIONS

#### Overview

In this chapter, conclusions are drawn regarding the frequency and severity of self-injurious behavior of clients within a residential and vocational setting. Next, the implications of these findings to specific data gathering and reporting techniques are discussed. Finally, recommendations are made for future research, program and practice.

### Conclusions

Clients in this study exhibited differential levels of behavior when within the residential and vocational setting. However, it was apparent that for some clients "bad days" resulted in self injury despite setting.

This suggests that when evaluating the levels of self injury for clients, such behaviors need be observed within differential settings. It may be that for individuals, self-injurious behaviors some may bе specific and not cross-situational. situation This would suggest that for these clients alterations in environment could prevent self-injurious behaviors from occurring. However, it is also apparent that others may exhibit self injurious behaviors cross situationally, and possibly as a result of physiological or biological and psychiatric causality. It is also apparent from this study, that clients may display different levels of severity for self injury when within the vocational and residential setting. This would suggest, that data should be collected cross-situationally when evaluating severity of self injury. This information would the assist in prioritizing target behavior selection. That data also suggest that average daily recordings would provide misleading information for program decision making for those clients who experience "bad days". In such a case, daily frequency and severity of behaviors would provide more accurate information to decision makers.

The study provides limited support for the

effectiveness of faradic stimulation in the reduction of self-injurious behaviors. When evaluating the effectiveness of such a procedure, it would be important to assess changes in the severity of the behavior which may not include frequency of occurrence. While there the number of behaviors may be no change in recorded in such cases, the severity of the injury and the risk of death could dramatically be reduced.

Difficulties interpreting in treatment effectiveness and differential levels of behaviors by setting could be diminished by utilizing specific operational definitions and severity ratings for each behavior. Yet for clients who may display a multitude of behaviors, it may be difficult to determine treatment effectiveness, as multi-treatment confoundedness may occur. In such cases, the life threatening nature of the multiple injuries and aggressions may preclude gradual introduction of treatments. Multiple baseline techniques within the context of all behaviors monitored may provide further assistance in monitoring for such clients.

The data do imply effective <u>clinical</u> control of life threatening self-injurious behaviors through the use of electric shock for some clients. Apparently,
individual treatment plans should also include a reduction in behavioral severity when considering treatment effectiveness.

### Clinical Recommendations

To be effective, data used in clinical decision making need be accurate and a close reflection of daily events and happenings for clients. The present inquiry suggests the importance of viewing clinical data with regard to self injury from a perspective of severity of behaviors and day of occurrence. This would assist in providing a more accurate reading of the level of effectiveness of specific treatments utilized. With clients exhibiting "problem days" it would be important to abandon measures of central tendency for unaggregated measures that more accurately describe frequency and severity of self-injurious behaviors. It would also be important to attempt to predict such "problem days" in advance and provide environmental manipulations that could reduce the opportunity for antecedents to behavior. An investigation of possible covariation of across settings SIB could also assist in the identification of such clients.

Where daily behavioral observations indicate a

preference for a specific environment with respect to the frequency and severity of self injury, it would be important to provide an environment which may reduce such behaviors. It would also be important to evaluate the cross-situational nature of the specific self injury, to assist in program and treatment planning.

This study points to the difficulties encountered when attempting to treat "multi-problem" clients with life threatening self-injurious behaviors. It becomes difficult to evaluate treatment effectiveness when multiple treatments are applied to multiple behaviors. Such clients require the immediate cessation of life threatening injury and do not permit the use of traditional multiple baseline or reversal designs.

It would be also important to evaluate the effects of treatment upon the quality of life and severity of the targeted behavior. In the case of Douglas, the use of electric shock over a prolonged period of time did not appear to have an adverse effect on him. In fact the results suggest the possibility of an improved life style as compared to original reports (Gailbraith et al., 1970).

Finally this study points to the importance in evaluating clients who exhibit life threatening self

injury from a multi-environmental perspective. Such viewing from within a naturalistic setting may provide valuable information as to the antecedents, consequences and etiology of life threatening self injury.

### Research Recommendations

It would be important to investigate the differential setting requirements which may interact with specific client reactions to environmental change. For clients that exhibit behaviors cross-situationally, more endogenous etiology may be suggested. Single subject research design could assist in providing important information to assist in clinical control of behaviors.

Utilization of a severity index for SIB, could assist in the prioritization of behaviors selected for immediate treatment and research. Once selected for investigation, utilization of multiple baseline design, with adequate treatment phases could assist in evaluating outcome measures for multi-problem clients.

The use of data gathering techniques which report daily behaviors and application of the severity index to residential and vocational settings also needs to be evaluated. Such research would assist in providing more

accurate information of operationally defined behaviors when treatment decisions are being made.

