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### **Analysis of staff explanations about challenging behaviour**

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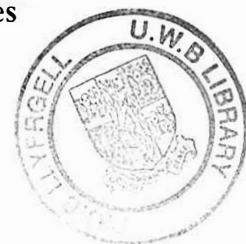
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# ANALYSIS OF STAFF EXPLANATIONS ABOUT CHALLENGING BEHAVIOUR

**Stephen J. Noone**

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Thesis submitted in fulfilment of the regulations for the degree of  
Doctor of Philosophy in the University of Wales  
2001



## Summary

Five studies investigated how nursing staff attribute causality to aggressive behaviour. The research was informed by literature that suggests that (i) challenging behaviour can be maintained by the behaviour of care staff and (ii) the behaviour of care staff may be influenced by their explanations about challenging behaviour. Two separate literatures have examined this area; applied behaviour analysis and attribution theory.

The first study coded verbatim accounts of three groups of nurses about challenging behaviour. It investigated whether the causal attributions reflected the dominant understanding of challenging behaviour? The results suggested that the majority of staff attribute the cause of the behaviour to be independent of the environment and likely to be permanent. These attributions contradict the dominant scientific explanation of challenging behaviour.

Study's 2 and 3 investigated whether care staff possess a style in how they explain challenging behaviour. Study 2 measured how a group of staff explained the behaviour of two clients with the same topography. The results showed significant differences in the domains of internal/external and personal/universal attributions. Study 3 compared the explanations from study 2 with new explanations about the same behaviour presented as a video role-play. The results showed that the care staff were able to use a variety of attributions to explain different examples of the same behavioural topography.

Previous research had proposed that the attributions of stability and control might influence the motivation to help others. Sharrock et al. (1993) proposed that both these attributions influence a sense of optimism, which in turn influences a desire to help a client in need. The purpose of the fourth study was to investigate the influence of stable and controllable attributions on the optimism of naïve carers about an imaginary client with challenging behaviour. The results showed that stability had the stronger influence over optimism.

To test the practical implications of these results, the final study examined whether attributions would change as a consequence of intensive staff training (designed to increase the effectiveness of a staff team). The results showed that attributions of stability showed significant changes but the attributions of control remained the same.

The results demonstrate that contrary to a number of studies, care staff can be shown to be effective and helpful while continuing to attribute control to clients who display challenging behaviour. The results are discussed in relation to (i) the validity of cognitive-emotional models used to explain the responses of care staff to clients with severe behavioural problems and (ii) the principles of rule-governed behaviour.

**Dedicated to the memory of  
John James Noone  
(1924 –1988)**

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## **CHAPTER 1**

### **FUNCTIONAL ANALYSIS AND HELPING CLIENTS WITH BEHAVIOUR THAT CHALLENGES SERVICES:**

#### **INTRODUCTION AND LITERATURE REVIEW**

## Chapter Summary

Although considerable progress has been made in the development of effective interventions for people who present challenges to services, behaviour problems still continue to cause distress in the lives of service users and their families. Consequences most cited include; injury, loss, exclusion or rejection, physical restraint, deprivation and neglect (Emerson, 1990; Emerson, Felce, McGill & Mansell, 1994; Emerson et al., 1987). Challenging behaviour has also been acknowledged as causing high levels of stress in carers (Emerson & Bromley, 1995, Quine & Pahl, 1985, Qureshi, 1993).

‘Challenging behaviour’ has become an umbrella term to describe any behaviour that places a demand on services (Blunden & Allen, 1987). The most frequent behaviours reported as challenging, in learning disability services, include physical aggression, self-injury and disruption of the physical environment (Durand & Crimmins, 1991; Felce & Lowe, 1993; Jones, 1991).

If vulnerable people with challenging behaviour are to be helped, and if their carers who cope with daily levels of stress (Emerson & Bromley 1995) are to be supported, it is essential to understand why proven interventions fail to be effective in ordinary care situations (Cullen, 1988). The relationship between staff behaviour and challenging behaviour forms the basis of the studies carried out in this thesis. This relationship is complex. There can be little doubt that staff behaviour greatly influences both the behaviour and the quality of life of the individuals who are cared for (Hastings & Remington, 1994 a, b). Research on this relationship has, unfortunately, shown that this influence is not always benign (Jahr, 1998). For example, many studies have shown that rates of interaction between staff and clients

in institutional settings are exceptionally low (e.g., Burg, Reid & Lattimore, 1979; Cullen, Burton, Watts & Thomas, 1984; Montegar, Reid, Madsen & Ewell, 1977; Moores & Grant, 1976; Rawlings, 1985 Woods & Cullen, 1983). There is also evidence that clients who are perceived by staff as more attractive and intelligent receive a greater amount of staff attention (Dailey, Allen, Chinsky & Veit, 1974), and that older, more institutionalised clients receive less attention (Paton & Stirling, 1974). These findings have been summarised by Felce (1993):

Individuals can typically expect contact from staff for no more than about 5% of the time, with interactions occurring at a rate of only about two per hour and lasting for 30 seconds or less. Such levels of interaction are clearly insufficient to support people with severe or profound learning difficulties in any reasonable quality of existence. Of particular concern is that those individuals, who might reasonably be expected to require more intense staff intervention, have been found to receive the least (Raynes, 1980). Clients with higher levels of maladaptive behaviour, and lower levels of independence and adaptive behaviour, receive fewer positive interactions (Grant & Moores, 1977) and less informative speech (Pratt, Bumstead, & Raynes, 1976) from staff (pp. 135-136).

As Hastings and Remington (1994a, b) point out, in addition to these negative findings there is also evidence that when interactions between staff and clients do occur, these interactions can inadvertently lead to increases in maladaptive behaviour through the reinforcement of inappropriate behaviour (e.g. Warren & Mondy, 1971). It is not surprising therefore that attempts to change the behaviour of staff have been targeted primarily through the provision of staff training or staff management procedures (see Jahr, 1998 for a review). However, there has been considerable criticism of such interventions (e.g. Cullen, 1988; Lally, 1993). The literature on the effectiveness of staff-training is mixed although “such measures are widely believed to be ineffective” (Jones, Walsh & Sturmeay, 1995 p. 194). The evidence for such pessimistic conclusions comes from the findings that much staff training fails to



effect change in client behaviour (Cullen, 1988; Hersen, Bellack & Harris, 1993; Parsons, Reid & Green, 1993; Reid & Green, 1990). In particular, lack of generalisation of training has been frequently cited as an outcome in the staff-training literature (Duker & Seys, 1980; Kissell, Whitman & Reid, 1983; Page, Iwata & Reid, 1982; Smith, Parker, Taubman, & Lovaas, 1992).

The reason why behavioural programmes ultimately fail are numerous. These include lack of resources (Corrigan, Kwartarini & Pramana, 1992), staff turnover (Burdett & Milne, 1985; Emerson & Emerson, 1987; Reppucci & Saunders, 1974), influence of management decisions (Hall & Baker, 1973), bureaucratic machinery (Reppucci & Saunders, 1974), and the inflexibility of working shifts (Backer, Liberman & Kuehnel, 1986). One obvious reason why staff training in this area may fail is in the application of theory into practice. Clinicians may have an understanding of how to reduce challenging behaviour but by the time staff are asked to incorporate new ideas into their work practice, the original theories may have begun to mutate into an ineffective programme.

The aim of this thesis is to contribute to understanding this phenomenon. The first step in this chapter will be to investigate the literature on analysis of the function of challenging behaviour. The second step will be to investigate some of the complex theoretical principles that may help to explain why interventions fail. The third step will be to outline some of the main concepts in rule-governed behaviour and the literature that shows verbal behaviour has an impact on human learning.

## 1.1 Principles of Functional Analysis

Functional analysis has come to be regarded, by clinicians and researchers, as best practice in the assessment and treatment of severe behaviour problems in people with learning disabilities and other populations (Repp & Horner, 1999).

The aims of functional analysis are to identify the environmental contingencies that have established a challenging behaviour and continue to maintain it. This would include: (1) examining the conditions that motivate the client to engage in the problem behaviour (2) events that trigger the occurrence of the behaviour, and (3) events that result from occurrences of the behaviour that reinforce it (Mace & Jones, in press). Interventions can then be designed to remove the reinforcement of the behaviour and teach the client alternative and adaptive behaviours that serve the same or similar function (Carr & Durand, 1985).

Prior to the advent of functional approaches to understanding challenging behaviour, clinicians relied on the application of behaviour modification techniques to reduce behaviour problems (Yule & Carr, 1987). These procedures were used generally without regard to the conditions that maintained problem behaviour. Generally, programmes operated in one of two ways. The first was through the introduction of potent positive reinforcement (e.g. developing self-help skills, Azrin, Bugle & O'Brien, 1971), teaching vocational skills (Bellamy, Horner & Inman, 1979), and maintaining socially appropriate behaviours (Whitman, Mercurio & Caponigri, 1970). The second was through the delivery of punishment contingencies. These included, time out from positive reinforcement (Foxy & Shapiro, 1978), overcorrection (Foxy & Azrin, 1973), and contingent use of electric shock (Lovaas & Simmons, 1969). Although clinically effective in limited contexts, critics considered these techniques to be intrusive and too concerned with the eradication of behaviours

without sufficient attention being paid to the continued development of the individual (Dietz, 1978; Hayes, Rincover, & Solnick, 1980; Johnston, 1991).

A review article by Carr (1977), on the scientific literature on self-injurious behaviour, suggested a model for the systematic screening of the possible functions of self-injury. These ideas were later developed by Iwata, Dorsey, Slifer, Bauman and Richan (1982) into an experimental methodology for studying the behavioural functions of self-injury.

The basic premise of a function-based assessment (to understand why an individual engages in problem behaviour) has received widespread support from clinical researchers (e.g., Carr, Langdon, & Yarbrough, 1999; Horner, 1994; Iwata, 1988). By understanding the function of a problem behaviour, it should then be possible to develop alternative behaviours that will enable a client to obtain the same reinforcement that had been achieved through engaging in the problem behaviour. It is fundamentally an exercise in redistributing available reinforcement to maximise the use of adaptive skills rather than a means of eradicating behaviour.

## **1.2 Methods of Functional Analysis**

A variety of assessment methods of functional analysis now exist. Authors differ in how they categorise the different methods depending on how the data is collected. Durand and Crimmins (1990) use four main categories of assessment methods; whether the data is gathered from 'intact' or 'modified' social environments and whether it is by 'concurrent' or 'retrospective' means. Iwata, Vollmer and Zarcone (1990) propose a classification either of indirect recording, direct (and) naturalistic observations, or direct (and) controlled observations. Other authors have reduced assessment methods to one of three categories; informant based, descriptive

or experimental methods (Emerson, Thompson, Reeves, Henderson & Robertson, 1995).

In a comprehensive review of behavioural interventions for aggression in people with learning disabilities, Hile and Derochers (1993) reported that the number of published treatment outcome studies using functional analysis doubled in the decade from 1981 to 1990. A more recent review confirms that this trend continued throughout the following decade (Pelios, Morren, Jesch & Axelrod, 1999) and now many practitioners include functional analysis techniques as a standard component of their professional practice (Desrochers, Hile & Williams-Moseley, 1997). Functional analysis is now the most commonly reported pre-intervention strategy in the literature and without doubt, it has “changed the fundamental character of behavioural intervention” (Neef & Iwata, 1994, p. 212).

### **1.3 Difficulties with Functional Analysis**

Clinicians may find that although they endeavour to apply the principles of functional assessment their attempts may fail to identify a clear function for a client’s behaviour and therefore they are not able to offer effective help. Failed interventions can confirm beliefs that the client is beyond help and that psychological interventions are ultimately ineffective.

#### ***1.3.1 Complexities of Behaviour Problems***

A central problem facing therapists is the complexity of human behaviour and the fact that many services may only possess a superficial understanding of the theoretical basis on which functional analysis is founded. Owens and MacKinnon

(1993) develop this argument to illustrate how clinicians may be led to the wrong conclusions through simplistic functional analysis. In particular they stress the danger of assuming that human behaviour can be understood by a simple, linear, single reinforcement model of the type used in A-B-C analysis.

Early operant research by Ferster and Skinner (1957) using single reinforcement schedules had produced surprising findings. In an experiment to measure the effect on rate of responding when the magnitude of the reinforcer was changed, Ferster and Skinner (1957) discovered that varying the size of the reinforcer appeared to have little or no systematic effect on responding.

These early experiments were based on offering one possible response to an animal. Owens and MacKinnon (1993) argue that this did not reflect what happens in the natural environment, where an organism has access to numerous responses and reinforcers. Herrnstein (1970), in an influential experiment, attempted to incorporate choice of responses by examining the effect of two responses reinforced on independent schedules. This created a 'concurrent schedule' (Herrnstein, 1970) where two or more responses could be reinforced independent of each other and at different rates.

The study of concurrent schedules led to a number of important findings, perhaps the most important being the development of the Matching Law (Herrnstein, 1970). Herrnstein (1970) proposed that when two explicitly programmed sources of reinforcement are available independently and concurrently the allocation of responding to these two sources is governed by the Matching Law in such a way that relative response rates approximately equal the relative reinforcements frequencies for the two alternatives. This is described mathematically as:

$$\frac{R_A}{R_A + R_B} = \frac{r_A}{r_A + r_B}$$

Where  $R_A$  and  $R_B$  are the number of responses per session to alternatives A and B respectively and  $r_A$  and  $r_B$  are the obtained frequencies of reinforcement for the alternative responses.

The Matching Law itself implies that when there is only a single response available, then it is to be expected that changing the reinforcement magnitude will have little effect on behaviour. If the individual has two responses available, equal time will be spent on them, if the reinforcement available is equal. If the reinforcement on one is changed, the individual will alter its response in proportion to the available reinforcement from both schedules.

Owens and MacKinnon (1993) argue that although some controversy surrounds the application of the Matching Law to verbal humans, it may go some way to help understand the complexity of challenging behaviour and why simplistic functional analysis sometimes fails to identify a clear function. For example, most real-life behaviour is a function of concurrent schedules, aggression and appropriate social behaviour may both be maintained by social attention but at different rates. This may not be detected by the use of ABC charts.

The picture becomes more complicated by the fact that a single behaviour may serve several functions. In the experimental laboratory, such a situation might be modelled by programming several schedules of (possibly different) reinforcers on a single key press. Such a schedule is known as a conjoint schedule - one in which a single behaviour is reinforced according to more than one schedule. In a clinical setting, a particular challenging behaviour, like throwing a tantrum, may also serve a

number of functions, including escape from an unpleasant situation, relief from boredom and achievement of some particular objective.

If a behaviour is reinforced according to a conjoint schedule (i.e. is a function of several reinforcers) this does not preclude the possibility of other behaviours also being available and reinforced concurrently.

Within such complexity, Owens and MacKinnon (1993) suggest that it is easy to be led to false conclusions regarding the function served by a particular behaviour. Take the example of aggressive behaviour being maintained by a conjoint schedule of both positive reinforcement of social attention after periods of low social contact and demand avoidance, when the client was asked to complete a household task. In this case, it may be likely that socially adaptive behaviour may also be maintained by the positive reinforcement of social attention. This would mean that a concurrent schedule would exist between socially appropriate behaviour and aggression (but at different rates).

Any attempt at a functional analysis might run into problems because no single consequence would reliably follow the behaviour (since there are two reinforcers operating). If the therapist concluded that one of the consequences observed did indeed serve a reinforcing function and decided to remove attention as part of an extinction programme, it would be equivalent to reducing the available reinforcement. This may produce a similar effect as predicted by the Matching Law. The behaviour would under these circumstances, still continue at a proportion of its previous level in relation to available reinforcement. For example, if the available reinforcement within a set period was 20 times following socially appropriate behaviour, 20 times following aggression maintained by social attention, and 10 times following aggression maintained by demand avoidance, then the consequence of an extinction programme, would be to reduce the available reinforcement

contingent on aggressive behaviour by 50% - given the difficulty in ignoring aggressive behaviour. Importantly, however, this would not mean that the frequency of aggression would be reduced by 50%. Aggression maintained by demand avoidance would be unaffected by the extinction programme and continue at the same rate. Yet, aggression maintained by social attention would not be reduced by 50%. This is because, although the available reinforcement for the two behaviours on the concurrent schedule would be reduced from 40 times within a set period to 30 times, the Matching Law would predict that the client would distribute the behaviour to maximise the available reinforcement. Although the reinforcement was halved, the time spent in aggressive behaviour would drop from 50% of the time not to 25% (half the original value) but to 33% (two-thirds of the original value of 50%). Thus reducing the rate of reinforcement for a behaviour may not produce anything like the reduction in the behaviour expected and may give staff the impression that they get a poor return for their efforts.

This may then lead the therapist and the staff team, to conclude that they were mistaken about the reinforcer, discontinue the attempt at extinction, and search for other reinforcers (possibly hitting upon the second and repeating the original mistake).

In reality the situations might be even more complex but this example serves to illustrate how therapists may draw the wrong conclusions from data and how the investment of staff time and effort into a programme may lead to poor outcomes despite what appears to be a careful functional analysis prior to intervention.



### ***1.3.2 Direct and Indirect Assessment***

The problems with applying functional analytic principles are not just theoretical. A number of reviews have begun to examine shortcomings in the procedures themselves (Durand & Crimmins, 1990, 1991; Iwata et al., 1990, Iwata, Pace, Dorsey et al., 1994; Mace & Jones, in press).

There are advantages and disadvantages in any of the methods used. Interviews and rating scales share two advantages over direct methods of assessment. First, care provider responses can be based on a large number of observations in a wide range of naturally occurring conditions. This could provide a breadth of sample rarely achieved using direct observation. Second, both methods are easy and time-efficient to administer, making them very practical to use in virtually all clinical services. However, these same advantages have important drawbacks that limit the validity of their results. Both depend heavily on accurate care provider recall and summary of a very large number of observations. Independent reliability studies have shown the Motivation Assessment Scale (Durand & Crimmins, 1992) to have low interrater reliability and low correspondence with results of analogue functional analysis (Duker, Sigafos, Barron & Coleman, 1998; Newton & Sturmey, 1991; Sigafos, Kerr, & Roberts, 1994; Zarcone, Rodgers, Iwata, Rolurke, & Dorsey, 1991). A similar finding was reported for the correspondence between interview data and analogue assessment (Toogood & Timlin, 1996).

