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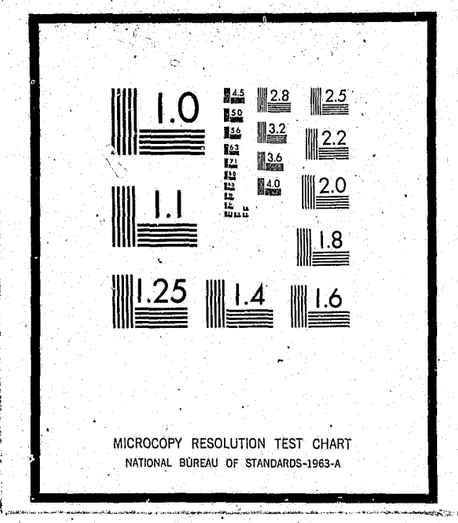

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Internal Report

PROBLEMS IN USING ASSAULT FREQUENCY TO EVALUATE INDIVIDUAL TREATMENT PROGRAMS

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Problems With Assault Frequency

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Abstract

The number of assaults per month exhibited by four male patients in a maximum security behavior modification system was recorded for an average of twenty-eight months. The average assault frequency was approximately one assault per month and the inter-assault interval varied widely. Because of the variability it would be difficult to know when assault frequency had been lowered by some therapeutic intervention for an individual patient. A system of recording assaultive data in the form of the probability of an assault given a particular situation was recommended. Such a system would rest on an accurate and detailed specification of the stimuli which occasion assaults.

Interpersonal violence is a recurring problem in maximum security psychiatric institutions and certain correctional institutions. Assault frequency is the variable most directly related to this problem but it is seldom measured over extended periods of time within individual persons. In preparation for introducing individualized programming we obtained extensive baseline data on four patients who were making unsatisfactory progress in a unit-wide behavior modification system. These baseline data are presented here because of their methodological implications.

Method

Four patients were selected because they exhibited frequent assaultive behavior in comparison to other patients, had been in the maximum security "Oak Ridge" Division of the Mental Health Centre for at least 18 months, and did not appear to be making satisfactory progress in the ward-wide behavior programs. The characteristics of the patients are shown in Table 1. All the patients were

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Insert Table 1 about here

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young and retarded. Three of the four were epileptics. All received phenothiazines and all but Patient Two received antiepileptic medication.

The patients were housed on a four ward, 150 bed, all male, behavior modification unit. Each patient was housed in an individual room. The programs on this unit were changing in the direction of greater complexity and sophistication throughout the patients' stay. In general, however, the programs to which the patients were exposed involved awarding points for room and self care, ward and off-ward work, and mood and cooperation ratings. Points were accumulated weekly and determined the patients' privilege level for the next week. Higher privilege levels resulted in more freedom of movement, access to off-ward work

and recreation areas, extra cigarettes and goodies; maintenance of the highest levels resulted in a transfer to a more desirable ward. Point fines were given for various misbehaviors and, depending on their size, resulted in an immediate drop in privilege level and consequent increased surveillance by staff.

An assault was defined as an interaction between two or more persons of a forceful nature which culminated in staff physically restraining the patient in question. Records were kept of such incidents in three forms: daily behavior assessment sheets, ward logs and accident reports. A complete record was available for each patient. Each assault resulted in the patient being confined to his room for a minimum of one day. The duration of confinement depended on the staff's assessment of the seriousness of the offense and the patient's behavior while confined. This confinement procedure was in effect throughout the period under consideration.

When interpreting the data to be presented, it should be kept in mind that confinement reduced but did not eliminate the opportunity for assaults to occur. Assaults during confinement were associated with shave, shower, exercise and room cleaning periods. A patient could also create an opportunity for an assault by refusing to pass out a spoon after a meal or refusing to accept an injection of medication.

Results

A graph of each patient's assaults is shown in Figure 1. The frequency

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Insert Figure 1 about here

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of assaults is roughly one per month per patient. The inter-assault intervals varied widely within and between patients as can be seen in the Figure. Assault free periods of three months were not uncommon and the record of Patient One

contains an assault free interval of nearly one year.