Finally this study suggests the possible importance of researching the ability of clinical staff to predict "problem days" for such clients and the effect of environmental alteration during such days. LIST OF REFERENCES

#### LIST OF REFERENCES

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APPENDIX A

### APPENDIX A

## SIB INDEX OF SEVERITY

### SIB TOPOGRAPHY: HEADBANGS ON OBJECTS

Severity of Injury

Minimal-redness of area, no bruising

Mild-bruising or abrasion, 1st degree

<u>Moderate</u>-laceration-not all layers penetrated; or 2nd or 3rd degree abrasion, possible stress fracture (repeated, cumulative blows)

<u>Intense</u>-laceration-all layers penetrated fat visible or lst degree cerebral concussion; infection risk simple skull fractures, retinal detachment risk open sores, scar tissue formation.

Extreme-laceration-all layers and fat penetrated to bone or other tissue; 2nd degree cerebral concussion and other cerebral injury (permanent/long term compound skull or vault fractures; high infection risk; death

### SIB INDEX OF SEVERITY

### SIB TOPOGRAPHY: EYE POKES/RUBS/HITS

Severity of Injury

Minimal-redness surface irritation

Mild-bruise-black eye swollen, sore lids

<u>Moderate</u>-laceration or abrasion of cornea-infection of eye surface red-eye (broken vessels)

<u>Intense</u>-retinal detachment severe laceration or ulceration of eye surface, visual impairment, some loss of function

 $\underline{Extreme}$ -removal of eye, deep laceration or rupture of eyeball total lateral or bilateral blindness

## SIB INDEX OF SEVERITY

### SIB TOPOGRAPHY: REGURGITATION

Severity of Injury

Minimal-occasional rumination (less than 2/day)

Mild-persistent rumination (more than 2/day)

Moderate-self-induced regurgitation (no hands) tooth decay (long term effect), mild weight loss

<u>Intense</u>-object (hands) or self-induced regurgitation tooth decay, internal damage to throat (objects); Hydrocholoric acid damage to esophagus membrane some dehydration risk, weight loss

Extreme-compulsive projectile or induced vomiting Bucal decay-extensive hydrochloric acid damage; throat abrasions; loss of teeth severe dehydration, severe weight loss, death risk

## SIB INDEX OF SEVERITY

### SIB TOPOGRAPHY: BITES TO SELF

Severity of Injury

<u>Minimal</u>-teeth marks contusion-skin not broken no blood drawn callused or calcified skin, discolourations

<u>Mild-skin</u> abrasion-lst 2nd, or 3rd degree of skin, varying degrees of scar tissue, possible infection

<u>Moderate</u>-skin laceration or puncture-not all layers penetrated scar tissue formation

<u>Intense</u>-laceration-all layers of skin penetrated: fat visible extensive scar tissue formation

Extreme-deep laceration-all layers of skin and fat penetrated to bone or other tissue, permanent skin/tissue loss severe damage to arteries, ligaments, veins APPENDIX B

# APPLIED BEHAVIOUR ANAYLSIS PROGRAM SOUTHWESTERN REGIONAL CENTRE MINISTRY OF COMMUNITY & SOCIAL SERVICES

The Self-Injurious Behaviour (S.I.B.) Trauma and High Risk Units are short-term behavioural treatment residential areas for cognitively disabled (developmentally handicapped) individuals exhibiting severe behaviour disorders. Both Units are low-clientele high-staffing areas (approximately 2.0 staff/resident average), equipped with modern facilities for safe, secure and intensive treatment. Front-line staff on both Units are highly experienced and trained developmental service workers, directly supervised by a registered psychologist, Dr. F. J. Barrera, Clinical Director.

The S.I.B. Trauma Unit specializes in the treatment and management of self-injurious behaviour (S.I.B.) and severely aggressive behaviour (S.A.B.): behaviours that are highly dangerous to the client or to others, or to both. The Unit houses 10 short-term beds (average length of stay is 6-12 months) and provides service primarily to lower-functioning clients from within and without Southwestern Regional Centre. Four of these beds are specifically designated for external community or institutional clients from throughout the Province. In all cases, the Unit provides extensive follow-up services, including training of parents or staff in intervention procedures and in the management of disturbed behaviour, and on-site coverage and consultations.