### **1.4 Barriers to Effective Intervention**

Many clients with challenging behaviour are cared for by teams of paid staff. This adds a further complication to the development of effective intervention. All programmes will require co-ordination and consistency in response by all members

of a team. No matter how accurate the functional analysis and planned response maybe, if the daily care plan is not implemented correctly it is unlikely to be effective.

Maintaining consistency within a staff team requires an understanding of how contingencies may shape and maintain staff behaviour. Hastings and Remington (1994b) suggest functional analysis should be expanded to include an examination of the rules and beliefs that staff possess about the function of client behaviour. They suggest that the principles of rule-governed behaviour may help to understand staff behaviour. To help understand the basis of this argument it is important to understand the development of the concepts of the behavioural analysis of verbal behaviour.

### **1.5 Rule-Governed Behaviour**

Skinner's contribution to verbal behaviour and rule-governed behaviour came in two major pieces of work separated by twelve years. The first, 'Verbal Behaviour' (1957), examined the phenomena of speaker behaviour. This is a theoretical book with no experimental data. The explanatory foundation, that behaviour is selected by its consequences, remained the same as his earlier work on the analysis of behaviour.

Later, Skinner produced a seminal paper (Skinner, 1969) that examined the nature of listener behaviour and developed the principle of rule-governed behaviour.

### *1.5.1 Skinner's Model of Speaker Behaviour*

The central focus of Skinner's book 'Verbal Behaviour' (Skinner, 1957) was the relationship between what is said and what occurs (verbal actions take place in a variety of forms and should include what is written, gestured or touched, as well as said).

Skinner (1957) suggested that a four term contingency relationship exists in all instances of verbal behaviour. These were the initial stimulating events (for example, during meal time, sat at a table, the presence of salt, an audience, etc.), the verbalising action (somebody saying, "Please pass the salt"), the consequating action that mediates the verbalisation (the salt is passed) and finally, the consequence (obtaining salt for one's chips).

Among these contingencies, Skinner (1957) proposes an important role for a verbal community. Effective verbal behaviour (the language used to describe and act upon the world) is shaped by the feedback from others regarding the effectiveness and ultimate meaning. The words used to describe the world are shaped by the responses from other people. This idea has important implications for staff responses to challenging behaviour. The language used by care staff will be shaped by the responses to its use by the verbal community. Some care staff may stop using scientific, technical, language to describe behaviour and instead use local colloquial terms because of the feedback they receive from other staff (i.e. the local verbal community).

Skinner (1957) identified six different forms of verbal behaviour, these are; mand, tact, echoic, textual, intraverbal behaviour and the audience relation. (For a

full discussion of each term, the reader is recommended to Skinner, 1957 pp. 35-185). For the purpose of this discussion three of the terms will be briefly discussed.

### ***1.5.2 The Mand***

The term 'mand' originates from the terms 'command' and 'demand' but has a more exact definition. It is defined as:

a verbal operant in which the response is reinforced by a characteristic consequence and is therefore under the functional control of relevant conditions of deprivation or aversive stimulation. (Skinner, 1957, pp 35-36)

By manding it is possible to move from a state of deprivations or need. In contrast to other verbal operants, the response has no specified relation to a prior stimulus.

### ***1.5.3 Intraverbal Behaviour***

Some verbal responses show no point-to-point correspondence with the verbal stimuli which evoke them. Such is the case when the response "Ten," is made to the verbal stimulus "What is five plus five?" or the response, "London" to the

question of “What is the capital of England?” Skinner (1957) suggests that behaviour controlled by such stimuli should be termed ‘intraverbal’.

#### *1.5.4 The Tact*

In all verbal behaviour under stimulus control, there are three important events to be taken into account: a stimulus, a response and a reinforcer. These are contingent upon each other in the following way: the stimulus, acting prior to the emission of the response, sets the occasion upon which the response is likely to be reinforced. Under this contingency, through a process of operant discrimination, the stimulus becomes the occasion upon which the response is likely to be emitted.

In echoic, textual and intraverbal operants the prior stimulus is verbal. There are two important types of non-verbal stimuli, one is audience characteristics, the other is nothing less than the whole of the physical environment.

The three term contingency in this type of operant is exemplified when, in the presence of a cat, a child achieves some sort of generalised reinforcement by saying the word ‘pussycat’. Skinner (1957) invented the word ‘tact’ to describe this reinforcement. The term carries a mnemonic suggestion of behaviour that ‘makes contact’ with the physical world. Care staff facing unusual phenomena such as bizarre and challenging behaviour may produce a tact to create an appropriate label to describe the phenomenon. Therefore the phrase, “he's throwing a wobbler,” may be a tact in the presence of a client in high physical arousal beginning to show physical aggression.

A 'tact' is defined by Skinner (1957) as a verbal operant of which a response of given form is evoked (or strengthened) by a particular object or event or property of an object or event.

### **1.6 Skinners Model of Listening Behaviour**

Skinner (1969, pp. 133-171) provides a distinction between contingency shaped and rule-governed behaviour.

We refer to contingency-shaped behaviour alone when we say that an organism behaves in a given way with a given probability because the behaviour has been followed by a given kind of consequence in the past. We refer to behaviour under the control of prior contingency-specifying stimuli when we say that an organism behaves in a given way because it expects a similar consequence to follow in the future (Skinner 1969, p. 147).

Rule-governed behaviour is behaviour under the control of a rule, and Skinner (1969) defines a rule as a "contingency-specifying discriminative stimulus" (p. 147).

Rules can be used to control behaviour when the natural contingencies cannot be trusted to do so, or when the natural contingencies are likely to maintain behaviour deemed as undesirable (Skinner, 1969, pp. 148-149). Cultural rules, laws and maxims are often more easily identified than the contingencies they specify (Skinner, 1969, p. 147). For example, most people who refrain from breaking speed limits and who wear seat belts do so because they believe they have "actually avoided or escaped from serious accidents by doing so." (p. 168).

The ability to analyse contingencies (Skinner, 1974) means that the rules can be self-generated or provided by others (Zettle, 1990). Either way, following rules provides a number of advantages. Rules generated by one person can be used by another without having exposure to the aversive contingencies (e.g. wearing a seat belt in the event of a car accident).

Malott (1989) defines a rule as a verbal description of a behavioural contingency (e.g. “if you stab yourself you will bleed, if you starve yourself you will go hungry”). A behavioural contingency consists of a response, an outcome and a discriminative stimulus in the presence of which the response will produce that outcome. The concept of rule-governed behaviour allows radical behaviourists to address the questions that had been previously the concern of cognitive psychologists (Skinner, 1969). Rules provide a behavioural perspective for understanding how thoughts or self-talk might control goal-oriented behaviour.

Skinner (1969) distinguishes between different types of rules. In specifying a contingency a rule may make reference to the consequences which would result from direct exposure to the contingency (for example, “Drink this, it will make you feel better”). Skinner terms this “advice” and it is often in the form of maxims or laws such as “an apple a day keeps the doctor away.” Other rules (“commands”) are effective because of special reinforcers made contingent upon them, often by governments and other social agencies.

Expanding on this issue, Zettle and Hayes (1982) proposed that:

Rule-governed behaviour is behaviour in contact with two sets of contingencies, one of which includes a verbal antecedent (p. 78).

One set relates directly to the particular task in question (e.g., the natural consequences of the activity); the second contingency is verbal/social in nature.

In an attempt to reinterpret developments from cognitive behavioural therapy into a radical behavioural paradigm, Zettle and Hayes (1982) expand on Skinner's (1957) original definition of verbal operants. Within the new term of rule-governed behaviour they classify the terms 'mands' and 'tacts' as functional units of speaker behaviour. But they make substantial expansions of the functional uses of listener behaviour to introduce three new terms. These are pliance, tracking and augmenting.

### ***1.6.1 Pliance***

Pliance (derived from the word compliance) is defined as a rule that controls behaviour because compliance with that rule will generate social approval and failure to comply will generate social disapproval. The rule itself is termed a 'ply'. The original example posed by Zettle and Hayes (1982) is:

A thief says: "Your wallet or your life" and the person hands the thief the wallet, an apparent instance of pliance. Yet, it is pliance only if the listener is under the control of apparent speaker-mediated consequence for following the rule (p. 80).

An example of pliance given by Malott (1989) is the reinforcement and punishment of a child by its parents to shape up appropriate behaviour at bedtime. If the parents have told the child to get ready to bed, they are more likely to praise that child for getting ready for bed than if the child randomly got ready for bed during the day. The parents would also be more likely to nag at the child for failing to get ready than at times when the parents had not made the request. In this respect the social



contingency is playing a major role in the acquisition of control of rules and it also probably plays a role in the maintenance of such control.

These definitions of pliance were developed further by Hayes, Zettle and Rosenfarb (1989) into “the most fundamental unit of rule-governed behaviour” and defined as:

rule-governed behaviour under the control of apparent socially mediated consequences for a correspondence between the rule and the relevant behaviour (p. 203).

In pliance, the issue is not the type of reinforcement (i.e. social/non-social) but the type of contingency. With pliance, the consequence must be socially mediated because only a social verbal community can discern the presence of a rule and check behaviour that corresponds to it.

### *1.6.2 Tracking*

A second form of rule following is tracking. Tracking can be defined as rule-governed behaviour under the control of the apparent correspondence between the rule and the part of the world that is the subject of the rule, rather than controlled by speaker-mediated consequences. A track is a rule that specifies a natural, non-socially mediated outcome that might function as an effective behavioural consequence. For example if we are warned about the dangers of electric shock and are subsequently careless with electricity cables and get shocked, the rule will be more likely to function as an effective warning stimulus in the future. Zettle and Hayes (1982) stress that:

..the speaker does not mediate compliance. Tracking would be as likely to occur if the rule is in a book as if it were given by an actual speaker (p. 81).

### ***1.6.3 Augmenting***

A third unit of rule-governed behaviour would be subsumed under the classification of an intraverbal and suggests a changed or heightening of affairs. Augmenting is defined as:

rule-governed behaviour under the control of apparent changes in the capacity of events to function as reinforcers or punishers (Zettle & Hayes, p. 81).

Skinner's concept of autoclitics (1957) would appear under this category. This has been defined in various forms in the past before behaviour analysts had created a technical vocabulary. More recently (Malott, 1989) it has been used in the same way as Michael's establishing operations (Michael, 1982, 1993). This can be defined as:

an environmental event, operation, or stimulus condition that affects an organism by momentarily altering (a) the reinforcing effectiveness of other events and (b) the frequency of occurrence of that part of the organism's repertoire relevant to those events as consequences. (Michael, 1993, pp 192-193).

Malott (1989) proposes rules may serve as establishing operations when a rule establishes certain stimuli as more effective behavioural consequences; that is, the statement of the rule might make those stimuli more rewarding or more aversive. The statement of the rule may increase the reward value of stimuli immediately

resulting from compliance with the rule or alternatively increase the punishing value of a rule immediately resulting from non-compliance with the rule.

### **1.7 Empirical Studies on Rule-Governed Behaviour**

Human operant research emerged in the 1950s as a means of establishing whether the same results found with animal experiments using rats and pigeons would be found with people (Long, Hammock, May & Cambell, 1958). Generally the results were disappointing. One major problem was that verbal humans were able to describe the procedure to themselves and then predict the future rate of a schedule (Lowe, 1979).

Researchers began to conclude that differences between human and non-human performance could be traced in part to the effects of language on human interaction (e.g. Barnes, 1989; Lowe, 1979, 1983; Poppen, 1982). For example, Horne and Lowe (1993) note:

There have been numerous reports in the literature of a marked differences between the performances of adult humans and other animal species on schedules of reinforcement. This is true on fixed-interval (FI) and fixed ratio (FR) schedules and is evident both in response patterning and in sensitivity to the schedule parameters. The evidence also suggests that the occurrence of rule-governed behaviour in humans may also give rise to some of these differences (p. 29).

Many studies had to develop elaborate modifications to original research designs in order to overcome the influence of self-talk by subjects (Vaughn, 1989). A fixed interval schedule design was adapted so that participants were asked to carry out a concurrent task such as solving a simple mathematical problem or reading

aloud (Lowe, Harzem & Hughes, 1978) during the procedure. Another design was to use pre-verbal humans (Lowe, Beasty & Bentall, 1983) to investigate if non-human pattern of responses emerged. The results showed the similar patterns found with non-humans.

Vaughn (1989) suggests that most of these procedures served two main purposes. The first was to replace the participant's learning history prior to the experiment and secondly, to attenuate the effects of what participants might say to themselves about the procedure that could influence performance during the experiment.

These findings have a number of important implications for the applied field. It has already been shown that human behaviour is more complex than originally presented in the early operant animal studies (Ferster & Skinner, 1957). Yet much of behaviour modification is based on the original animal paradigm (Remington & Evans, 1988). For many services, behavioural interventions may be based around discrete staff training sessions in simple behavioural principles. These sessions may adopt the simplified model of single schedules (Owens & MacKinnon, 1993) with perhaps little reference to the literature that suggests that verbal humans learn differently. Even authors who have attempted to adopt behavioural principles in their staff teaching (Milne, 1984a, b; Cullen, 1988, 1993) appear not to have recognised that staff learning will be shaped by their verbal behaviour. To help appreciate the influence of verbal behaviour on learning, the next section will examine some of the literature that has attempted to investigate this phenomenon.

### *1.7.1 Verbal Behaviour on Performance*

A number of early researchers attempted to examine the effects of verbal behaviour on performance. Ayllon and Azrin (1964) showed that a group of psychiatric patients produced a rapid change in picking up their cutlery during meal time. Patients were given food or cigarettes if they picked up their utensils during the first phase of the study, while the second part of the study provided instructions to all patients. Results suggested that whereas no change had occurred in the reinforcement only condition, most participants responded correctly in the instruction only condition and after 1 year, one third of the participants continued to emit the appropriate response without any explicit reinforcement.

Similar findings were reported by Kaufman, Baron, and Kopp (1966) who examined the effects of instructions on schedule control. The results suggested that the responses were insensitive to changes in the contingencies. Participants were exposed to a variable-interval (VI) schedule of monetary reinforcement and one group was given accurate information that money would be given on a VI basis. Other groups were given inaccurate schedule information: either a variable-ratio (VR) or a fixed-interval (FI) schedule would be in effect. The effects of the schedule instructions were just what would be expected from participants who had been exposed for many sessions to the specified schedules, in spite of the fact that the VI schedule had been programmed for all participants.

Lippman and Meyer (1967) looked at the effect of different instructions on responding in a fixed interval schedule. Participants were either told that reinforcement depended on the passage of time or on the number of responses. Results showed that participants given the time instructions responded as if they were on a fixed interval schedule whereas participants given the ratio instructions showed a high, steady rate performance. Participants given minimal instructions

responded with either one of the two patterns but did not show the patterns characteristic of animal responses to similar schedules.

Weiner (1970) examined the effects of instructions on extinction. Three groups of participants were given different instructions about the amount of pennies they could earn in an experiment. The first group were informed that they could earn no more than 700 pennies. The second group were told 999 pennies and the third group was told nothing about the number of pennies they could earn. The experiment allowed a 2-hour extinction period after 700 pennies were earned. The results showed that responding was greatest during extinction for the group that had received no information. It was less for the second group that were told 999 pennies and least for the first group that had been told 700 pennies.

Galizio (1979) investigated the hypothesis that instructions can override the influence of programmed schedules of reinforcement and serve as a discriminative stimulus. The basis for the study was that if instruction-following was an operant it should occur when instructions are accurate and should decrease when instructions become inaccurate. Through a series of four experiments that studied instructional and schedule control when instructions either did or did not accord with the schedule of reinforcement, the hypothesis was supported that instructional control was determined by a participants reinforcement history.

Hayes et al. (1989) criticise these studies because they were not theoretically driven but rather served to document the effects of instructions. (Instructions in this sense do not take a functional perspective).

Another form of investigation has been to expose participants to changes in contingencies and to assess whether those who had their performance instructed were

more sensitive to these changes than those who had not. Research by Matthews, Shimoff, Catania and Sagvolden (1977), has shown that most schedule-sensitive performance is obtained by shaping behaviour rather than by instructing it. Shimoff, Catania and Matthews (1981) investigated patterns of responding when following instructions. The findings indicated that participants continued to show insensitivity to changes in contingencies when they were simply given instructions. When responses were shaped, however, sensitivity to changes in contingencies emerged.

Catania, Shimoff and Matthews (1990) argue that such insensitivity is a major advantage of rule-governed behaviour and it is what makes it so useful. Although contingency shaped responding is never, by definition, insensitive to contingencies, rule-governed responding is often so (Catania, Shimoff & Matthews, 1989). Yet this may be the great strength of rule-governance that responding can be established with rules when the contingencies are too weak to shape performance effectively. Early in training, it can be obvious that the performance of a student is rule-governed, students may repeat or reread instructions to themselves but the insensitivity of rule-governance is unlikely to persist against the power of contingencies; eventually behaviour will be shaped by its consequences (Catania et al., 1989). This can happen in one of two ways. Either control by rules may drop out, or the rules may become consistent with the environmental contingencies and therefore become redundant, a correspondence forms between verbal and non-verbal behaviours, as in the correspondence between saying and doing (Catania, et al., 1989; Matthews, Shimoff, & Catania, 1987).

Lowe and Horne (1985) have criticised research that fails to place “ ..verbal behaviour and its interactions with other behaviour at the centre of the agenda for behaviour analysis,” (Lowe & Horne, 1985, pg 112). They argue that “little progress can be made in constructing a psychology fit for humans.” (Lowe and Horne, 1985, pg 112) until verbal behaviour assumes a central role in the behaviour analysis of humans.