Conditions that immediately preceded assaults were not always observed or recorded. In instances where this information was available, it often appeared that an assault would occur in situations where the patient was frustrated, fined, or reprimanded. Even though the data were fragmentary with respect to the conditions that preceded assaults it seemed worthwhile to review the descriptions of the assaultive incidents to determine if there were certain situations that would commonly occasion an assault in individual patients. It appeared that there were different conditions that were associated with assaultive behavior in different patients. Common antecedent conditions for Patient One were (a) teasing by other patients (often instigated by the patient's teasing of them), (b) believing that other patients were talking about him or bugging him, and (c) receipt of a fine or reprimand from ward staff because he had broken ward rules. For Patient Two, the most common antecedent condition was having someone refuse one of his demands. Censure of this patient for breaking ward rules often elicited physical rebellion, particularly if there was a patient audience. Patient Three was often argumentative with staff over his complaints and requests. These arguments would sometimes escalate into a physical confrontation. Patient Four often became angry when one of his requests was refused or he received a fine for misbehavior. Occasionally an assault would occur with no warning half an hour or so after his frustration in a different situation. Assaults in this patient were apparently sometimes triggered by someone accidentally touching or crowding him.

Discussion

The length and variability of the inter-assault intervals preclude certain types of interventions. Shock punishment procedures are often used to suppress aggressive behavior but in this instance the period of specialized

surveillance that would be required is too long to be practical. This variability also results in a more important problem in program evaluation. Even if a treatment completely suppressed assaultive behavior for a particular patient this effect could not be detected until a period of time had passed that was considerably longer than the longest pre-treatment or baseline inter-assault interval. Judging by the records shown here, several years would be required to perform a convincing ABA type program evaluation. Of course, group designs can overcome these difficulties for research purposes but, for clinical purposes, evidence is needed that a patient is less likely to assault after some intervention than he was before.

The problem of predicting future assaults is a very real one. Each of the patients whose data are considered here occasionally have used weapons such as forks, broken spoons, and glass and, although the number of injuries to staff and patients was very low, particularly considering the frequency of assaults, injuries (usually to staff) did occur. Because of the dangerous nature of these patients' acts, no one would be anxious to, for example, give one of these patients access to the power tools in the industrial shops on the basis of a two month assault free interval or transfer one of these patients out of maximum security on the basis of, say, a four month assault free interval. Large changes in the status of these patients are, therefore, slow in coming.

A further difficulty is that, because of the intimate association of staff and patients over a long period of time, one is not sure whether to attribute any gradual changes in assault frequency to the skills acquired by the patients or by the staff. Staff do learn what sorts of events "set off" certain patients and modify their behavior accordingly. We might even expect the staff's behavior to be more likely to be modified. The behavior of "normal" persons would appear, a priori, to be more easily modified than that of retarded

or psychotic patients. When a patient has improved, therefore, it is difficult to know whether this improvement will transfer from a secure setting with staff who know the patient extremely well to an open setting where staff do not know the patient as well and are not used to handling potentially assaultive patients on a routine basis.

It appears that other behaviors that are related to assault frequency must be used to evaluate program efficacy and patient dangerousness. To our knowledge, there are no known methods of predicting the future frequency of assaultive behavior within individual patients. However, it may be possible to develop such a method by obtaining extensive baseline data as we have done here but, in addition, to obtain careful descriptions of the conditions that preceded each assault from the point of view of both patient and staff. Once situations were identified that raised the probability of an assault within a patient, the behavior of the patient in such situations (contrived or real) could be used in assessment. Conditional probabilities of this kind, i.e. the probability of an assault given a particular situation, would almost certainly be more sensitive to treatment effects and more easy to evaluate than overall assault frequency for two reasons: (a) With an assault per unit time measure, assaults can vary in frequency because the patient's behavior is modified or because of a change in the frequency of the stimuli which ordinarily occasion assaults. (b) With conditional probabilities, the frequency of the antecedent conditions' appearance can be controlled and increased by the therapist as in the "barb" technique (Kaufman & Wagner, 1972). In this technique the therapist fades in the discriminative stimuli for assaults while teaching the patient alternative behaviors in the presence of these stimuli. The reaction of the patient to "full strength" discriminative stimuli near the end of treatment could be used in assessment. However, regardless of whether discriminative stimuli are used in assessment this study has shown that the

large variability in inter-assault interval makes individual treatment program evaluation difficult for many assaultive patients in any manageable period of time using assault frequency as a measure.

Reference

Kaufman, L. M. & Wagner, B. R. Barb: a systematic treatment for temper control disorders. Behavior Therapy, 1972, 3, 84-90.

