

## Treatment of self-destructive Behaviour in Handicapped Children

---

**Volume: 07      Issue: 02      July 1989      Page: 195-199**

---

Margot Prior, - *Department of Psychology, La Trobe University, Bundoora, Victoria, 3083, Australia*

One of the most common and most distressing problems for those working with severely handicapped children is that of self-destructive behaviours. Self-mutilation in some children can become a habitual activity which may occupy much of their waking life and which prevents efforts at teaching, training and rehabilitation of any kind. This behaviour is found most frequently in severely handicapped children: mentally retarded, deaf-blind, brain-damaged, autistic and schizophrenic; a wide range of disorders may be accompanied by such behaviour. It is also more often found in institutionalized children probably for many different reasons. Institutionalized children may be the more severely handicapped, they may have come from the most adverse early circumstances, they may have less attention from, and interaction with other people, they may lack alternative forms of stimulation, or, perhaps they are institutionalized because they are prone to self-destructive behaviour and are consequently extremely difficult to manage at home. Such children often have to be restrained in some way to prevent severe physical damage or even death. Generally speaking the problem is resistant to any form of drug treatment, and has been one of the most intractable problems faced by the behaviour-modifier. The term self-mutilation describes repeated attempts at self-injury often emitted with a regular and rhythmic pattern and often with no apparent reinforcement at least from outside events. It seems to be self-reinforcing. It is similar to stereotyped self-stimulatory behaviour like repetitive rocking, hand-flapping, head-banging, etc. but may in some cases occur in an outburst or tantrum fashion, without any clearly apparent external triggering event. Common types of self-destructive behaviour include: forceful head-banging, punching the face or head, scratching and biting various parts of the body.

In some cases attention may be given to the child mostly for self-destructive behaviour. This will increase its strength while other more adaptive behaviours are likely to be ignored since they are not problem behaviours. It has been shown in many studies that self-destructive behaviour is reinforced and maintained by environmental events, and it has been suggested that self-injurious behaviour and stereo-typed behaviour results from a gross imbalance between reinforcement for self-directed versus outward-directed activities.

---

### Collection of baseline data

Before beginning any treatment program a period of observation of the behaviour without intervention- is essential. This is called collection of baseline data. We need to collect this information for a number of reasons. Firstly, to discover what are the antecedent and consequent events in the pattern of self-destructive behaviour, i.e., what triggers the behaviour and what happens to the child when it occurs. Secondly, to learn how frequently the behaviour occurs before treatment, in order that we may assess the effects of our treatment. Vague statements such as "I think he does it more in the afternoon than in the morning," or later, after treatment, "I think he has improved a bit this week" are not satisfactory in assessing the effect of intervention on the child. We need to be exact and objective. Thirdly, we need to learn when and where the behaviour occurs, i.e., to observe the child in a variety

of situations and over time to look at space and time effects in the behaviour.

Sometimes just carrying out baseline observations is sufficient to achieve a reduction in self-destructive behaviour, e.g., if the environmental contingencies are identified, then simply altering those may be effective without other intervention.

Having collected such data we should have a picture of how often the behaviour occurs and in what kind of circumstances, i.e., we have an objective measure of the behaviour which we are going to try and change. During treatment and after treatment we then have a basis for comparison; amount of self-destructive behaviour, before, during and after treatment. We can thus assess clearly over time whether our intervention is successful in decreasing or eliminating self-destructive behaviour.

---

### **Punishment with reinforcement of other behaviour**

In the following sequences you will see the successful operation of a method which uses both aversive conditioning, or punishment, and the reinforcement of other adaptive behaviour which is incompatible with the self-destructive behaviour. It is worth drawing your attention at this point to what is a vitally important part of any treatment for maladaptive behaviour. At the same time that we are working to decrease the maladaptive (in this case self-destructive) behaviour it is essential to provide for the child an alternative and adaptive response or behaviour that he may learn, to replace the unwanted act. Thus we reward a desirable behaviour in order to increase its frequency whilst at the same time we are punishing the unwanted behaviour. It is probably safe to say that without DRO any treatment will either fail or will be much less successful than a programme which includes such positive aspects. Another fact which has been established via learning theory is that reward is a more powerful agent for changing behaviour than is punishment. Some control over the intensity of the punishing act must be maintained. Thus we recommend that in the initial stages the method be applied by one agent only, and that in later phases others using the treatment should replicate as exactly as possible the intensity of punishment used by the original trainer.

---

### **Extinction**

The basis of this method is the well documented fact that if a behaviour is never reinforced - that is if it never leads to the organism gaining some kind of satisfaction or reward, it will extinguish, or its frequency will reduce until it no longer occurs. Here are two examples of ways to extinguish a behaviour.

In the first situation - which is called non-contingent isolation - the child who self-mutilates is isolated for a set period of time, and permitted to engage in the behaviour without interruption. The basis of this method is that when a behaviour receives no attention it becomes less and less frequent and gradually stops entirely. Thus no attention is given to the child during this period of isolation, he is simply observed and the number of self-destructive responses is counted. This treatment is suitable when baseline measurement indicates that the behaviour occurs as a result of the need for attention when attention has been previously forthcoming for such behaviour and when the behaviour is only moderately self-injurious so that no effects will result from this period of uninterrupted opportunity to

perform the behaviour. It is not appropriate for self-destructive behaviour which is in any way really damaging, severe or life-threatening. When not isolated of course the child needs plenty of opportunity to behave in appropriate ways and to receive plenty of reward for other adaptive behaviour.