There are a number of implications from this research in regards to clinical settings with challenging behaviour. Staff training, for example, should expand its focus to include a rule governed perspective, (Hastings & Remington, 1994a, b). An exclusive focus on environmental influences may prove to be ineffective. A new staff member working for the first time with challenging behaviour will be shaped by natural occurring contingencies that follow their interactions with a client and also by the rules that develop about how they should do the job. Yet the most difficult task maybe in deciphering which set of contingencies are actively shaping the behaviour Shimoff & Catania (1998).

## **1.8 Conclusions**

This chapter has highlighted a number of problems facing care staff in their attempt to understand challenging behaviour. It has reviewed the principles of functional analysis and illustrated that although this has been one of the most important developments in helping to understand challenging behaviour, there are a variety of methods which have their own difficulties and therefore may not always provide clear answers of what to do next. The complexity of human behaviour has been illustrated to show that simplifying the theoretical principles may be a disadvantage and that in some cases a more thorough understanding of the principles of schedules of reinforcement may be helpful. Thirdly, an examination of the principles of verbal behaviour and rule-governed behaviour reveals an added complexity to understanding human behaviour especially when evidence suggests that models based on animal behaviour can not be easily applied to explain the behaviour of verbal humans.

To understand the influences that shape staff behaviour within an applied behavioural analysis paradigm will require an analysis of natural occurring contingencies and rule governance.



The field of behavioural analysis certainly has much to offer in our understanding of staff accounts of challenging behaviours but other areas of psychology may also be a rich source of ideas. In particular, a number of authors have suggested that a cognitive perspective is needed in order to create a full understanding of carer motivation and performance in response to challenging behaviour (Dagnan, Trower, & Smith, 1998; Kushlink, Trower & Dagnan, 1997; Sharrock, Day, Qazi, & Brewin, 1990; Stanley & Standen, 2000). Dunne (1994) has suggested that Heider's (1958) theory of causal attribution may help to explain why interventions for challenging behaviour may fail due to attributional bias among staff. Similarly, Fenwick (1995) has argued that Weiner's (1980, 1986) attributional theory of motivation and helping may help to understand carers' emotional responses to challenging behaviour and their resulting lack of commitment when implementing care programmes.

Attribution theory has a history of research in the field of how people explain the behaviour of other people. Thus, it is important to present some of the core principles in this field. The next chapter will therefore investigate the core ideas from this literature.

## **CHAPTER 2**

### **INTRODUCTION TO ATTRIBUTION THEORY: A LITERATURE REVIEW**

## **Chapter Summary**

The aim of this chapter is to provide an overview of the core theoretical concepts from the field of attribution theory. First there will be a short history of the development of the central ideas of attribution theory. Two developments in the field will be covered in more depth. These are the reformulated Learned Helplessness Model (Abramson, Seligman & Teasdale, 1978) that led to the construction of an attributional questionnaire which has been the basis for a number of studies that have examined carer attribution about challenging behaviour (Dagnan et al., 1998; Sharrock et al., 1990; Stanley & Standen, 2000). Secondly, the attribution theories of motivation and helping (Weiner, 1980, 1986) which have provided a theoretical framework for examining carer motivations to help clients (Dagnan et al., 1998; Sharrock et al., 1990; Stanley & Standen, 2000).

Finally, a review of the available measures that have been used to measure attributions will be presented. With a better understanding of what attributions are and how to measure them, it is hoped that this will provide the introduction to an exploratory investigation of how care staff use causal attributions about challenging behaviour.

### **2.1 History of Attribution Theory**

Heider's (1958) seminal work on how people explain their own and others actions has placed him as "the acknowledged 'founder' of attributions theory." (Weiner, 1992, p. 229).

Attribution theorists are concerned with perceptions of causality, or the perceived reasons for the occurrence of a particular event. As Heider (1958) explains:

The causal structure of the environment, both as the scientist describes it and as the naive person apprehends it, is such that we are usually in contact with what may be called the offshoots or manifestations of underlying core processes or core statements. For example, if I find sand on my desk, I shall want to find out the underlying reason for this circumstance. I make this inquiry not because of idle curiosity, but because only if I refer this relatively insignificant offshoot event to an underlying core event will I attain a stable environment and have the possibility of controlling it (p. 80).

One of the first attempts at producing a model to depict how one person explains the behaviour of another was proposed by Jones and Davis (1965). They suggested a correspondence inference model, which showed how an explainer may attribute someone's actions to a personal disposition such as 'personality'. This was a rather limited model that could only be used to explain limited examples. Essentially it proposed that all behaviour could be explained as a consequence of an individual's personality if the explainer could assume a person knew what they were doing and secondly if the choice of behaviour was regarded as 'undesirable' and not immediately reinforcing. Antaki (1984), provides an example of this:

If she chooses (to go to) Barbados, we can't really be very sure that she has particularly strong feelings about it, since the promise of sun, sea, sand and servants seems to appeal to most people. If, on the other hand, she chooses Albania, we might well sit back and think it tells us a great deal, and not just about where she likes taking her holidays. (Antaki, 1984, p. 213).

This model was elaborated by Jones and McGillis (1976), who replaced the concept of 'undesirability' with the more neutral 'unexpectedness of the action.' Giordano (1983) attempted to expand the theory to help understand responses to 'deviant behaviour' but the model has not been developed further.

Kelley (1972) proposed a covariance attribution model that was built around the analysis of variance cube that assumed most people to be rational explainers. It proposed that a person's behaviour is explained by others through a co-variation of the three dimensions of consistency, consensus and distinctiveness. The best way to explain the model is through an example.

A young first year student asks her lecturer to speak up. The way other students explain this behaviour will depend upon whether the behaviour is consistent, that is, if the lecturer is unusually quiet and once asked to speak up, the student may never need to ask a question again. But if the student asks every lecturer to speak up, then this would suggest that the behaviour has high consistency. If no other student made the same request it would suggest that the behaviour is low-consensus. If every lecturer were asked to speak up it would be described as 'low distinctiveness'. The more the student shows an association with a class of event over its several examples in time, venue and particular manifestation, than the greater the chance that others will use an internal attribution to explain the behaviour (Kelley, 1972).

A number of studies have attempted to investigate the co-variation model and found that manipulating the co-variation of consistency, consensus and distinctiveness yielded the predicted shifts in attributions (See Jaspers, 1983, for reviews).

Taylor and Fiske (1978) came to the alternative conclusion that people's attributions were often based on much simpler information rather than a complex co-variation of three variables. This followed previous work by Orvis, Cunningham and Kelley (1975) who found that similar patterns of attribution judgement were the same as when two of the three pieces of information were dropped from the stimulus set as when they were present.

Kelley's (1972) assumption that ordinary individuals think like scientists in the way they explain other people's behaviour was challenged by a number of authors (Borgida & Brekke, 1981; Kassin, 1979). Kassin (1979) and Borgida and Brekke (1981) suggested that informative statistical information would only have an impact on decision making when it was easily translatable, highly relevant and obvious to the target population. Kahneman and Tversky (1973) went as far to suggest that people may experience a type of deficit in how they process information when the information is dry, statistical or technical, even when it is highly relevant.

Ross (1977) provides a good example of this when describing a man who is in the process of choosing a new car. He wants to buy a particular make because of its safety record (e.g. a Volvo). He reads all the available information in the car magazines that confirms his assumption that a Volvo is the safest car. The day before this appointment at the local Volvo garage, he attends a party and gets into a discussion about cars. One man tells him of the terrible problems he had with his Volvo and that it had exploded on the motorway. So concerned is he by the account of these car difficulties that the next day he cancels his appointment and later buys a Ford Mondeo.

The relevance of Kahneman and Tversky's (1973) proposal is that it illustrates the idea that people can base their decision making on one high impact piece of information even in the light of significant evidence to the contrary. One

might argue that this phenomenon is found in care services where scientific evidence to explain challenging behaviour is dismissed and a behavioural programme abandoned because one significant experience is regarded as undermining the formal explanation.

One significant development in the understanding of ordinary explanations is the observation that people explain their own behaviour in a different way from explaining that of other people. Jones and Nisbett (1972) referred to this as the actor-observer split. A good example of the phenomena can be seen in the example given by Nisbett, Caputo, Legant and Maracek (1973) who found that students attending a new university attributed their own choices of university course, or friends at university, to facts about the university or their friends - but they tended to think that other student's choices of friends and courses reflected something about the individual dispositions of those students.

An explanation of this phenomena was developed by Ross (1977) who proposed that the difference was caused by a 'fundamental attributional error.' This is an error of over attributing another person's behaviour to an individual disposition and attributing one's own behaviour to more external influences. Therefore I may say I am angry because of the intolerable situation I find myself in but I assume that you are angry because you have problems with anger control.

Although these ideas appeared ingenious they have not been supported by later empirical studies (Brewin & Antaki, 1987). Antaki (1984) describes the more robust areas of attributional theory as behavioural attribution theories. These are the learned helplessness model (Abramson Seligman & Teasedale, 1978) and Weiner's model of motivation and helping (Weiner, 1979, 1985, 1986).

## 2.2 Learned Helplessness Model

Learned helplessness was first recognised in the animal laboratory. Researchers immobilised a dog and exposed it to a series of electric shocks - painful but not damaging - that could be neither avoided nor escaped (Overmier & Seligman, 1967; Seligman & Maier, 1967). The following day the dog was placed into a situation in which electric shock could be terminated by a simple response, yet instead of attempting to escape the dogs remained passive enduring the shocks.

Maier and Seligman (1976) proposed that the dogs had learned to become helpless. During the exposure to the shocks, the dogs had learnt that nothing they did had any effect on lessening the aversive stimulus and therefore stopped trying to escape.

The same research team began to investigate the learned helplessness model with humans (Maier & Seligman, 1976). In the laboratory, human participants had control removed by asking them to solve problems that could not be solved. Seligman (1974) had proposed that the experimental data could offer a new perspective on human psychopathology. In particular he proposed that reactive depression and learned helplessness shared critical features, such as causes, symptoms, consequences and prevention.

Although Seligman's proposal was attractive there were considerable problems when applied to the clinical population (see Miller & Norman, 1979 and Roth, 1980 for reviews). Some depressive patients showed pervasive deficits as the model suggested that were general across time and situation but many others did not. A second major criticism posed by Teasdale (conference discussion reported by Seligman, 1990) was that if lack of control of the aversive in one life was a precursor



to depression how could it explain people who were able to stand loss of control in their life and remain non-depressed.

In an attempt to resolve these discrepancies, Abramson, Seligman and Teasdale (1978) expanded the original theory of Learned Helplessness to include causal analysis from attribution theory. They proposed that when people encounter an uncontrollable event, they ask themselves why it happened. The nature of their answer - the causal explanation they use - sets the parameters for the helplessness that may follow.

Abramson et al. (1978) adopted three attributional dimensions of internal/external, stable unstable and global/specific to measure an explanation. Internal/external originates from Heider's (1958) original concepts of whether the outcome is due to an individual or to other people and circumstances. The notion of stable/unstable originates with Weiner's (1974) attributional theory of motivation. Abramson et al. (1978) defined the difference between the two terms as stable factors being long-lived or recurrent, whereas unstable factors are short lived or intermittent.

Abramson et al. (1978) developed a third category of global/specific in order to distinguish between deficits that can be highly general and those that appear to be quite specific. Global deficits are those that occur in a broad range of situations. The question is whether cause X is a factor that affects many situations or only a few.

Abramson et al. (1978) proposed that if causal attributions about negative personal events were stable, then induced helplessness was long lasting. If the causal attributions were global, then subsequent helplessness would be manifest across a variety of situations; if specific, then it would be correspondingly circumscribed.

Finally, if the causal attribution is internal, the individual will experience poor self-esteem, if the attribution is external self-esteem remains intact.

### **2.3 Weiner's Model of Motivation**

To explain his theory of motivation Weiner (1986) used the example of a boy playing Little League baseball. Even though Billy failed at a crucial point in the game to make a run and the direct consequence was that his team lost, Billy turns up the next day for extra batting practice.

Weiner's model (1986) explains Billy's determination to succeed by his causal attributions used to explain his failure to make an important run. Billy attributed failure on this occasion to lack of adequate preparation before the game and to poor concentration while at the bat. Because these are perceived as unstable and controllable, Billy is able to assume a reasonable expectation of success in future games. If on the other hand, Billy would have made the causal explanation that he failed to make the necessary runs due to his innate lack of skill, that is, if he used an attribution that is stable (he will never be able to be a good batsman) and uncontrollable (he has been born with low skills that can not be improved) he would have been less motivated to pursue further practice.

Weiner (1986) claimed that his cognition-emotion process model was an alternative to Skinner's functional analysis. He predicted that a Skinnerian interpretation of Billy's behaviour would be:

..after failure at baseball, a player would be expected to be less likely to appear for the next game. After all, failure to most of us is aversive and punishment decreases the probability that the behaviour will be repeated (p. 165).

Weiner (1986) is suggesting that behavioural analysis would predict Billy to reduce his baseball because his batting had been followed by an aversive event. This interpretation is an incorrect explanation of the behavioural term 'punishment.' The fact that failure may be aversive to most people is irrelevant to the example cited by Weiner. A Skinnerian analysis of the same example would suggest that if a behaviour had not reduced in frequency after an aversive consequence, the consequence should not be labelled as a punisher. From a behavioural perspective, all the example shows is that Billy was not punished by the reaction of the crowd when he played a bad shot.

Weiner (1986) also fails to acknowledge Skinner's work on covert behaviours and the principle of rule-governed behaviour when he says:

... all the emotional reactions and all the cognitive processes known to play such a major part in human behaviour, as well as all the potential reactions from others, fall beyond the range of Skinnerian conception (Weiner 1986, p. 165).

### *2.3.1 Weiner's Early Experiments*

Weiner's (1986) ideas were based on earlier work that had asked participants to imagine that a student had failed or succeeded at an exam. The participants were provided with possible causes for the outcome, either hard work or bad luck. Participants then predicted the intensity of the emotional (affective) reactions on rating scales (Weiner Russell & Lerman, 1978). A second paradigm was used to ask

participants to remember an event in their life when they had either succeeded or failed for a specified reason. Again they recounted the emotions they experienced (Weiner Russell & Lerman, 1978).

These studies suggested that one determinant of affect was the outcome of an action:

Success at achievement-related activities was associated with the affect of happy regardless of the cause of that outcome, and failure seemed to be related to frustration and sadness. Thus...given athletic competition, one tends to experience happiness following a victory whether that win was due to extra training... or luck (Weiner, 1978, p. 82).

This is an example of what Weiner (1986) refers to as outcome-generated emotions and can be used to explain simple affective response of happy and sad. For more complex emotions such as pride, anger, pity, guilt, shame, gratitude and hopelessness, Weiner (1986) proposes that attributions play a key role. Pride and self-esteem is experienced as a consequence of attributing a positive outcome to the self (Stipek, 1983; Weiner et al., 1978). Averill (1982, 1983) showed through a large survey that anger towards another person is more likely following attributions of blame towards that person, that is, the person is seen as being in control of their actions. Pity towards someone in need has been shown to follow from attributing someone's need as uncontrollable, e.g. losing a loved one because of an accident or difficulties because of a biological disability are typical situations that elicit pity (Graham Doubleday, & Guarino, 1984, Weiner, 1980). Izard (1977) concluded that "guilt is accompanied by feelings of personal responsibility" (p. 423). Weiner (1986) suggested that guilt and anger are elicited by controllable causes but guilt is directed inward, whereas anger is typically directed outward.

## 2.4 Attributional Model of Helping Behaviour

One of the earliest studies to investigate helping behaviour (Piliavin, Rodin & Piliavin, 1969) demonstrated that the perceived reason why help is needed influenced the decision whether to offer help. The methodology employed by Piliavin et al. (1969) involved a stooge either obviously drunk or obviously ill, falling down while riding a train. Observations of the behaviour of the passengers revealed that help was more likely to be offered to the ill person than to the drunken person. Piliavin et al. (1969) suggested that the decision to help involved a cost analysis and that helping a drunk would be more costly (e.g. the chance of the drunken person becoming aggressive or resisting the offer help).

Berkowitz (1969) was among the first authors to explicitly demonstrate the effect of causal ascription on help giving. Participants in this study had to request aid from another participant. The variable of causality for need was manipulated by making one request for aid due to experimenter error while another was due to the participant "taking it easy." Therefore the former was an external attribution to the participant while the latter was an internal ascription. The data clearly revealed that more aid was extended when the cause of the need was attributed to the experimenter's mistake rather than to the participant's laziness.

Barnes Ickes and Kidd (1979) realised that helping behaviour was more amenable to a more comprehensive attributional analysis than the single dimension of locus proposed by Berkowitz (1969). Barnes et al. (1979) used students who were telephoned by alleged classmates asking to borrow class notes. The reason given for requesting classnotes was either low ability (uncontrollable) or lack of effort (controllable). In addition it was indicated that the problem was either stable or unstable. The results suggested that help was more likely when low ability rather

than lack of effort was given as the cause of needing help and that help was increased given a stable rather than an unstable causal ascription.

Weiner (1980) repeated the Barnes et al. (1979) study with a number of important modifications. First, participants were given hypothetical situations rather than being phoned up by stooges. Secondly, a more complete sampling of causes were employed and three (rather than two) dimensions of causality were investigated. This created eight experimental conditions in a 2 (Locus) X 2 (Stability) X 2 (Controllability) matrix. The results repeated the central findings from Barnes et al. (1979) that perceived personal control was implicated in withholding help. Stability was not found to influence helping judgements.

To examine the role of affect, Weiner (1980a) again replicated earlier studies (with analogue scenarios rather than real contexts) by providing participants with the following scenario:

At about 1:00 in the afternoon you are riding in a subway car. There are a number of other individuals in the car and one person is standing, holding on to the centre pole. Suddenly, this person staggers forward and collapses. The person is carrying a black cane and apparently is ill. (Alternate form: The person is apparently drunk. He is carrying a liquor bottle wrapped in a brown paper bag and smells of liquor). (Weiner 1980, p. 190).

Participants then rated the degree to which the cause was perceived as personally controllable, their feelings of sympathy and disgust and their judged likelihood of helping.