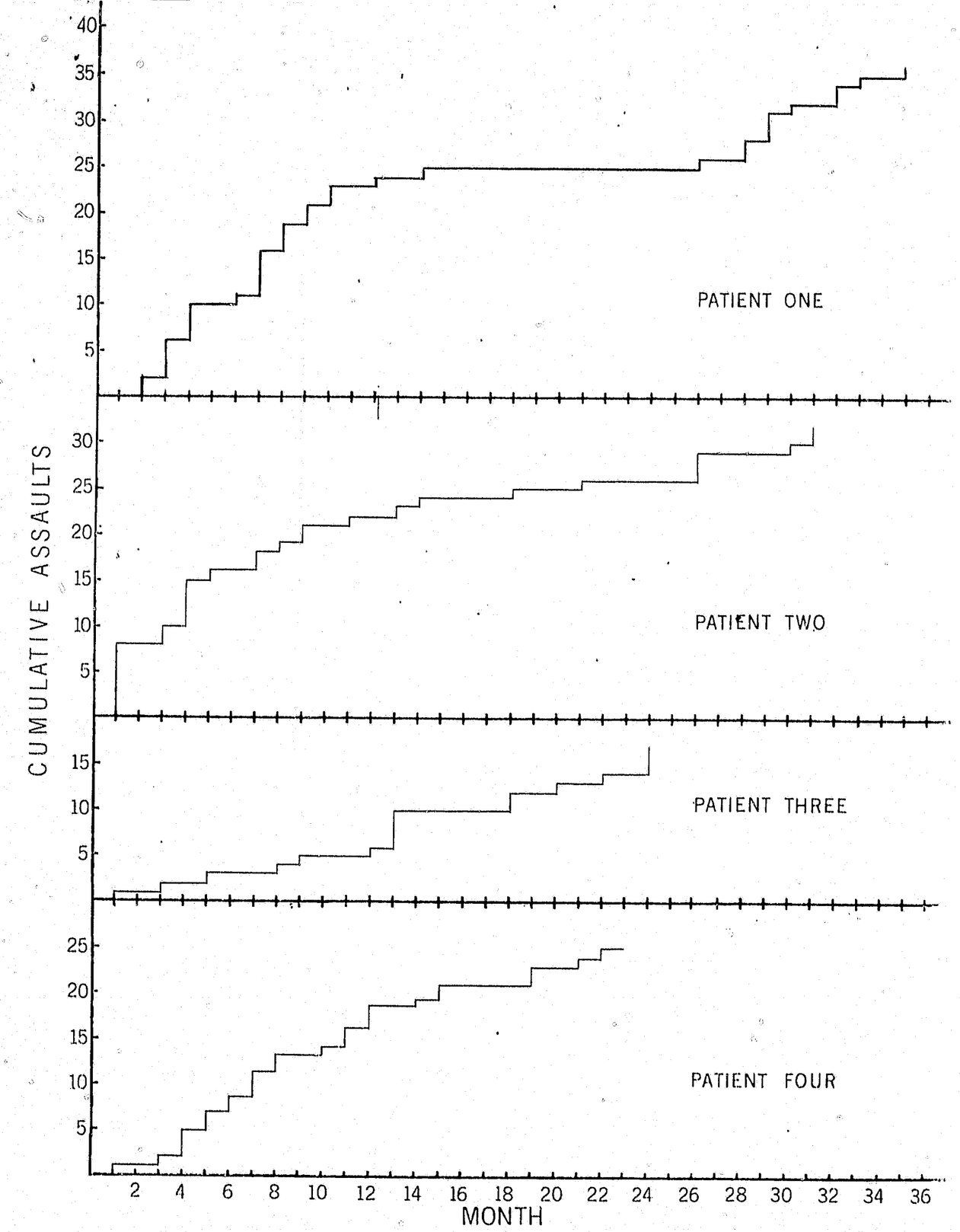
Table 1

Characteristics of Patients Included in Study

Patient	Present Age	I.Q.	Diagnosis
1	18 yr	55 (CMMS)	Mental retardation associated with tuberous sclerosis; behavioral problem, violent and explosive. Epilepsy
2	16 yr	79 (WISC)	Borderline mental retardation with behavior problem.
3	21 yr	54 (WISC)	Behavior disorder with epilepsy.
4	16 yr	77 (WISC)	Mild mental retardation, epilepsy, behavior disorder.

Figure Caption

Figure 1. Cumulative assaults as a function of months since admission for each patient.



Footnote

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