The second extinction procedure is called contingent isolation or 'time out'. This procedure is related more closely to the self-destructive behaviour since the isolation is contingent upon, that is, occurs immediately the behaviour begins. Time out is one of the most successful methods for reducing severe behaviour problems such as tantrums and aggression in normal children. In this procedure the child is isolated immediately after the self-destructive response begins. For this it is necessary to have a 'time out room', i.e., a place where the child can be put which is bare and nonstimulating, where he cannot hurt himself, or objects in the room and where he can be placed quickly with a minimum of flies and disruption. Usually he should be left there (observed if possible) until the behaviour has ceased whereupon he may be brought out and helped with reward for adaptive behaviour.

The importance of continued recording and observation of behaviour is nowhere better illustrated than in this procedure. It sometimes happens that time-out or isolation is not punishing for a child but is actually rewarding. You can find yourself in a situation where the child will self-mutilate in order to be isolated because that is his preferred experience. In this case of course observation and recording indicating an increase in the behaviour would tell you to change the treatment to one which was more effective for that child. However generally there are few children who do not find isolation punishing and one would normally expect the self-destructive behaviour to decrease over time.

---

## Overcorrection

A recently developed method for treating self-destructive and repetitive stereotyped behaviour is called overcorrecting. This has been used with a number of different problem behaviours with considerable success. The rationale for the procedure is that the environmental effects of SIB must be overcorrected, that is contingent on SIB we get the child to behave in such a way as to return to a situation which is much better than the one that existed before the SIB responses began. For example if a child is disruptive at the meal table and overturns his food, or his chair, to overcorrect the situation we require the child to not only clean up his mess, clean his plate and the entire table, restore the chair to its right position, and straighten and clean all other furniture in the room; that is he must make the situation much better than it was before he disrupted it.

A variation of this rationale which is the one more usually used with SIB (since it often does not disrupt the environment) is to get the child to practice overly correct forms of the behaviour.

Sometimes it is difficult to decide on an appropriate response to practice intensively. For example this child injured her head so badly that it was not possible to practice the logical correction, i.e., appropriate head movements. Therefore we decided to use overcorrection on the arms which were the other parts of the body involved in the head punching behaviour. We devised a specific series of arm movements which prevented the child from hitting herself and which served to involve her arms in another action pattern.

The use of this procedure here was successful in reducing the head punching but unfortunately another problem developed. She altered the self-destructive response to chin to shoulder hits. This is sometimes called symptom substitution and occasionally occurs in children when successful reduction

of undesirable behaviour occurs. In this case we devised a further method to deal with the problem. If this method is to be used it is necessary for all the people normally in contact with the child to be trained to use the procedure every time the SIB occurs. This means that no matter where the child is when the response occurs someone will be able to apply the overcorrection routine immediately.

---

### **The problem of restraints**

One method which is frequently used to deal with SIB is to restrain the child in such a way that he is unable to perform the self-destructive act; he is physically prevented. Some examples of restraints often used are, tubes placed over the arms to prevent head punching; helmets on the head to prevent damage from head banging or head punching; gloves worn on the hands so that scratching cannot occur; strapping worn on the arms which permit movement but prevent punching. Sometimes the child will devise his own method of restraint to prevent himself from injury.

It is unfortunately the case that for many children the restraint becomes an obsession with them and whilst they may not self-mutilate while restrained they are also unable to do practically anything else because of their complete absorption in being restrained. The restraint becomes as much of a problem as the SIB since it prevents the child from learning, socializing, interacting in a normal way, and increases his isolation from the normal environment. Removal of restraints can provoke fierce outbursts of the SIB and extreme distress in the child. Thus it is better not to begin using restraints at all but to try one of the other methods. However if you are faced with a restrained child who self-mutilates when unrestrained, a two pronged programme needs to be devised. Firstly the use of restraints must be extinguished and then the SIB, if it occurs must be treated. You saw an example of the consequences of restraint removal in an earlier sequence as part of the method called non-contingent isolation. Where such a method is not appropriate because of the extreme violence of the child we can use a procedure called 'graded change' in the removal of restraints.

The essence of this procedure is to very gradually reduce the restraining apparatus in size and/or scope so that its eventual disappearance occurs so gently that the child is able to tolerate it. This method is also useful with other kinds of obsessive behaviour.

---

### **Generalization**

Finally, it is also essential to attend to the problem of the generalization of behaviour. This refers to the fact that many programmes fail in their aims because generalization procedures are not built in. It is necessary firstly to operate the programme in all the settings which occur in the child's life, and secondly, to eventually include in the programme all the people who are involved with the child. Thus all caretakers should be trained to operate the contingencies of negative consequences for self-destructive behaviour along with reward for desirable behaviour. Failure to teach generalization means that the child may inhibit the self-destructive behaviour only in the specific situation in which he is trained. Treatment of self-destructive behaviour is not easy and does require time effort and dedication on the part of those involved. We must be prepared for lapses even when treatment is going well and for the necessity to continually assess the effects of our treatment. However, the techniques

we have shown you do work. A careful assessment of the events surrounding the behaviour via baseline data collection, selection of a technique which best fits the child and his particular problem behaviour, careful recording of changes in behaviour, and inclusion of generalization and reward for adaptive behaviour along with absolute consistency in programme application procedures should lead to a happier situation for the child and his caretakers.