The findings of this study led Weiner (1985) to develop his attributional model of helping. In relation to the above scenario it can be explained as follows. First there is a causal explanation about the origin of the difficulty experienced by the person in need. In particular, whether the person had any control regarding their predicament. Is the man physically ill (therefore has no control over his predicament) or is he drunk and therefore the cause of his own problems (high control)?

Weiner (1985) claimed that the outcome of the causal explanation would directly influence the type of emotion experienced, ranging from empathy to anger. The type of emotional response was directly related to the amount of control attributed to the person in need. Weiner (1985) concluded that it is more likely that the emotion of empathy will follow an explanation that the man is having a heart attack and therefore has no control over his predicament. Yet if the cause of the man falling is due to excess alcohol, it is more likely that the emotional response will be one of annoyance or anger.

The decision to help is directly related to the type of emotional experience and help will normally occur only when the emotional response is one of empathy. In Weiner's original studies (1980) this would mean stopping what one was intending to do and attending to the needs of the person.

These findings have been replicated in numerous social psychology experiments, although all followed a similar analogue paradigm with students as participants (e.g. Meyer & Mulherin, 1980; Betancourt, 1990; Betancourt & Blair, 1992). Applying the model to health care professionals, Brewin (1984) did find that medical students were more willing to engage in helping behaviours (prescribing medication) when patients' life events were regarded as uncontrollable rather than controllable.

## 2.5 Application of Attribution Theory

Attribution theory has made a considerable contribution to a variety of clinical problems. Ross, Rodin and Zimardo (1969) examined the role of attributions in a therapeutic technique for reducing fear, whilst Valins and Nisbett (1971) examined the more general role of attributional processes in emotional disorders. This proposed that the labelling of emotional reactions was influenced by the perception of what causes physiological arousal and defined a role for causal attributions in the aetiology of emotions.

Attribution theory has been applied to the dynamics of loneliness (Peplau, Russell & Heim, 1979) severe physical incapacitation (Bulman & Wortman, 1977) and addiction (Eiser, 1982). A early review of developments in the fields of education, medicine and psychotherapy can be found in Antaki and Brewin (1982). Fosterling (1985) reviewed the application of attributional conceptions within clinical psychology. His model depicts how information is processed about a stimulus in order to produce a causal explanation. Fosterling (1985) suggests that unrealistic attributions can lead to dysfunctional reactions and therefore the aim of therapy should be to induce a change in the perception of causality.

Attribution theory offers some explanation to why some parents may display some harsh emotions and aggressive behaviours in parenting (Chavira, Lopez, Blacher and Shapiro, 2000). Negative parental emotions have been shown to interfere with appropriate parenting practices, such as monitoring, problem solving and attending to the child's needs (Paterson, 1982; Vasta, 1982).

Dix, Ruble, Grusec and Nixon, (1986) showed that when parents perceived their children's misbehaviour as more intentional, more under the



child's control and more dispositional in origin, they expressed more negative affect and attached greater importance to responding to the behaviour.

Bugental and Cortez (1988) found that adults with low perceived control over a discipline encounter responded with greater negative affect, helplessness and arousal to difficult children than did adults with a higher perceived control. Thus dysfunctional child-centred attributions (i.e., attributions regarding the child's aversive behaviour that have a locus in the child and are relatively trait like, stable, global, voluntary and intentional; for example "She's never satisfied, she always wants it her way,") may themselves elicit negative affect in a mother, which would compound the emotional arousal the mother is already experiencing in response to aversive child behaviour and increase the likelihood of harsh or over-reactive parenting.

Studies over the last 10 years provide some support for an attributional model of negative emotions in parenting. In one of the earliest studies to test this framework, Dix, Ruble and Zammarabo (1989) exposed parents to hypothetical scenarios of children engaged in problem behaviours and asked parents to rate their attributions of control and their emotional reactions towards the children. As predicted, parents who believed the child was responsible for the misbehaviour were likely to report feeling angry. Similarly, mothers of physically abused children (Bugental, Blue & Cruzcosa, 1989) who tended to perceive a high degree of child control over their children's problem behaviour were more likely to express negative affect while interacting with their children.

Smith and O'Leary (1995) presented mothers with videotaped scenarios of negative parent-child interactions and found that mothers were more likely to react with negative affect to the children in the scenarios when they attributed the cause of the negative interaction to the children. In addition, both negative affect and attributions were significant predictors of mothers' endorsement of over harsh disciplinary methods.

Chavira et al. (2000) interviewed mothers of children with developmental disabilities and examined their reactions to their child's problem behaviour. The findings indicate that most mothers viewed their child as not being responsible for the behaviour problem. Furthermore, as predicted by Weiner's (1985, 1995) theory of motivation and emotion, mothers who prescribed relatively high responsibility to the child were significantly more likely to report negative emotions and aggressive/harsh reactions than mothers who ascribed low responsibility.

## **2.6 Attributions and Behavioural Analysis**

There can be little doubt that staff do play an important role in mediating rates of challenging behaviour (Carr, Taylor, & Robinson, 1991; Taylor & Carr, 1992; Hall & Oliver, 1992) and attempts to understand the influence has focused on applied behaviour analysis and in particular rule governed behaviour (Hastings & Remington 1994a, b).

Within the framework of behaviour analysis a number of studies have investigated how staff attribute causality to challenging behaviour.

Bromley and Emerson (1995) conducted a questionnaire with 70 staff, all of whom worked with either children or adults with learning disability and challenging behaviour. Participants were asked on their views to the reason why challenging behaviour occurred. The five most frequent responses were: internal psychological state or mood (41% of staff), past environment (such as institutionalisation - 26%), current environment (such as reaction to change -26%), self-stimulation (24%) and a form of communication or control of others (23%).

Oliver, Hall, Hales and Head (1996) developed a questionnaire to measure staff attributions about self-injurious behaviour: the Self-Injury Behavioural Understanding Questionnaires (SIBUQ). This is a questionnaire made up of several scenarios around clients with self-injury and comprises of three sub-scales that questions knowledge, potential action, and the causal explanation of self-injury. The questionnaire was given to ninety-six respondents from four different work groups with differing levels of experience of self-injury. These were a contact group (were participants were in close contact with someone with self –injury), hospital staff (were participants were in close contact with people with learning disabilities but not with self-injury), behavioural unit (participants working on a unit for children with challenging behaviour, that adopted a behavioural response) and the fourth group was a behaviourally trained group (were all the participants had a formal qualification in behavioural approaches to challenging behaviour). Comparison of the scores of the groups revealed that the contact group scored significantly lower scores than the other groups. Further correlations revealed a negative correlation between behavioural knowledge and the likelihood of choosing a reinforcing response and imputing internal emotional causal explanations.

Berryman, Evans and Kalbag (1994) used questionnaire vignettes of fictitious people with challenging behaviour. Eighty-three staff were asked to identify the causes of the challenging behaviour. The most frequent responses were: social reinforcement (average 90% of staff), emotions (74%), task/environment (53%), communication (35%), medical/pain (44%), and intrinsic reinforcement (37%).

Hastings, Remington and Hopper (1995) gave a sample of 148 health workers a series of vignettes that described fictitious people with learning disabilities who engaged in different types of challenging behaviour. The final attribution categories were achieved using factor analytic procedures. Staff attributions were described by a seven factor structure: client needs (e.g. “he wants something”, “he is trying to communicate something”), stimulation, personal and environmental factors (a mixed

factor), social factors, biological factors, environmental elicitation (e.g. noise, over crowding), and natural factors (i.e., “a natural thing to do”). The results showed two things. Firstly, experienced staff held beliefs that were more consistent with behavioural analytical theories than inexperienced staff. Secondly, experienced staff distinguished between behaviours in terms of their causes.

Hastings (1995) interviewed 19 staff working with adults with severe learning disabilities and challenging behaviour. Each participant was asked for reasons why challenging behaviour had occurred. Each interview was transcribed and a content analysis revealed that the most frequent causal explanations were: social reinforcement (79% of staff), communication/expression (68%), physical environment (such as crowded living conditions - 58%), and emotional states (58%).

Finally, Morgan and Hastings (1998) investigated the attributions of 60 teaching staff about the behaviour of fictitious children with challenging behaviour. The results showed that few staff described the correct function of the behaviour.

These studies have used a variety of methods to measure the explanations used by care staff about challenging behaviour: open ended questions requiring written responses (Berryman, Evans & Kalbag, 1994), direct interviews with care staff (Hastings 1995), questionnaire rating scale scales (Hastings, Remington, & Hopper, 1995) and multiple choice questions (Oliver et al., 1996). The term, ‘attribution’ is used in a variety of ways. For example, Oliver et al. (1996) examined ‘attribution’ in terms of discrepancy of knowledge of core principles of applied behaviour analysis, while Hastings (1995) and Hastings, Remington & Hopper (1995) examined the explanations of care staff in respect of the principles of rule-governed behaviour (Zettle & Hayes, 1982).

It is important to stress that the verbal statements of care staff regarding the behaviour of clients is an important and valid area of study for scientists and for behaviour analysts in particular. Remington (1991) believes that the analysis of verbal behaviour should be applied to caregivers and Hastings and Remington (1984a) argue that

Given the many efforts to instruct the behaviour of care staff, the concept of rule-governance should be of great relevance to understanding the ways they engage with their clients. (p.283)

Skinner (1974) stated the validity of internal events when he stated:

Radical behaviorism...does not insist upon truth by agreement [intersubjective verifiability] and can therefore consider events taking place in the private world within the skin. It does not call these events unobservable, and it does not dismiss them as subjective. It simply questions the objects observed and the reliability of the observations. (p.15)

It would appear attributional theory and the principles of rule-governance have the same focus on verbal behaviour but there would appear to be other reasons behaviour analysts should examine the casual attributions of care staff.

The major intervention of challenging behaviour will often involve some form of teaching that presents new rules (tacts) about how staff should behave in the future. Psychologists may find themselves competing with informal theories held by staff about the origin of challenging behaviour. Any approach that allows the objective measurement of informal theories held by staff is likely to facilitate better planning and more successful interventions.

There is some evidence that descriptions of behavioural technology are viewed as more acceptable when non-technical terms are used (Witt, Moe, Gutkin, & Andrews, 1984; Woolfolk & Woolfolk, 1979). Allen and Warzak, (2000) have used this as the basis for an argument for

“repackaging” the language of behavioural technology to be less discriminable from the language of contemporary culture. (p380)

Therefore, behavioural analysis of how staff attribute causality to the behaviour of a client, through their ordinary language, may be crucial in the development of teaching that is viewed as relevant and easily accessible by care staff.

Attribution theory, as it is defined within social psychology, may be able to offer an alternative paradigm to understand the causal explanations used by care staff about challenging behaviour. Several studies have attempted to incorporate this theoretical framework to analyse the way staff explain client behaviour (Cottle, Kuipers, Murphy & Oakes, 1995; Dagnan, et al., 1998; Sharrock, at al., 1990; Stanley & Standen, 2000). These will be reviewed in Chapter 4.

To be able to apply the concepts of attribution theory to the explanations of care staff, it is important that a tested methodology and validated measures are used. Therefore, the range of relevant measures will now be reviewed.

## **2.7 Measuring Attributions**

Early experiments that attempted to measure attributions offered participants a choice from a bipolar dimension (Barnes et al., 1979, Piliavin et al., 1969, Meyer & Mulherin, 1980, Weiner (1980). These were between attributions of locus

(internal/external), stability (stable/unstable) and control (control/uncontrol). The Attributional Style Questionnaire expanded this format to incorporate a seven-point Likert scale to measure three attributional dimensions (Peterson, Semmel, von Baeyer, Abramson, Metalsky & Seligman, 1982).

The Attributional Style Questionnaire (A.S.Q) was developed by Peterson et al. (1982) to show that people who tended to habitually explain bad events in their lives with internal, stable and global attributions were more likely to experience the symptoms of depression compared to other those people who used external, unstable and specific explanations. The A.S.Q presents participants with hypothetical good and bad events involving themselves. This was part of the central prediction of the attributional reformulation of the learned helplessness model (Abramson, et al., 1978).

The A.S.Q is a self-report instrument containing 12 hypothetical situations, half about negative events and the other half about positive events. Participants are asked to imagine the event happening to them and then to write down the major cause for the event and then to rate on a 7-point scale the degree to which the cause is internal or external, stable or unstable and global or specific. With each dimension being coded separately 1=completely external/completely unstable/completely specific; 7= completely internal/completely stable/completely global.

A second method of assessing attributions is the Content Analysis of Verbatim Explanations (C.A.V.E) devised by Peterson and Seligman (1984) but later developed into a formal scoring manual by Peterson, Schulman, Castellon and Seligman (1991). Unlike the A.S.Q, the events used in the C.A.V.E technique are usually occurrences from the participant's life. Therefore, it is possible to examine how participants use explanations in their ordinary experience. The C.A.V.E technique involves two independent steps; the first is the extraction of verbatim event

and causal explanation couplets and the second involves the rating of the causal statements on the internal, stability and global dimensions of explanatory style. Both of these steps are completed by trained researchers who are naive to the identity of the project as well as to the outcome of the measures.

Although explanatory style is regarded as a cognitive trait, it is not expected that people will maintain 100% consistency in their style at all times. The originators of the technique suggested that at least five negative events with explanations should be analysed in order for the assessment to be valid. Peterson and Seligman (1984) counselled that the term 'style' should be reserved for individuals whose causal explanations show low variability across situations and time.

As with the A.S.Q, ratings of explanations are assigned to each of the three dimensions - internal versus external, stable versus unstable, global versus specific - using a 7 -point scale. Ratings range from 1 - 7 for each dimension with a 7 representing the most internal, stable and global explanations and a 1 representing the most external, unstable, and specific explanations. If there is insufficient information to rate the attribution the rater is instructed to assign a 4 so as not to skew the ratings.

A third way of measuring attributions was also designed to measure verbatim accounts of explanations in normal conversation by a research team in Leeds (Stratton, Heard, Hanks, Munton, Brewin & Davidson, 1986). The Leeds Attributional Coding System (L.A.C.S) was originally designed to measure the accounts given by families during family therapy.



Stratton et al. (1986) attempted to construct a coding system that did not make the same assumptions as the C.A.V.E (Peterson & Seligman, 1984) which had its theoretical origins in learned helplessness theory.

The L.A.C.S attempts to resolve a problem that the authors identified in the A.S.Q by separating the internal/external dimension from the personal universal dimension. The A.S.Q uses internal/external dimension in two ways. The first is in the original Heidian (1958) way of environment versus personal disposition but it also has a second dimension of whether a relevant other would have equally caused the outcome or whether there is some unique personal factor that led to the negative event. The rationale for this is the A.S.Q's theoretical basis in the concept of learned helplessness model of depression and its focus on explaining negative events in a person's life. The L.A.C.S was designed to reach a broader group, families who may not necessarily be depressed but who are offering explanations about other family members. The A.S.Q also has no measure of whether or not the outcome is controllable. Weiner (1979) has expressed the need to incorporate this attributional dimension in any attributional analysis.

The A.S.Q is a questionnaire about self-statements. The L.A.C.S is a measure of self-statements and attributions about others. This is part of the actor/observer split first identified by Jones and Nisbett (1972).

An adapted version of the L.A.C.S was successfully used by Brewin, MacCarthy, Duda and Vaughn (1991) to measure the attributions of relatives of patients with schizophrenia. In addition to the binary coding of each dimension, a third code was available for use whenever information was ambiguous or insufficient or when the extracts mentioned causal factors at opposite ends of the same dimensions, e.g. they identified a combination of internal and external events.

Secondly, ratings were made exclusively from the perspective of the patient rather than the relative. Finally, Brewin, et al. (1991) found that there was good inter-rater reliability for all the dimensions except for global-specific and therefore decided to exclude it. Brewin et al.'s (1991) version of the L.A.C.S would appear to be a useful measure that could be used to investigate how staff explain challenging behaviour. Further discussion of reliability will be covered later (section 4.1).

## **2.8 Conclusion**

A basic principle of applied behavioural analysis is that many challenging behaviours are maintained by environmental contingencies however, self stimulation and any behaviour with an organic basis e.g. lip biting in Lesch-Nyhan Syndrome, might be regarded as being maintained by internal contingencies. A variety of studies have shown that staff behaviour is shaped by the consequences of challenging behaviour (Carr, Taylor & Robinson, 1991; Taylor & Carr, 1992; Hall & Oliver, 1992) yet no one has examined whether staff causal attributions are shaped by client behaviour.

Attributional theorists (Ross, 1977) propose that a fundamental bias may exist in explanations about the behaviour of other people. It is therefore possible, that care staff may possess an attributional bias in their explanations about challenging behaviour. If any bias did exist (e.g. if staff explained client behaviour as originating within the client and intended by the client, it would have implications for training and supervision).

Hastings and Remington (1994a) have suggested that although staff possess a fundamental understanding of the principles of applied behavioural analysis, they do not incorporate these principles into their informal interventions because they are

motivated by meeting the immediate needs of a client rather than implementing functional equivalent interventions.

Another possible explanation would be that staff fail to implement the principles of applied behavioural analysis because they possess a bias in their explanations and assume the cause of the behaviour to be independent of the environment.

Hastings (1995) conducted a semi-structured interview to examine how a group of staff explained challenging behaviour. Staff were asked about the general concept of challenging behaviour but no measures from the reviewed attributional literature were taken.

The first study will replicate Hastings (1995) use of semi-structured interview with nursing staff in an attempt to investigate whether staff possess an attributional bias about challenging behaviour. An exploratory study will examine the verbatim accounts of care staff working with challenging behaviour, to investigate whether the casual attributions correspond with the principles of applied behavioural analysis. Three groups of nurses will be interviewed about the most recently witnessed challenging behaviour incident. The data will be analysed using Brewin et al.'s (1991) version of the L.A.C.S.