The admission criteria to this Unit includes evidence of the extreme, life-threatening nature of the behaviour problem(s) which must be documented by medical summaries, injury reports and evidence of unmanageability by ongoing behaviour programming at the referral source. The Unit admits children or adults of either sex. In addition to working with S.I.B. and S.A.B. clients, the Unit has treated individuals with persistent unmanageable and disruptive behaviour problems, such as those associated with extreme non-compliance, those needing intensive individualized training (autism, phobic disorders, stress compliance training). Although the Unit is widely renown for its humane, safe and highly supervised use of aversive conditioning, its treatment philosophy is based on eclectic, holistic and drug-free intervention strategies.

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### APPLIED BEHAVIOUR ANALYSIS PROGRAM Southwestern Regional Centre

The Mandate of the High Risk Unit is to provide service primarily to moderate and high-functioning community-bound clients who have a high risk of becoming institutionalized due to their behaviour problems. Treatment plans on the Unit are thus aimed toward the behavioural rehabilitation and community integration of problem clients. The Unit houses 10 beds, with four beds reserved for external clients from throughout the Province, and the remainder for internal (Southwestern Regional Centre) clients who have community placement potential. Thus, the admission philosophy for external and internal clients alike is centred on intensive de-institutionalization.

The Unit specializes in the treatment of aggressive and violent individuals with behaviour problems ranging from adjustment disorders to explosive ("episodic") personality disorders and severe antisocial behaviour. The Unit does not handle psychiatric patients as it is not geared to deal with sexual offenders, severe psychotic behaviours or court-referred individuals. Thus, referrals to the Unit are selected for the explicit purpose of causative treatment, rather than symptomatic rehabilitation in social, community and work skills.

The Unit works in close conjunction with the Occupational Behaviour Resource Centre, a unique work setting program that provides all levels of pre-vocational and vocational training for clients with difficult and severe behaviour problems. The O.B.R.C. is a highly successful program that is becoming quickly known for its emphasis on supported employment and on its creative and inventive research approach to training occupational productivity with behaviourally at risk clients.

In addition to this service, the Unit has established a reputation as a forefront research and development centre for a variety of innovative techniques, including biofeedback, stress training, customized token economies, crisis intervention training, computerized functional analysis, and telemetric biobehavioural monitoring.

The Applied Behaviour Analysis Program is committed to offering highquality service delivery, based on the most recent empirical and theoretical knowledge in clinical psychology, behaviour analysis technology and behaviour modification techniques. The success of the A.B.A. Program is based on its application of modern participatory management techniques which, coupled with an extensive and systematic observational network, allows for flexible and confident programming in an informal, open and team-centred atmosphere. This success has made the Units a much sought-after resource centre for training of agency and community personnel, as well as for college and university students and interns.

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## APPLIED BEHAVIOUR ANALYSIS PROGRAM Southwestern Regional Centre

## Referrals:

Admissions to the Applied Behavioural Analysis Program are stricltly regulated by short term contractual agreements. Inquiries regarding program services should be directed to:

> Dr. F. J. Barrera, Clinical Director Applied Behaviour Analysis Program Southwestern Regional Centre P.O. Box 1000, Blenheim, Ontario NOP 1A0 (519) 676-5431, ext. 211 or 370 or page

All referrals including necessary background documentation should be directed to:

Mr. M. J. Kinder, Director Residential Services Southwestern Regional Centre P.O. Box 1000, Blenheim, Ontario NOP 1A0

APPENDIX C

# BEHAVIOUR MANAGEMENT AND REHABILITATION WORKSHOP (BMRW) SOUTHWESTERN REGIONAL CENTRE BLENHEIM, ONTARIO

BMRW began as a project proposal prepared by Dr. F. J. Barrera, Clinical Director of the Behaviour Modification and High Risk Units, and Ms. J. Case, Rehabilitation Counsellor. The Proposal was submitted to Mr. L. Jackson, Administrator, Southwestern Regional Centre, in January, 1984. BMRW opened on January 28, 1985, on a 6-month experimental project basis.

## Rationale of BMRW

Many studies have demonstrated that the acquisition of positive and useful skills is a critical component of behavioural rehabilitation. The acquisition of such skills, whether they be social, academic or vocational, has been shown to complement effectively short-term therapeutic interventions. Skills of this nature have proven effective not only for accelerating a faster reintegration into normalized settings, but also for maintaining therapeutic gains for longer periods of time without behavioural relapses.

In the recent past, however, and due to a variety of reasons, it has become increasingly difficult to accommodate clients with behaviour problems into existing vocational settings. The reasons for this under-service include:

- a) Insufficient vocational staffing.
- b) Vocational departments do not generally have the staffing level and quality of specialized training for handling disruptive behaviours. In cases where aversive techniques are involved, the presence of Behaviour Modification or High Risk Unit staff is mandatory as only these staff members are authorized and trained to implement such contingencies.