## **CHAPTER 3**

### **EXPERIMENT 1: AN EXPLORATORY STUDY INTO THE CAUSAL ATTRIBUTIONS OF NURSING STAFF WORKING WITH CLIENTS WITH AGGRESSIVE AND CHALLENGING BEHAVIOUR**

## Chapter Summary

The first study is an exploratory investigation into the explanations about challenging behaviour by nurses. The literature has shown that interventions to help people with challenging behaviour should be based upon a functional understanding of the contingencies that have reinforced the behaviours in the past. Yet the application of behavioural analysis into interventions has not always proven successful. Even appropriate staff training in these principles has been found to be disappointing (see chapter 1 for review). Hastings and Remington (1994a, b) have proposed that functional analysis needs to investigate contingencies that may shape and maintain staff behaviour and emphasise the importance of investigating two sets of contingencies. The first are environmental contingencies and physical consequences of working with challenging behaviour such as the physical aggression, the noise caused by shouting, which may act as aversive stimuli or punishment to staff behaviour. The second set of contingencies are best understood within a framework of rule-governed behaviour and how staff talk to each other and explain challenging behaviour. Other authors (Dagnan et al., 1998; Stanley & Standen, 2000) have proposed that behavioural analysis needs to be expanded to include a cognitive perspective and in particular the principles of attribution theory, to fully understand how staff respond to a client with challenging behaviour.

The first study is an attempt to apply a content analysis of how care staff explain challenging behaviour and in particular aggressive behaviour, using the principles of attribution theory. A semi-structured interview with 48 nurses working on three wards, in three separate hospitals, with clients with aggressive and other challenging behaviours, was undertaken. Each interview was tape-recorded, transcribed and coded using Brewin et al's. (1991) adapted version of the Leeds Attributional Coding System (Stratton et al., 1986).

The data is presented visually and would suggest that there is a variability in the use of some attributional dimensions depending on training and client group but there would appear to be a general trend among staff to explain challenging behaviour in a particular way. This would support the idea that staff may operate some form of 'explanatory style' - an idea that is implicit in a number of recent studies into staff explanations (Dagnan et al., 1998; Sharrock et al., 1990; Stanley & Standen, 2000).

### **3.1 Method**

#### ***3.1.1 Participants***

Forty-eight staff working in three wards from three local hospitals took part in this study. This constitutes all the hospital services for people who may present with challenging behaviour in one rural county. All the wards were staffed by both trained and untrained staff and served people of whom at least half displayed high levels of challenging behaviour.

The first group, Hospital 1, were from a long stay learning disability hospital that catered for the needs of clients with severe learning disabilities.

The second group, Hospital 2, were all from a different learning disability hospital but within the same county. The ward had been developed to cater for young men with moderate learning disabilities who displayed aggressive behaviour.

The third group, Hospital 3, was a long term ward for people who presented with aggressive behaviour within a psychiatric hospital. None of the clients had a

learning disability but all had been referred from other parts of the hospital because of their behaviour difficulties.

There was an almost even distribution of males to females amongst the participants (23 males and 25 females). This is unusual for services for people with learning disabilities where it has been recognised in previous studies (Allen, Pahl & Quine, 1990) that a higher proportion of female staff to male staff usually exist. This may be explained by the nature of the behaviour difficulties in Hospitals 1 and 3 that required a higher male to female staff ratio. There was a range of qualifications and experience among all the staff.

Hospital 1    n=11

Hospital 2    n=23

Hospital 3    n=14

Total        n=48

### *3.1.2 The Service Setting*

The three wards were similar in their design. Each had a large day room with separate sleeping quarters that were in turn separated into male and female accommodation. Hospital 3 offered partitioned bedrooms within a large dormitory, while Hospital 1 and 2 had old-style dormitory bedrooms. Hospitals 2 and 3 were equipped with seclusion facilities. Hospitals 1 and 2 were separate villas in the

grounds of the main hospital, while the ward in Hospital 3 was attached to the main building.

### ***3.1.3 Procedure***

Permission for the study was given by management and verbal consent for participation in the study was obtained from each staff member. Anonymity and confidentiality were maintained at all times and this was stressed to the participants. Participants were also verbally debriefed individually, a few weeks after completing the semi-structured interview.

Interviews took place on the ward either in the office or in a quiet room. Three interviewers were used, one behaviour nurse therapist, employed by the psychology department, one qualified clinical psychologist and a psychology assistant. All were supervised by the author and followed the same format. Each received instruction that involved role-play and feedback from the author. The interviews lasted over an hour and were recorded onto audio tape following which each transcript was typed for analysis.

### ***3.1.4 The Development of the Interview***

Because the interview was concerned with how the staff explain client behaviour, it was important that each participant was relaxed and could clearly remember the most recent example of challenging behaviour. To help in this process, each participant was asked on their views about the range of problem behaviours on the ward and the difficulties in meeting the needs of these clients. They were then required to recount their last working day. This was intended to act as a reference



point in remembering. Given that most of the behaviours are high frequency, many of the behaviours had occurred in the last working day.

To ensure that staff would have an opportunity to express what they thought caused the challenging behaviour, the interview focused on a specific incident in a chronological order of events. First, each staff member was asked to state, in their own words, the behaviour of the most challenging client on the ward. These descriptions were then read back by the interviewer and each participant was given an opportunity to add or change anything. A question was then asked about the last time the clients had presented with challenging behaviour. Staff were asked to remember how they responded and how they thought and felt during the incident. They were also asked to remember what was happening on the ward at the time.

To understand beliefs about each client's intentions, each participant was asked to imagine what the client was thinking and feeling during their challenging behaviour.

### *3.1.5 Data Reduction*

All interviews were tape recorded, fully transcribed and subjected to a content analysis, following Brewin et al's., (1991) attributional codings defined by the Leeds Attributional Coding System (Stratton, et al., 1986).

The attributions used in the analysis were; whether the origin of the cause was within the client or not (internal-external); whether the cause was permanent (stable-unstable); whether the cause was unique to the client (personal-universal) and whether the client was in control and intended to do what they did (control-

uncontrolled). Definitions for each of the attributional dimensions based on the L.A.C.S (Stratton et al., 1986) can be defined as follows:

#### Stable/Unstable

The function of this dimension is to indicate whether the cause that has been proposed in a specific instance would be likely to be operative when a similar issue arises in the future. Events must have a high probability in order to be called stable. The operational definition by L.A.C.S is

If the cause is believed... to be more likely than not to apply in the topic of the outcome in the future, then stable; if it would only apply about half the time or less then unstable (Stratton et al., 1986 p. 35).

#### Internal/External

If the cause is believed to originate in the person being coded, then it should be coded as internal. If it originates outside the person, whether a characteristic or behaviour of another person or circumstance, then it should be coded as external.

#### Personal/Universal

If anything in the attribution (cause, link or outcome) is believed by the speaker to indicate something particular about the person, then it should be coded idiosyncratic or personal. If it would apply to any normal member of the appropriate reference group (as defined by the speaker) then it should be coded as universal.

## Controllable/Uncontrollable

The primary concern with this dimension lies in deciding how much influence the person had over the outcome. Controllability can usually be defined from the perspective of the outcome.

If the speaker believes that the person being coded could normally manage to significantly influence the outcome in the absence of exceptional effort or circumstances, then it should be coded as controllable. If the causal sequence is believed to be inexorable or the outcome inevitable in normal circumstances, then it should be coded as uncontrollable.

The L.A.C.S is a binary coding system that allocates a 0 or a 1 for opposite ends of an attributional dimension. Brewin et al. (1991) developed this to include a third category for use whenever the information was either ambiguous or insufficient, or when extracts mentioned causal factors at opposite ends of the same dimensions, e.g. they identified a combination of internal and external causes. In addition, ratings were made from the perspective of the client rather than the perspective of the carer (as originally used in family therapy by the Leeds team). For example, is the cause internal or external to the client, controllable or uncontrollable by the client.

### 3.1.6 Data Analysis

To develop competence in the use of the coding system and interview technique, a full day work-shop was organised by the author. The training involved information on the history and theory of causal attributions and provided several opportunities to code sample explanations. By the end of the day inter-rater reliability scores exceeded 80% in all cases.

The author coded all the transcripts. To test for rater reliability, 25 percent of the transcripts were coded by two independent coders in the same way as Hastings (1995) had tested for inter-rater reliability. The Percentage Agreement Index (PAI) was used to calculate the agreement between three coders. This index calculates the percentage of times that two observers agree (Suen & Ary, 1989). The PAI is calculated using the following formula:

$$p\% = \frac{\text{No. of agreements}}{\text{No. of agreements} + \text{No. of disagreements}} \times 100$$

Values of p% range from 0% to 100% (Suen & Ary 1989).

According to Suen and Ary (1989), the PAI is the most widely used of the inter-observer agreement indices. The PAI was applied to each of the two raters with the main coder. The results for each attributional dimension can be seen in Table 3. Agreement ranged from 80% to 95%, which is considered acceptable inter-rater reliability.

Although the raters were not blind to the study they were given sections of transcripts that were made anonymous and sampled from the three groups. This process was co-ordinated by the author and the departmental secretary.

Table 3. Percentage of agreement between main coder and two independent raters.

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**Percentage of agreement between**

<u>Coding categories</u>	<u>Main Coder/First rater</u>	<u>Main Coder/Second rater</u>
Stable/unstable	95%	91%
Internal/external	88%	94%
Control/uncontrol	93%	89%
Personal/universal	82%	84%
Categories of behaviours	98%	95%
<u>Staff responses</u>	<u>98%</u>	<u>98%</u>

The focus for much of the analysis was the answer given to the question, "What do you think caused the behaviour?" But all of the interview was analysed because attributional information was often volunteered when not requested and a number of staff failed to offer any casual attribution when requested.

### 3.2 Results

Individual participant characteristics can be seen in appendix A (Tables A.1, A.2 and A.3) showing the distribution of gender, qualifications and experience. The majority of staff in each of the hospitals had over three years experience of working with people with challenging behaviour.

The topography of challenging behaviour described by the staff as ‘the most demanding’ can be seen in Table 3.1, together with examples for each category (all names have been altered to maintain anonymity). These categories are derived from previous research (Hastings, 1995). There is a high percentage of aggressive behaviour recorded by all the staff. This may reflect the nature of the population of clients who live within an institution. Two of the wards received referrals from the rest of the hospital for clients who presented with aggression. Many of the clients also presented with other challenging behaviours.

Table 3.2 shows the differences between the three hospitals in what staff described as the most challenging behaviour. These figures reflect the individual staff view of the most challenging out of the available behaviours in their work environment.

Table 3.1: Percentage of staff definitions of most difficult challenging behaviour

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**Staff choice of most difficult behaviours** **N=48**

<b><u>Topics/Categories of Behaviours</u></b>	<b><u>% of Staff</u></b>	<b><u>Example</u></b>
1. Aggression	52	He'll just run at you, you see that look. You can't predict it, you've got to keep out of his way when he's like that."
2. Self-injury	17	"See that wall, he did that with his head."
3. Destructive behaviours	4	"He' got no jumpers to speak of anymore."
4. Other 'inappropriate' actions	27	"He'll myther you all day when he's in one of those moods."

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Table 3.2: Choices of most challenging behaviour from three hospitals. (Percentages are in parenthesis).

<u>Categories of Behaviours</u>	<u>Hospitals</u>			<u>N=48</u>
	<u>1.</u>	<u>2.</u>	<u>3.</u>	
Aggression	7(63%)	10(43.5%)	8 (57.2%)	
Self-injury	1(9.5%)	7(30.5%)	0	
Destructive behaviours	0	1(4.3%)	1(7.1%)	
<u>Other 'inappropriate' actions</u>	<u>3(27.5%)</u>	<u>5(21.7%)</u>	<u>5(35.7%)</u>	

To show the type of attributions used by the staff teams a simple comparison is made of the possible three scores that could be used for each attribution (taken from Brewin et al., 1991). For ease of comparison each attributional dimension has been presented in its table.

The percentage of staff that used the attributional dimensions of internal and external can be seen in Table 3.3. When staff offered no response to the question "What caused the behaviour?" or said they didn't know, the other part of the interview was used to try and find a causal statement but in some cases this was not always successful.

Table 3.3 Percentage of staff use of attributional dimension of locus with example

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Causal attribution	% of Staff	Example
N=48		
<u>Internal - External</u>		
Internal	55.2	His personality
Mid-point	19.8	If he can't get his own way and if he can't get cigs
External	16.7	Too much pressure or too much stress put on him
<u>No response</u>	8.3	<u>Couldn't really tell you that.</u>

The percentage of staff that used the attributions of stability in their explanations can be seen in Table 3.4. It was notable that to be able to record a non-stable explanation required the absence of any adjective that suggested permanence, such as “ always,” or “all the time,” yet the staff tended to have a habit of including such adjectives and this may be one reason why the stable scores are so high.

Table 3.4 Percentage of staff use of attributional dimension of stability with example

Causal attribution	% of Staff	Example
<b>N=48</b>		
<u>Stable -Unstable</u>		
Stable	74	His persistent wanting it all the time
Mid point	12.4	If he can't get what he wants, if he loses a bead or he wants a clean jumper if he's lost his watch and can't find it.
Unstable	6.3	It usually happens when he's had a lot of input from, the Day Centre at ....., if his people are seeing him then to come back where we have more than Jeff to see to sometimes he just can't accept it.
No answer	7.3	I don't know what caused it he's had this addiction all the time .

The percentage of staff that used the attributions of personal and universal can be seen in Table 3.5 and the percentage of staff that used the attributions of control can be seen in Table 3.6.

Table 3.5. Percentage of staff use of attributional dimension of personal/universal with example

Causal attribution	% of Staff	Example
<b>N=48</b>		
<u>Personal/Universal</u>		
Universal	10.4	He doesn't like this ward, gets pressure off staff and clients. Doesn't like being told what to do.
Mid-point	12.5	Mental health, paranoid against fellow client and frustration due to his lack of mobility.
Personal	71.9	Worked with him six years and come to the conclusion that something inside, causes it.
<u>No answer</u>	5.2	

Table 3.6 Percentage of staff use of attributional dimension of control with example

Causal attribution	% of Staff	Example
<b>N=48</b>		
<u>Controllable and Uncontrollable</u>		
Uncontrollable	14.6	Think its out of Billy's control, becomes fixated on what he's obsessed with.
Midpoint	13.5	William's understanding could be a problem because if he's not getting attention then he knows head butting will get the attention.
Controllable	68.8	..he's pleased because he knows he's got your attention. I think that he's smarter than he looks and if he thinks he can get one over you he will try and do it all the time.
No answer	3.1	

A non-parametric correlation test of the codings revealed strong correlations between a number of the attributional dimensions. As one would expect internal and stable were very strongly correlated ( $r=0.6328$   $p<0.0001$ ). Smaller correlations were found among control and stable ( $r=0.2046$   $p<0.05$ ) and between personal and stable ( $r=0.2235$   $p<0.05$ ).

To help appreciate the differences between staff in the different hospitals and the possible influence of training on the choice of attributions, each attributional dimension has been broken down to show the percentage of staff from each of the institutions for each choice and the differences in the choice of qualified and unqualified staff.

Table 3.7 compares how staff from the three hospitals attributed internal/external causes to challenging behaviour and Table 3.8 compares the difference between qualified and unqualified staff on the same dimension.

Table 3.7 Break down of staff attributions for locus by each hospital.

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Attribution	Hospital		
	1 (N=11)	2 (N=23)	3 (N=14)
Internal	7(63.6%)	12(51.2%)	7(50%)
mid point	1(9.1%)	5(30.4%)	3(28.6%)
External	2(18.2%)	4(18.4%)	3(21.4%)
Non	1(9.1%)	2(8.7%)	1(7.1%)



Table 3.8 Comparison between qualifications for attribution of internal/external

<u>Attribution</u>	<u>Staff Qualifications</u>	
	<u>Trained (N=18)</u>	<u>Untrained (N=30)</u>
Internal	9 (50%)	17 (56.6%)
mid	3 (16.8%)	6 (20%)
External	6 (33.2%)	3 (10%)
non	0	4 (13.4%)

Table 3.9 compares how staff from the three hospitals attributed stable/unstable causes to the same behaviour and Table 3.10 compares the difference between qualified and unqualified staff on the same dimension.

Table 3.11 compares how staff from the three hospitals attributed personal/universal causes to the same behaviour and Table 3.12 compares the difference between qualified and unqualified staff on the same dimension.

Finally, Table 3.13 compares how staff from the three hospitals attributed controllable/uncontrollable causes to the same behaviour and Table 3.14 compares the difference between qualified and unqualified staff on the same dimension.

Table 3.9 Break down of staff attributions for stable/unstable by each hospital.

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<u>Attribution</u>	<u>Hospital</u>		
	<u>1 (N=11)</u>	<u>2 (N=23)</u>	<u>3 (N=14)</u>
Stable	7(63.6%)	14(61%)	13 (93%)
mid-point	1(9%)	4 (17.4%)	1 (7%)
Unstable	1(9%)	3 (13%)	0
<u>Non</u>	<u>2(18.2%)</u>	<u>2(8.7%)</u>	<u>0</u>

Table 3.10 Comparison between qualifications for attribution of stable/unstable.

<u>Attribution</u>	<u>Staff Qualifications</u>	
	<u>Trained (N=18)</u>	<u>Untrained (N=30)</u>
Stable	14 (77.7%)	20 (66.6%)
mid	1 (5.5%)	5 (16.8%)
Unstable	2 (11.3%)	2 (6.6%)
<u>non</u>	<u>1 (5.5 %)</u>	<u>3 (10%)</u>

Table 3.11 Break Down of staff attributions for personal/universal by each hospital

<u>Attribution</u>	<u>Hospital</u>		
	<u>1 (N=11)</u>	<u>2 (N=23)</u>	<u>3 (N=14)</u>
Personal	10(95%)	15 (65%)	9 (64%)
mid point	0	5 (21.7%)	2 (22%)
Universal	1(5%)	2 (8.6%)	2 (14%)
Non	0	1 (4.3%)	1 (7.1%)

Table 3.12 Comparison between qualifications for attribution of personal/universal

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<b>Attribution</b>	<b>Staff Qualifications</b>	
	<b>Trained</b>	<b>Untrained</b>
Personal	12 (66.6%)	22 (73.4%)
mid	3 (16.7%)	4 (13.4%)
Universal	3 (16.7%)	2 (6.6%)
Non	0 (0%)	2 (6.6%)

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Table 3.13 Distribution of attribution of control/uncontrolled among three hospitals.

<u>Attribution</u>	<u>Hospitals</u>		
	<u>1 (N=11)</u>	<u>2 (N=23)</u>	<u>3 (N=14)</u>
Control	8(72.8%)	19 (82.6%)	6 (42%)
Mid-point	2(18.2%)	2 (8.7%)	1 (16%)
Uncontrolled	1(9%)	1 (4.4%)	6 (42%)
Non	0	1 (4.4%)	1 (7.1%)

Table 3.14 Comparison between qualifications for attribution of control/uncontrolled

<u>Attribution</u>	<u>Staff Qualifications</u>	
	<u>Trained (N=18)</u>	<u>Untrained (N=30)</u>
Control	10 (55.6%)	23 (76.6%)
mid	3 (16.7%)	2 (6.6%)
Uncontrolled	5 (27.7%)	3 (10 %)
Non	0	2 (6.6 %)

Table 3.15 shows the percentage of staff responses to challenging behaviour. The aim of this coding was to produce a number of simple headings that could be easily used to code whether the staff team used any behavioural programmes in their interventions.

Table 3. 15 - Staff responses to client behaviour

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<b>Topics/Categories</b>	<b>% of Staff</b>	<b>Example</b>
Remove the client	8.1	Remove him - talk to him if need be.
Non specific response	73.0	He's immediately pulled up straight away we'll not condone that behaviour.
Follow therapeutic programme	16.2	I was told to take his arm away and bring my fingers across his face (sign No) and say no at the same time. I've never tried to restrain him and I don't think I would like to.
Behavioural programme	0	
Give medication	2.7	probably ask if he wants some extra medication

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### **3.3 Discussion**

The data would suggest that the participants demonstrated a bias in each of the four attributions, as coded by the L.A.C.S, when explaining challenging behaviour. There was an overwhelming preference for attributions that were internal, stable, controllable and personal. Such a bias would contradict current scientific views about the origins, functions and amelioration of challenging behaviour (see Jones & Eayrs, 1993, for a review).

This study raises a number of implications about how staff regard the causes of challenging behaviour. Firstly, the majority of the staff did not view the causal origin of challenging behaviour as environmental (over 50% of all the staff in each hospital used exclusive internal attributions). Secondly, the causes are largely viewed as within the control of the client who is being challenging (the learning disability hospitals used exclusive control attributions in over 70% of all explanations). Thirdly, many staff viewed the cause to be idiosyncratic to the individual (high personal, low universal attributions). Finally, the causes of the behaviour were regarded as permanent (high stable scores) and therefore unlikely to change.

If this were representative of staff thinking during the working day it would suggest that over half of the challenging behaviours are regarded as being independent of environmental influences. This would have considerable implications for the choice of intervention. It may lead to a failure to address environmental variables and increase the chance of ineffective intervention.

Differences were found among the three hospitals in the use of certain attributional dimensions. Hospital 1 had 95% of its explanations coded as personal

attributions. Hospital 3, the psychiatric hospital, had 42% of attributions coded as uncontrollable and 93% of attributions coded as stable.

The staff team in Hospital 1 tended to discuss the same client who presented with very severe behavioural problems compared to the rest of the clients. This may explain why the explanations of this client were coded as being idiosyncratic and therefore given a personal coding.

There were far fewer staff from Hospital 3, compared to the other two hospitals, who gave explanations that were coded as controllable. Many of the staff who used uncontrollable attributions were qualified (see Table 3.14). The training they may have received on mental illness may have influenced their decision to regard the clients as having little control over their own behaviour. This raises interesting comparisons with the staff from the learning disability hospitals who tended to use higher percentage of attributions that suggested control.

All the staff tended to use stable explanations but 93% of the staff from Hospital 3 used exclusive stable attributions. There was no evidence of any explanations for this staff team that did not reference some sense of permanence (see Table 3.9). It is possible that this may reflect the amount of time that clients have lived on the ward. Most had lived in the hospital for a number of years before being referred to that particular ward because of their behaviour. It is also possible that such extreme attributions reflect the culture of the service and that staff may share the type of explanations they use to describe client behaviour.

The strongest bias from all the attributions is undoubtedly in the domain of stability. This suggests that most of the staff explain the causes of the behaviour as permanent. This may also be the basis for the high stability scores in both of the

learning disability hospitals. The staff may assume the behaviour is the product of the disability and as chronic as the disability itself. This would support the findings of Stanley and Standen (2000) that staff are more likely to attribute challenging behaviour to stable causes with a client described as highly dependent.

There were a higher percentage of trained staff who reference external attributions in their explanations. This again may reflect the consequence of receiving some formal training in applied behavioural analysis and an ability to see the contribution of environmental influences. This would confirm previous studies that have shown the influence of training on the explanations of care staff (Hastings, Remington & Hopper., 1995; Oliver et al., 1996).

Hastings (1995) utilised seven categories, based on the current functional analysis literature, to record the perceptions of staff for the occurrence of challenging behaviour. These were social reinforcement, communication/expression, the physical environment, emotional, medical biological/sexual, an adapted response to the environment and no apparent reason. The additional contribution that attributional codings provide is that they allow an examination of an explanation from several perspectives. Therefore, if a behaviour is explained as being caused by attention seeking by two members of staff, under the above categories both would be allotted to the social reinforcement explanation. Yet if one member of staff had said "He's an attention seeker, he'll try any sort of deviant behaviour to get attention from the staff," it would imply an internal attribution that originates in the client. It also suggests that this is not a one-off occurrence and it is purposeful behaviour. Therefore it might be coded as internal, stable and controllable. It would also suggest that the cause of the behaviours is something unique about the individual and common among the peer group and consequently be coded as personal.

On the other hand, if the other staff member gave the following explanation, “He behaves like this when he has been ignored for a period of time, it’s his only way of accessing attention,” again it would be categorised as social reinforcement in a functional analysis but an attributional analysis allows a way of recording the qualitative difference. By using the L.A.C.S it would code the explanation as external (the origin of the behaviour starts with being ignored), the client has little control over the cause of the behaviour (so it would be coded as uncontrollable). It also suggests that the behaviour would decrease by altering a variable (therefore it is unstable). Finally, it would suggest that other members of the client’s peer group would behave like this therefore it would be coded as universal.

Hastings (1995) asked 19 daytime care staff what behaviours they found to be challenging. 74% of his population identified aggression, 58% identified self-injury, 47% identified destructive behaviours and 26% identified other ‘inappropriate’ actions, such as stripping, smearing, shouting and sexual behaviours. The design of Hastings’s study (1995) allowed staff to mention more than one behaviour as challenging, whereas the present study asked staff to state one behaviour that they considered to be the most challenging.

It is not surprising that aggression is chosen by over half the present sample given the personal implications for those who have to respond to it. There is a much lower percentage of staff who rate self-injury, compared to the Hastings (1995) sample. This may be for two reasons. First, only one of the wards delivered a service for people with very severe learning disabilities (Hospital 1). Studies have shown that this is a population that has a much higher incidence of severe self-injury (Oliver, Murphy & Corbett, 1987). Secondly, self-injury is less intrusive in the lives of the care staff and perhaps less likely to be judged as the most challenging behaviour on the ward.

Only one person mentioned destructive behaviour as an example of challenging behaviour. This may reflect the hospital environment where there are fewer things to break or an increased amount of more durable furniture. It may also reflect that it is less of a personal challenge for the staff team.

The 'catchall' term "other 'inappropriate' actions" is an interesting category. Several examples of the present study were coded under this category but could have easily been coded as 'severe attention seeking' or 'annoying staff' behaviour. It raises the issue that the subjective experience of staff may be a crucial variable in understanding what staff find challenging and that the behaviours chosen by the present sample may have been chosen because of the personal demand experienced by the individual staff member. This of course is speculative and would require empirical verification.

Perhaps one of the most optimistic findings from the data is that in all hospitals, there are some staff who are able to make attributions that do not focus on permanent, personal causes for challenging behaviour. Yet the general trend of explanations used within the present sample do not support the findings by Hastings (1995), that most staff are able to explain challenging behaviour in a way that is "...congruent with contemporary models of causation." (p. 304).

If the explanations were logically consistent with the literature, challenging behaviour would have been considered as an operant that functions to obtain reinforcement (Skinner, 1953). Such an explanation would attribute the cause of the behaviour to be external because of the strong environmental influence on the maintenance of the behaviour; unstable because challenging behaviour can be reduced by manipulating the environmental contingencies; and uncontrollable because the frequency of the behaviour is determined by environmental contingencies. Although a number of challenging behaviours may have an internal

origin, such as self-stimulation (Jones Walsh & Sturmery, 1995), the majority of behaviours discussed in the present study were related to aggression.

If staff are failing to reference environmental contingencies in their causal analysis, problem-solving and subsequent intervention plans may be flawed. Consequently the therapy offered to clients could be ineffective and may even contribute to the maintenance of challenging behaviour. The data would suggest that the staff are not able to give an accurate account of behavioural principles during a semi-structured interview. (Yet it must be stressed that this remains an assumption because there is no data available regarding the function of the behaviour that staff are explaining).

There was no mention of formal behavioural programmes implemented by any of the staff. The overwhelming response was categorised as non-specific (75%). Hastings (1995) had found that 74% of his sample responded to self-injury with stop and/or control and 74% responded to aggression under the category 'intervene.' Hastings (1995) similarly found that interventions did not follow formal behavioural therapies such as functional communication training or manipulation of attention contingencies.

Hastings and Remington (1994a) suggest that the central problem facing care staff is not a lack of understanding of behavioural principles but a failure to construct a functionally equivalent intervention. They propose that staff focus on the immediate needs of a client rather than the function of the behaviour. For example, a staff member could correctly identify the reason for self-injury as being a means to avoid interaction with people, yet rather than attempting to teach the client a functional equivalent sign to use to replace the self-injury, the staff member removes the client because they believe it will lower the immediate distress of the client (and hence meet a need but inadvertently reinforce the behaviour.)

Hastings and Remington (1994a, b) base their theory on studies that have used staff explanations based on written scenarios (Hastings, Remington & Hopper, 1995). One obvious reason for the discrepancy in the findings between the present study and previous findings is that staff may respond differently when analysing behaviour that they have no direct experience of. One major difference between the analysis of imaginary scenarios compared to analysing known clients is the lack of aversive consequences that accompanies caring for real clients with real challenging behaviour. Care staff may be able to give accurate accounts of the reasons for imaginary challenging behaviour but may not necessarily incorporate this knowledge into their work practice.

Hastings and Remington (1994a) and Hastings (1995) have identified the importance of analysing staff explanations to create a more detailed understanding about why challenging behaviour is resistant to change. It still remains unclear how best to do this but attributional analysis may offer an important contribution.

### *3.3.1 Conclusion*

The present study has attempted to explore how three groups of staff explain the challenging behaviour of clients within their care. The data is qualitative and therefore any conclusions can only be made within the context of the small group of clients that it relates to. The data may reflect the lack of behavioural interventions that are used within the wards and the fact that the staff may have little opportunity to practice whatever skills they may possess in applied behavioural analysis. Yet the type of explanations used by care staff requires further investigation to ensure that no bias or distortion exists that may contribute to poor therapeutic outcomes.

Therefore, the next study will investigate whether staff possess a 'style' in how they explain challenging behaviour. There are several sources within the literature to support such an investigation. Attribution theory has a body of work that has investigated the concept that people may possess a style in how they make explanations (see Buchanan & Seligman, 1995 for review). Ross (1977) proposed that people may possess a bias in how they explain the behaviour of others. A number of recent studies to investigate how staff explain challenging behaviour have utilised an attributional style questionnaire as a dependent measure (Cottle, Kuipers, Murphy and Oakes, 1995; Dagnan et al, 1998; Sharrock et al., 1990; Stanley and Standen, 2000). The work by Hastings (1995) has suggested that staff may respond to the topography rather than the function of behaviour when constructing an explanation. This would mean that staff are more likely to explain a behaviour such as aggression, in a particular way, independent of the function of behaviour - which could be regarded as constituting a type of style of explaining aggression. Therefore there is a compelling argument to investigate this further. If it is found to be true it would have considerable implications for the quality of the therapeutic response offered by staff. It would also have implications for the type of training and support offered to care staff to ameliorate any counter therapeutic, explanatory styles.



## **CHAPTER 4**

### **EXPERIMENTS 2 AND 3: DO STAFF USE AN ATTRIBUTIONAL STYLE WHEN EXPLAINING AGGRESSION?**

## **4.1 Introduction**

The participants in the first study reported on the behaviour of one client. The client had been chosen as presenting the most challenging behaviour at the time of interview. Many staff appeared to share a bias in the causal attributions used to explain client behaviour. Yet this can not be said to demonstrate a 'style' of explaining challenging behaviour among care staff.

The concept of explanatory style has been described as a personality feature by Peterson, et al. (1982). The focus of this approach is the analysis of personal experience and, in particular, whether the attributional dimensions about success and failure indicate self-control.

In the original study to develop an Attributional Style Questionnaire (Peterson et al., 1982) participants were given 12 scenarios evenly divided into good and bad events. Each participant was required to write down one cause for each event and to rate the cause on a 7-point Likert scale for four attributional dimensions.

Sharrock et al. (1990) were the first to investigate the explanatory style of care staff working with challenging behaviour. Thirty participants were asked to write down the major cause of 14 negative behaviours commonly associated with mentally ill patients, each with reference to a single patient who had been in the unit for more than 14 months and known to all the participants. Each cause was then rated by four attributional dimensions of internal/external, stable/unstable,

controllable/uncontrollable and global/specific. Three other measures were also taken. An optimism-pessimism scale (Garety & Morris, 1984) that was adapted from earlier work by Moores and Grant (1976). A measure of helping behaviour using a similar scale to Weiner's (1980) 7-point scale. Finally, a measure of emotional response, to record emotions of anger, disgust, sympathy and pity evoked by the target client. (For example , no anger at all was scored as 1, while extreme anger, was scored as 7). The results supported the prediction that when care staff make attributions of problem behaviour towards unstable factors it is associated with higher levels of staff optimism, which in turn is related to increased helping behaviour. This did not support Weiner's predictions (1980) that emotional reactions would be linked with helping behaviour. A second unexpected finding was that attributions of controllability were negatively associated with optimism.

Dagnan et al. (1998) attempted to replicate Sharrock et al's (1990) findings using learning disability staff. They provided six examples of challenging behaviour for participants to rate and subjected the results to a path analysis. They found that helping was best predicted by optimism, which was in turn predicted by the absence of negative affect which itself was mediated by attributions of controllability. This attribution of control was also negatively correlated with positive affect which they interpreted as a partial confirmation of Weiner's model (although there was no correlation between optimism or helping with positive affect).

Stanley and Standen (2000) have recently made a comparison of Weiner's model (1986) with the studies of Sharrock et al. (1990) and Dagnan et al. (1998). They investigated whether Weiner's model (1986) may predict staff explanations about challenging behaviour when the methodology is expanded to include the variables of behavioural topography in the client and positive affect in the carer. The results showed three main findings. Staff attributions are influenced by how independent challenging behaviours is and whether it is directed outwards. Secondly,

the propensity to help is related to positive affect. Finally, staff optimism is reduced by a perceived stable cause of client behaviour..

A version of the A.S.Q has also been used by Cottle, Kuipers, Murphy and Oakes (1995) to measure the relationship of expressed emotion and causal attribution following a violent attack by a client.

All these studies have made a number of assumptions about the applicability and validity of the A.S.Q. Extensive studies have been undertaken on various aspects of reliability and validity with the original questionnaire. Peterson et al. (1982) showed good internal consistency that has been supported by further studies (Tennen & Herzberger, 1986). Test-retest reliability has been demonstrated (Persons and Rao, 1985). A large literature has developed to support the criterion and construct validity of the A.S.Q (Alloy, Peterson, Abramson & Seligman, 1984; Eaves & Rush, 1984; Peterson, Bettes & Seligman, 1982). Yet, all this work has been developed around the reformulated learned helpless model of depression (Abramson et al., 1978). Essentially, it has examined how depressed people view imaginary events (with a positive and negative impact) on their life. It is fundamentally a measure of self-evaluation. In particular, whether a positive event happens due to luck or whether it is by chance or conversely, whether a negative event happens by chance or because of some personal, flaw.

The concept of an attributional style was originally viewed as a personality feature (Peterson, 1991) that produces a recognisable imprint about an individual's perspective each time it is called into action. Asking care staff about their beliefs of the causes of challenging behaviour may not assume a personality feature but nevertheless, may be making a number of implicit assumptions. Much of the research that measures staff opinions or knowledge about the causes of challenging behaviour (Berryman et al., 1994; Hastings, 1995; Hastings, Remington & Hopper., 1995;

Oliver et al., 1996) assumes that the responses are representative of general beliefs about challenging behaviours.

Sharrock et al. (1990), Dagnan et al. (1998) and Stanley and Standon (2000) would appear to make particular assumptions about the external validity of attributional questionnaires. These studies explore the relationship between the emotional response of a carer and the type of explanations that are used to understand the needs of a client. It is imperative in such studies that external validity exists (i.e. that the explanations recorded by the questionnaire would correlate with the explanations used in real situations). Yet, if external validity exists it would suggest that staff have a style of explaining challenging behaviour.

The assumption of an explanatory style needs to be tested because of its implications for training and supporting staff. If staff do tend to explain any behavioural topography with a style of causal attributions, one logical conclusion maybe be to develop staff training based on attributional retraining principles (Fosterling, 1985).

The presence of a style of explaining among a team of staff would also have a considerable impact on the quality of the therapeutic response. If staff apply a blanket explanation for a topography of behaviour, they may fail to appreciate the different functions of the same behaviour used by different clients and therefore offer inappropriate responses. There is also a danger that staff responses may not directly be shaped by a client's challenging behaviour (Carr Taylor & Robinson, 1991; Taylor & Carr, 1992) but rather by the explanations used about the behaviour incorporating some internal or group explanatory style.