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## Reintegration

Clients are gradually reintegrated into regular workshop settings when their behaviours show a significant drop to a level where behavioural intervention is minimal and manageable.

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- Target Behaviours
- a) Aggression
- b) Attempted aggression
- c) Non-compliance
- d) Destruction
- e) Self-injurious behaviour
- f) Temper tantrums
- Behaviour Management Techniques
- a) Exclusion time out
- b) Manual restraint
- c) Confinement time out
- d) Graduated guidance
- e) Bed restraint
- f) Stress compliance

- g) Projectile vomiting
- h) Regurgitation
- i) Verbal threats
- j) Elopement
- k) Gestural threats
- 1) Inappropriate verbalizations
- g) Extinction
- h) Aversive conditioning (shock, water squirts)
- i) Manual guidance
- j) Overcorrection
- k) Positive practice

### Behaviour Management Assistive Devices

- a) Portable C.T.O. room
- b) Bed with posey cuffs for restraint
- c) Posey cuffs

- d) Squirt bottles
- e) Shock sticks
- f) Padded E.T.O. corner
- q) Padded floor mat (manual restraint)

## Behavioural Data

 Daily Count Sheet - used for immediate recording of inappropriate behaviours.

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c) Potential for disruptiveness - the presence of clients with severe behaviour problems in existing vocational settings has often resulted in the past in chronic disruptions of ongoing activities.

#### **Objectives** Of The BMRW

To provide a centralized and separate vocational and prevocational setting for behaviourally at-risk clients requiring specialized behaviour management programs.

### Short Term Objectives

To establish a 6-month pilot vocational setting to demonstrate the feasibility of a functional setting of this nature, as described above.

### Long Term Objectives

The desired goal of the pilot project was to develop and establish a large scale vocational setting which would absorb all facility (and short-term) clients requiring behavioural programming.

## **Operating Schedule**

Weekdays from 0900 to 1130 hours and 1300 to 1530 hours.

### <sup>r</sup> Staffing Requirements

Three full time staff trained in behaviour management procedures and policies. Also include placement students from St. Clair College and University-level summer students.

### Schedule Client Capacity

Range from 1/2 hour per day x 5 weekly, up to 5 hours per day x 5 weekly. The BMRW is presently limited to approximately 10 to 14 clients. ï

## Behavioural Data (continued)

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- 2) Monthly Behaviour Graphs counts from daily count sheet are transferred to these graphs at the end of each client's shift. These are used for progress notes and to note improvements in behaviour.
- Daily Attendance Record shows client's reasons for being late or absent from work.
- 4) Reinforcement Checklist in order to carry out behaviour management programs there must also be a positive reinforcer checklist. Each client receives social praise every 15 minutes for good behaviour and edible reinforcers every 30 minutes.
- 5) Behavioural Resident Treatment Program (R.T.P.) R.T.P.s identify each ' target behaviour that is to be reduced or extinguished, as well as the contingency(ies) for each behaviour. Copies of each client's R.T.P. are on file in the shop. Psychology liaison, workshop staff and a clinician develop and authorize each R.T.P. before it is implemented.

MTE:		SHIFT:	
Example	·	•	
	HBQ -		
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## DAILY COUNT SHEET

Used by staff to record behaviours as they occur. All behaviours and contingencies are listed on this sheet.



DAILY FREQUENCY



Behaviour Management Programmes cannot be initiated unless reinforcers are involved. Each client receives social' praise every 15 minutes. Edible reinforcers are given every 30 minutes for appropriate behaviour.

## RESIDENTIAL TREATHER: I'LAN

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UNIT: B. Mod. CASE RANAGER: Jim Jones DELEGATE: DO	ig Doe		
Plaase list below the programs in effect during this mo Knep current RTP on client's clipboard.	nth.		
A. BEHAYIOURAL PROCEDURES	Date	ster	
Head bang on objects - exclusion timeout 3 minutes	Jan.	1/85	
Aggression - confinement timeout 10 minutes			
Self Abuse - manual restraint 3 minutes			
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B. SKILL-DUILDING PROGRAMMES			
Toothbrushing - 5 x weekly	Feb.	1/8	
Towel Folding - 5 x weekly	Mar.	30/	
SASCING ACTIVITIES (Holt of Off-Ward)	Dete	star	
	1.		
ATTENDS B.M.K.W. 5 X WEEKIY U900-1130 1300-1530	Jan.	28/	
Actends dances Friday nights Realing - Sunday night 1900 hours	Jan.	28/	
Sources Sunday ingit 1500, nours		207	
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R.T.P.'s identify each target behaviour that is to be reduce	or or		
extinguished, as well as the contingency(ies) for each behav	vibur.		