Therefore, the next experiment will attempt to examine whether staff possess an explanatory style about one type of challenging behaviour. Two experiments will be conducted. The first will examine whether a team of staff use the same causal explanations for behaviours with similar topography but with different functions.

One possible method of investigating this would have been to follow previous studies that have used analogue experiments with invented scenarios (Dagnan et al., 1998; Hastings, Remington & Hopper., 1995; Sharrock et al., 1990). The design would have to present two functionally different behaviours that have the same topography and then ask staff to complete an attributional questionnaire (e.g. "John is a 21 year old man who hits himself to get attention" and "John is a 21 year old man who hits himself to avoid any demand made of him"). The disadvantage of such a design is that it may not recreate how staff explain behaviour in the work place.

An alternative procedure is to use a quasi-experimental design and investigate the explanations of a group of staff about two clients who present with similar behaviour problems but that serve different functions. Such a design would have stronger external validity. The disadvantage of this design is that it requires access to a large screening of people with challenging behaviour in order to find two clients with the right credentials who are also known to a large enough group of staff.

An opportunity arose that made the development of a quasi-experimental design possible. A large hospital for people with learning disability began a staff training initiative on the principles of applied behaviour analysis and challenging behaviour. As part of this initiative, The Motivation Assessment Scale (Durand & Crimmins, 1992) was administered throughout large parts of the hospital. Twenty-four staff were identified as working with two clients who presented with similar behavioural topographies but which served different functions.

The study is in two parts. The first investigated how 24 care staff, using an adapted version of the Attributional Style Questionnaire (Peterson et al., 1982), explain the behaviour of two clients with the same behavioural topography (aggression) that serves different functions. The first hypothesis will therefore investigate the assumption of previous research that care staff operate some form of attributional style (Dagnan et al., 1998; Sharrock, et al., 1990; Stanley & Standen, 2000).

Previous research has shown that some staff are able to identify the underlying functions of challenging behaviour (Hastings et al., 1994a, Hastings, 1995). This creates an unanswered question: why can't staff respond more constructively to their clients if they possess a reasonable understanding of what may cause challenging behaviour? One possible answer is that staff may explain the behaviour of known clients in a different way from explaining the behaviour of novel situations. Many previous studies have used analogue designs and asked participants to explain the behaviour of a fictional client (Dagnan et al., Hastings, Remington & Hopper., 1995, Stanley & Standen, 2000), or else comment on the concepts of challenging behaviour (Hastings, 1995). It may be possible that care staff are able to utilise their knowledge base when discussing an abstract situation but when asked to explain a known client draw on previous used explanations.

The second part of the study will therefore investigate how the same participants explain the behaviour of a video role-play of a client who has an aggressive outburst. It is hypothesised that staff will be able to use attributions that reflect a behavioural understanding of the problem. That is, the behaviour will be judged to be more external (caused by environmental factors), unstable (the cause is viewed as non-permanent), non-controllable (the client does not have control over the cause of the behaviour) and more universal (the cause of the behaviour is similar to other members of the client's peer group).

The notion of attributional style about challenging behaviour will be investigated. The assumptions inherent in the ASQ would predict that staff will explain the behaviour of two clients with similar topography, by choosing similar attributions.

If participants use significantly different attributions to explain the same topography, it will challenge the assumption that care staff have a style in how they explain challenging behaviour.

The second part of the study will investigate previous claims that care staff are able to explain challenging behaviour using broad principles of applied behavioural analysis. It would predict that care staff would choose attributions that best reflect behaviour analytic principles.

## **4.2 Method**

### ***4.2.1 Participants***

Twenty three staff from the same hospital for people with learning disabilities took part in this study. 30 staff had been recruited but 6 dropped out due to holidays and sickness. All the participants worked on wards that provided day and residential services for young men who presented with aggression and challenging behaviour. Each participant had direct experience of working with two identified clients for a full nursing day shift for a minimum of 6 months.

There was a wide range of experience and qualifications similar to that found in other institutions but there was a greater distribution of males to females. (Details are in appendix B).



#### ***4.2.2 Procedure***

Permission was given by management. The procedure was explained to all the participants over a series of hand over meetings. Verbal consent for participation in the study was obtained from each participant. Anonymity and confidentiality were maintained at all times and this was stressed to the participants. The A.S.Q was explained to each participant and everyone had a chance to practice it and ask questions. Each participant was then asked to complete an A.S.Q after they had witnessed a challenging behaviour incident by either of the two clients. Each participant completed two forms per client. An average score was then taken to record attributional responses.

#### ***4.2.3 Apparatus.***

1. Motivational Assessment Scale (Durand & Crimmins, 1992).
2. Adapted version of the Attribution Style Questionnaire (Seligman et al., 1979).

Three of the same attributional dimensions from the Sharrock et al. study (1990) were used. These were internal-external, stable-unstable and controllable and uncontrollable. Global and specific were replaced by personal and universal because of the findings by Weiner (1980) and Stratton et al. (1986) that challenged its validity. Sharrock et al. (1990) also found this dimension to have lower reliability scores (0.7 when 0.8 is regarded as satisfactory).

As part of a hospital wide training initiative two clients had been identified as presenting with high rates of aggressive behaviour. Both clients presented with the same behavioural topography, i.e. physical aggression aimed at staff members.

#### *4.2.4 The Clients*

Both clients were young men who presented with many behaviours similar to those found in people with autistic spectrum disorder. Neither attended day services. Initial screening had indicated that the behaviours differed in their functions in the following ways.

Client A was described as presenting with aggression of kicking and hitting staff with an average frequency of once or twice a week. He would also bite his hand and the night staff reported that he would occasionally call out during the night. The main function of the behaviour could be related to environmental events such as avoiding group interactions or demands or when stopped from doing something he wanted to do such as leaving the ward.

Client B presented with a number of obsessive behaviours such as collecting objects that were organised by some personal ritual. He also would present with physical aggression such as kicking and punching and slapping and he would slap his own head. His behaviour was more frequent at approximately three or four times per week. The functions of the behaviour were predominantly to do with obtaining tangibles when he could not locate one of his favourite objects. Yet many episodes seemed to have no obvious environmental antecedent.

The charge nurse together with three other members of staff had completed two M.A.S's for each of the clients. Prior to starting the interviews, the ward completed two weeks record keeping of ABC charts to monitor the frequency and possible functions of the behaviour. These confirmed the findings of the M.A.S.

Five staff failed to complete all parts of the questionnaires and therefore were not included in the analysis.

### 4.3 Results

A comparison of the mean scores for staff attributions about each client can be seen in Table 4.1

Table 4.1- Comparison of mean scores of causal attributions

N=23			
<u>Clients with Behaviour problems</u>			
<u>Attributions</u>	<u>A</u>	<u>B</u>	<u>Wilcoxon</u>
<u>Z</u>			
<u>Internal</u>			
Mean	4.39	5.66	-1.96*
SD	(2.25)	(1.93)	
<u>Stable</u>			
Mean	4.89	5.74	-1.27
SD	(2.11)	(1.05)	
<u>Control</u>			
M	6.05	5.04	-1.81
SD	(1.33)	(1.4)	
<u>Personal</u>			
M	6.2	5.19	-2.51*
SD	(1.26)	(1.47)	

\*p<.05. (Note. The higher the score, the greater the attribution)

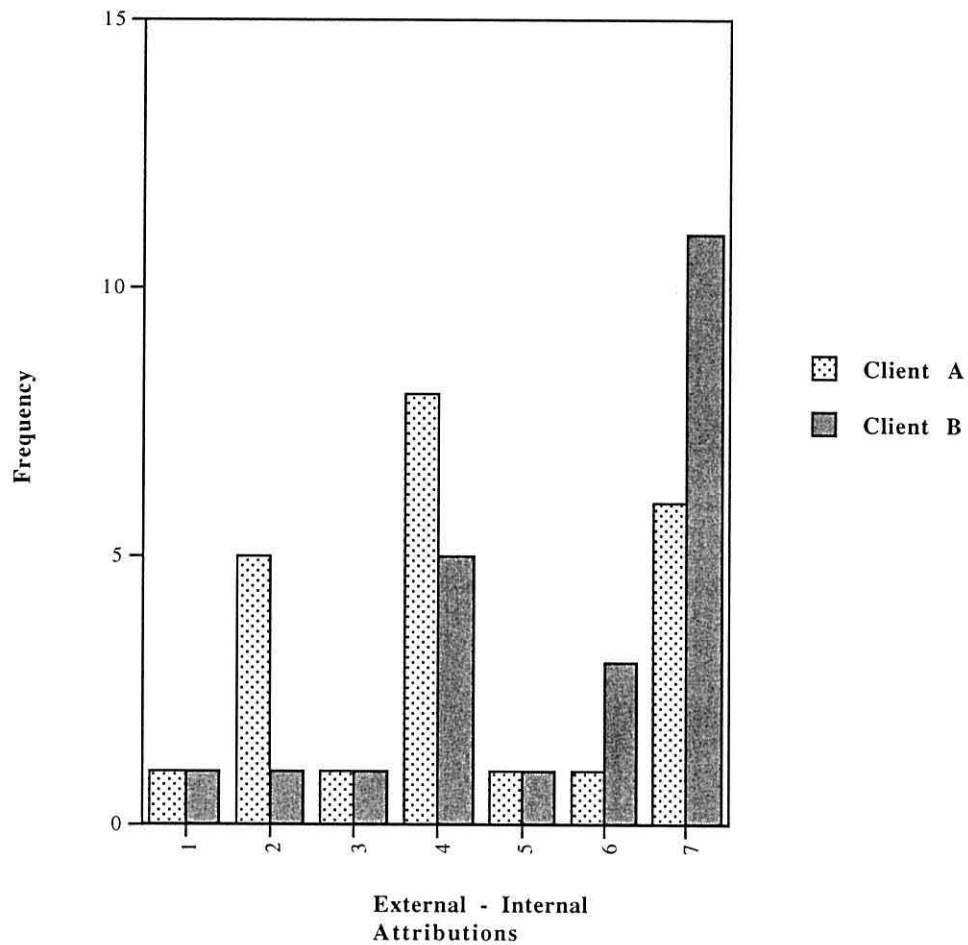
To test for statistical significance between how individual staff make attributions about the two clients, a non-parametric test was chosen -the Wilcoxon Matched Pairs Signed test, (Ferguson, 1971)- because the range of scores did not form a normal distribution. The z-scores are shown in Table 4.1. A significant difference was found between the attributional dimensions of internal and external and between personal and universal.

The A.S.Q allows a choice of three scores for each attribution whereas other measures, such as the L.A.C.S, offers a straight choice between each dimension. To help appreciate the preference of the staff group for particular attributions, Table 4.1.1 has condensed the range of attributional scores into one single score. For each attributional dimension, three figures are shown. These are the percentage of staff who chose the numbers 1,2,3, the percentage who chose, 5,6,7 and the percentage who chose the mid-point score of 4.

There was a wide discrepancy among the staff team about the attributions used to explain the behaviours which can be see in Figures 4.1 to 4.4, which show graphs for each attributional dimension comparing attributional scores about both clients.

Table 4.1.1 Comparison of percentage of staff per attributional dimension and mid-point.

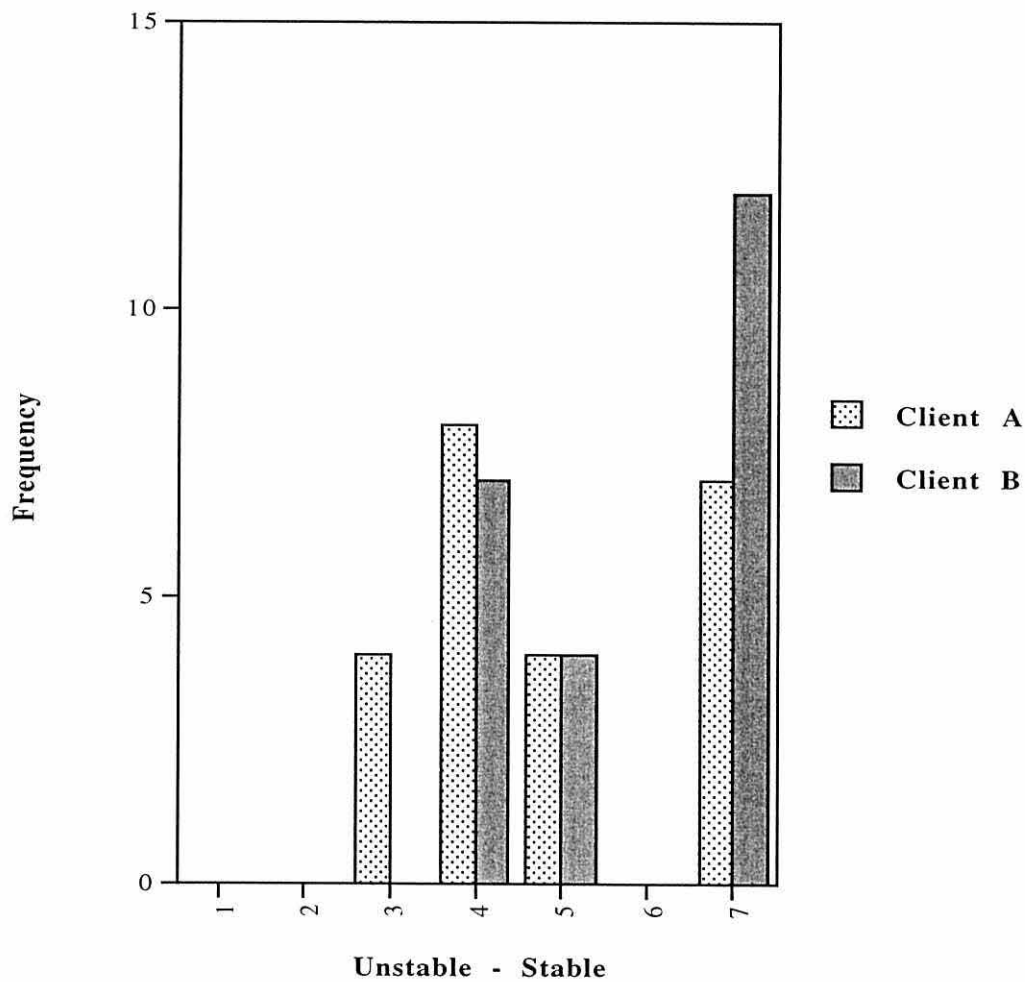
<u>N=23</u>		
<b>Attributional Dimension</b>	<b>Client A</b>	<b>Client B</b>
<b>and Mid Point</b>	<b>%</b>	<b>%</b>
Internal	35	65
External	30	13
<u>Mid Point</u>	<u>35</u>	<u>22</u>
Stable	48	69
Unstable	17	0
<u>Midpoint</u>	<u>35</u>	<u>31</u>
Controllable/	78	52
Uncontrollable	0	13
<u>Mid Point</u>	<u>22</u>	<u>35</u>
Personal	78	65
Universal	22	22
<u>Midpoint</u>	<u>0</u>	<u>13</u>



**Figure 4.1: Comparison of range of Causal Attributions Internal/External for Client A and Client B**

Figure 4.1 compares the distribution of internal/external attributions made by the staff group for each of the two clients. There are almost twice as many explanations that denote an exclusive internal cause (scored as a 7) for Client B compared to Client A. Twice as many staff recorded external references in their explanations of Client A compared to Client B.

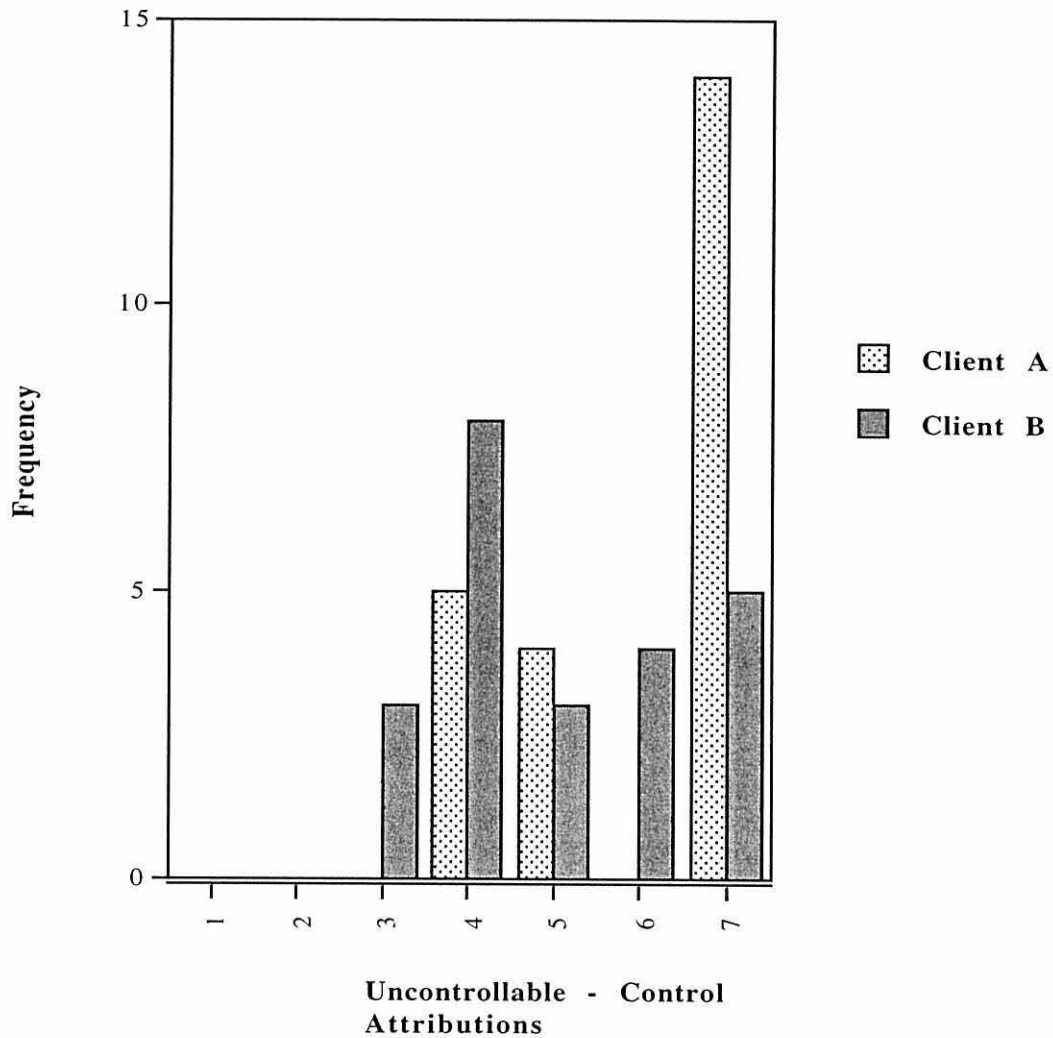
Figure 4.2 compares the distribution of stable/unstable attributions for each of the two clients. Generally the explanations used for both clients are predominantly within the stable range, which would suggest that the cause is regarded as permanent. A small number of staff register a score of 3, which would suggest they regard the cause of the behaviour of Client A to be less permanent than the cause of the behaviour of Client B.



**Figure 4.2: Comparison of Range of Causal Attributions Stable/Unstable for Client A and Client B**



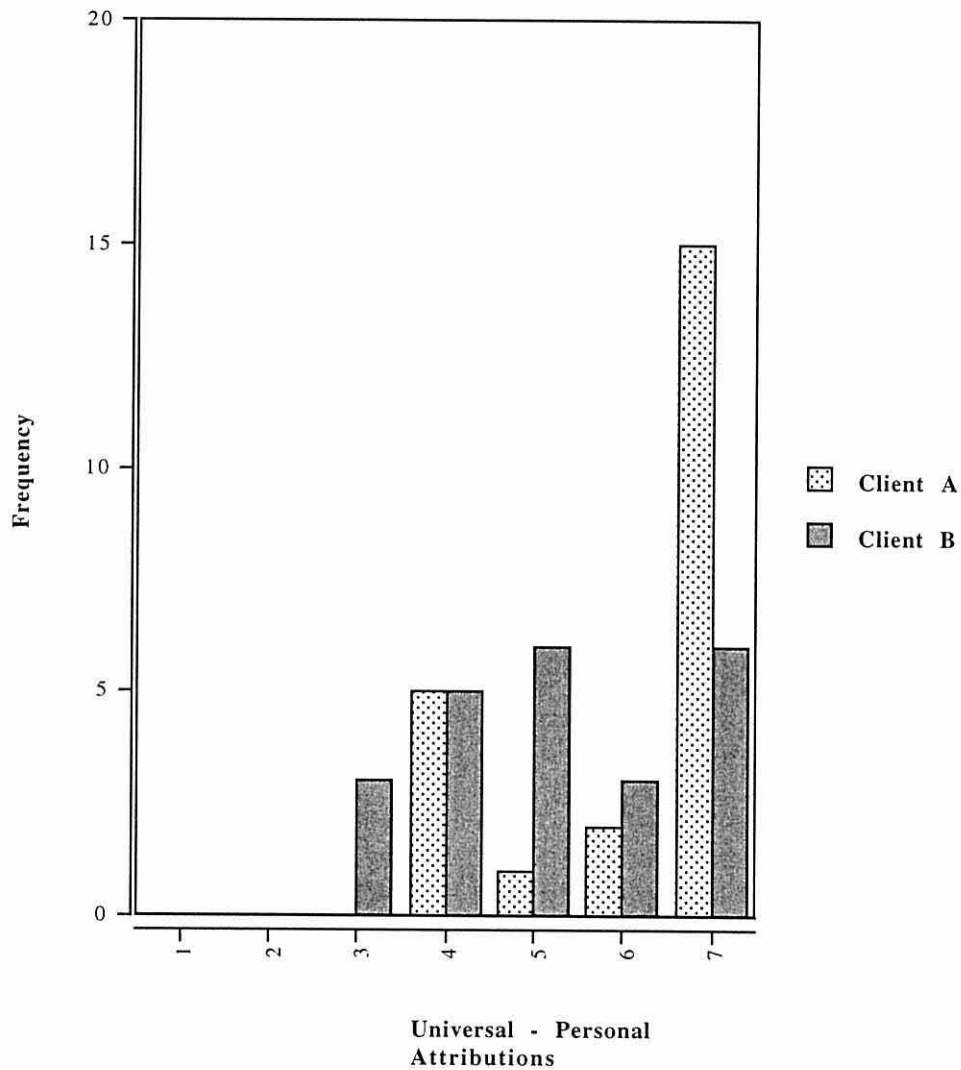
Figure 4.3 compares the distribution of control/uncontrolled attributions made by the staff group for each of the two clients. The cause of the behaviour of Client A has been scored as high control in comparison to Client B.



**Figure 4.3: Comparison of Range of Causal Attributions of Control/Uncontrol for Client A and Client B**

Figure 4.4 compares the distribution of personal/universal attributions made by the staff group for each of the two clients. It suggests the use of more exaggerated

explanations with Client A compared to client B. The coding 7 is used to denote the cause to be unique to Client A and not something one would expect to find within a peer group.



**Figure 4.4: Comparison of Range of Causal Attributions of Personal/Universal of Client A and Client B**

## 4.4 Discussion

There was a small significant difference found in the mean attribution scores on the A.S.Q for the dimensions of internal/external and personal/universal. This does not support the first hypothesis that the staff would use the same attributions to explain the two examples of aggressive behaviour.

The data suggests that staff attribute the cause of the aggressive behaviour of Client B to be different in some respects than the way that they attribute the cause of aggression in Client A. The significance of the difference in the mean scores of internal/external attributions, is that it suggests a preference to use more external explanations for Client A compared to Client B. With the dimension of personal/universal, although there is a significant difference, both means are at the extreme end of the scale and therefore differ only in degree of how personal the cause is regarded. Differences in internal/external attributions however, are more significant because those staff who choose internal attributions are failing to acknowledge environmental influences that may be significant in understanding the function of the behaviour.

The staff would appear to be demonstrating some form of discrimination between the two examples of aggressive behaviour presented by the two clients. Client A would appear to receive more extreme scores than client B (as can be seen in Figures 4.3, and 4.4). Over half the staff group attribute the maximum score of 7 for the attributions of control/uncontrol and personal/universal when explaining the behaviour of Client A. This would indicate that this group of staff believe that the cause of the behaviour is under the control of the client and idiosyncratic to the client. A different pattern emerges with the attributions of stable/unstable and internal/external attribution. Here, it is Client B who obtained the higher number of

7's (see Figure 4.1) - suggesting that more staff regard this form of aggression as more stable and internal to Client B compared to Client A.

One explanation for this is that staff analysis of each client's behaviour leads to different conclusions. A consideration of the possible functions of each client's behaviour may help to understand this. If Client A's behaviour is largely avoidance based, it would mean that there is a definite antecedent to aggression. This may provide the staff with obvious environmental events that become implicated in the cause because they correlate with the behaviour's origin. This may be the reason why more staff chose more external attributions to explain the behaviour of Client A. The nature of Client B's behaviour means that there may not be as many obvious clues in the form of external events. If Client B becomes aggressive because he can not access a tangible, such as finding a favourite marble, it may appear to staff that this behaviour originates within the individual rather than it being a consequence to deprivation from the tangible (Michael, 1993).

Table 4.1.1 shows that nearly 50% of the staff group regard both clients' behaviours to be stable. Figure 4.2 shows that Client B receives greater number of maximum scores for stability. One possible explanation is that Client B presents with more frequent behaviour and therefore the staff see more of it. Alternatively it may be a consequence of a belief that the behaviour is independent of the environment and more likely to be an individual characteristic of the client and therefore more likely to be permanent. The significant correlations between the attributions of stable/unstable and internal/external would support this.

Figure 4.3 shows that Client B is regarded, by over half the staff, as having complete control in the cause of the behaviour. This again could be explained by the possible function of the behaviour. If Client B becomes aggressive to obtain a tangible it might create an impression of exercising some form of control. If there is

no obvious reason for the behaviour, staff maybe inclined to use previous explanations for the same topography. On the other hand, Client A is more likely to behave in an aggressive way when asked to take part in a group activity, which may suggest to staff that the behaviour is a reaction to the control within the environment. This may reflect why more staff have chosen scores on the non-control end of the scale for Client A.

Table 4.1.1 shows that most staff explain the cause of both client's behaviour as personal, which means it is unlike how the peer group would be expected to behave. Figure 4.4 shows a strong bias for exclusive personal scores for Client A. The aggressive behaviour itself may single out both clients but the nature of Client A's behaviour would appear to single it out as even more idiosyncratic. The tests for correlations suggest that high personal scores are significantly correlated with high control scores. This could mean that because the behaviour is regarded as goal directed (high control) it is more likely to be regarded as unique to the client.

Figures 4.1 to 4.4 reveal a wide range of explanations adopted by the staff. This may have implications for the level of agreement and consistency experienced among a staff team. One strong feature is the number of extreme scores chosen (score of 7). One may have expected staff to choose mid-point on the scale to correspond to multiple causality. This suggests that a number of staff would appear to have a high conviction of their beliefs. It may also suggest that staff share a common understanding among some of the team about the cause of aggression. Why some staff choose extreme scores is uncertain but the possibility remains that it may reflect some individual feature of the staff. Further study would be needed to investigate individual staff features such as stress and personal coping styles.

There are number of reasons why staff may discriminate in their choice of attributions between the clients. First staff may be affected by their personal history

with the client and whether they have experience of personal injury as a consequence of the client's aggression. Further behavioural data that recorded the extent of staff injury and personal distress may help in answering this question. Or alternatively, the answer may lie in the quality of the relationship that staff may have with each of the clients. A model proposed by Grant, Ramcharan, McGrath, Nolan and Keady (1998) has examined carer stress in terms of demands on carers but also includes the availability of rewards in the caring process. Therefore, such personal factors may also influence the choice of attributions and could also include how much stress the staff are under at work or at home and their general sense of well being. Further investigations should be considered to examine how carer satisfaction and stress affects the causal attributions about client's behaviour but it would appear reasonable to assume that these factors may play some role in influencing how staff finally attribute the cause of aggression and why they have made the discriminations between both clients.

Not all staff were able to distinguish between differences in the two clients. Yet it seems clear that the tendency of the staff is to place a different emphasis on the types of attributions used to explain the behaviour of different clients.

An examination of the trend of the graphs reveals a strong preference for one attributional dimension in three of the domains (stable/unstable, personal/universal, control/uncontrollable). This suggests that the behaviour of both clients will be explained as stable, personal and controllable in most cases. If the staff were offered a questionnaire based on the L.A.C.S codings (which only has three available options, to code each attribution) the data would have demonstrated a much stronger bias for one attribution (see Table 4.1.1). Although there may be differences in how staff explain the influence of the environment, there would appear to be some form of inclination by the staff group to explain the typography of aggression in a particular way. A further study is required to clarify whether staff have some form of

inclination in explaining aggression or whether they make discriminations on a case by case basis.

The next study will investigate how the same staff team explain the behaviour of an invented client with aggressive behaviour. This will remove any previous experience that individuals may have had that could influence the type of explanations used. By creating a video of a role-play scenario about a client who becomes aggressive, every staff member will be exposed to exactly the same stimuli to explain. This allows a refinement of the first hypothesis. Although staff can discriminate between two known clients with aggression they still have a tendency to use certain attributions. The next study will investigate whether the trend continues in an analogue situation.

The second hypothesis, that explanations will be influenced by knowledge of behavioural principles, will also be investigated.

## **4.5 Method**

### ***4.5.1 Participants***

The same 23 staff from the second study participated in this study.

### ***4.5.2 Apparatus.***

The participants were shown a video that depicted a client interacting with two staff and eventually becoming aggressive. Each participant was also provided

with two written scenarios about the client's behaviour and the same adapted version of the A.S.Q.

#### ***4.5.3 Procedure***

Permission was given by management. The procedure was explained to all the participants over a series of hand over meetings. Verbal consent for participation in the study was obtained from each participant. Anonymity and confidentiality were maintained at all times and this was stressed to the participants. Staff attended a training session in three groups over three consecutive days. As part of the introduction to the session, they were shown the video, two written scenarios and given the questionnaires to complete. Those staff who were unable to make the training were given their own personal showing. Participants were verbally debriefed after completing the questionnaires.

#### ***The video***

A role-play was devised to show the build up to a client becoming aggressive and needing to be restrained. The role-play involved three actors. It was scripted, rehearsed and recorded by the audio video department from the School of Psychology, using professional video recording equipment. A whole day was spent editing to produce a 5-minute video scenario, on professional editing equipment. The advantage of using a video was that it provided all the participants with the same stimulus to make their judgements on.



The video depicted a hospital ward that was under pressure to take more clients. The first scene shows a charge nurse on the phone complaining to a colleague about the work load he is under. Throughout the phone call the charge nurse shouts at other staff to help clients.

The second scene shows a second staff member entering the room with two cups of coffee. The charge nurse finishes the phone call and the two male nurses begin having an informal chat as if they had started an impromptu break. The conversation covers football and a recent night out.

The third scene follows immediately on and begins with an agitated client entering the room to ask for a cigarette. The staff respond to the client in an abrupt manner and tell him that it is not time for his cigarette and he needs to check his programme.

The client is male, in his late 40's, with an obvious learning disability, who fails to understand the explanations offered to him. He was scripted to show autistic features such as repetitive questions, failing to reciprocate social interactions and to show limited communication.

The scene shows the staff attempting to continue their conversation and being interrupted by the client. Each time the staff shouts a little louder but to no effect. Finally, the staff offer the client one of their own cigarettes and tell him to smoke it in the day room. The client then leaves.

The final scene commences a few minutes later with the client returning to ask for a light for his cigarette. This second interruption produces greater frustration

in the charge nurse who exclaims that the client should have asked someone else for a light and then takes away the cigarette from the client. This makes the client become more agitated and knocks over some papers and books from the charge nurses' desk and finally striking out at one of the staff. Both nurses respond to this aggressive act, by restraining the client and calling for help from other staff.

The scenario was designed to show the build up of challenging behaviour in a client without attributing blame to staff or client. The video was shown to a pilot group of 8 nurses from another service to comment on its authenticity and all thought it represented the sense of pressure that they experienced as nurses and resembled situations that they have to face.

The video was also shown to two clinical psychologists experienced in working with challenging behaviour. They both were asked to do a continuous observation of the video. Their conclusions were that repetitive questions may serve the function of achieving tangibles such as cigarettes. The verbal responses of staff and the removal of the cigarette may have created a high state of arousal within the client and being highly aroused may evoke aggressive and disruptive behaviours that leads to lower physiological arousal. The psychologists were also asked to complete the A.S.Q. They concluded that cause of the behaviour was external but they chose a 2 and a 3 to represent the contribution of earlier learning the client must have experienced. The behaviour was deemed to be very unstable, both 2, because it was highly dependent on the behaviour of the staff and the pressure on the ward at that time. The final two scores (control and personal/universal) both explained the behaviour as low control and (1 and 2) and universal (both chose 2).

The second scenario was a written description about the same client from the video about an incident that happened a few weeks later. It read as follows:

‘John had a similar behaviour several days later when out in town with a member of staff. It happened when they were getting on a bus to come home and a large group of people all tried to get on the bus at the same time. In response to being pushed and shoved John started to behave in the same way as on the video.’

A third scenario read:

‘John again started to behave in the same way as on the video, when he was told that his mother would not be visiting him as promised.’

## 4.6 Results

The mean score for each attribution about each scenario can be seen in Table 4.2, together with the standard deviations.

Table 4.2 Mean scores for each attribution of video and two written scenarios. (Standard deviation in parenthesis).

	Video	1st Written	2nd Written
	Scenario	Scenario	Scenario
<b>Attribution</b>	<b>N=23</b>		
internal/ external	3.17 (1.67)	3.57 (1.5)	3.26 (1.32)
stable/ unstable	4.13 (1.74)	4.48 (1.62)	4.43 (1.31)
control/ uncontrol	2.7 (1.52)	3.57 (1.5)	3.26 (1.42)
personal/ universal	5.61 (1.16)	4.91 (1.35)	5.48 (1.47)

Table 4.3 shows the range of scores used by the staff for each attribution in each scenario.

Table 4.3 Range of scores for each attribution of video and two written scenarios.

	<b>Video</b>	<b>1st Written</b>	<b>2nd Written</b>
	<b>Scenario</b>	<b>Scenario</b>	<b>Scenario</b>
<b>Attribution</b>	<b>N=23</b>		
internal/ external	1 - 7	1 - 7	1 - 6
stable/ unstable	1 - 7	2 - 7	2 - 7
control/ uncontrollable	1 - 5	1 - 6	1 - 6
personal/ universal	4 - 7	2 - 7	1 - 7

Because the range of scores did not form a normal distribution, a non-parametric statistical test (Wilcoxon Matched Pairs Signed Ranks Test) was chosen to compare the mean scores for each attribution within each scenario. No significant differences were found.

To measure any differences in attribution used about two known clients and those used to explain the imagined character in the three scenarios, a series of Wilcoxon Matched Pairs Signed Rank Test were performed. The resulting Z scores can be seen in Table 4.4, which compares scores for client A with three scenarios and Table 4.5 which compares the scores for Client B with the three scenarios. The p-values have been increased because of an increased danger of a type I error due to relatively small population and repeated comparisons.

Further correlational analysis (using Spearman Test of Rank Correlation) of attributions about the known clients and the three scenarios revealed no significant correlations.

Table 4.4 Z scores for each attribution of Client A with video and written scenarios.

	<b>Video</b>	<b>1st Written</b>	<b>2nd Written</b>
	<b>scenario</b>	<b>scenario</b>	<b>scenario</b>
<b><u>Attribution</u></b>			<b>N=23</b>
internal/ external	-2.0088	-1.7752	-2.1867
stable/ unstable	-1.7103	-1.1323	-0.9231
control/uncontrol	-3.9199**	-3.4533*	-3.5711**
<u>personal/universal</u>	-1.1871	2.4157	-1.0262

\*p<0.01, \*\*p<0.005

Table 4.5 Z scores for each attribution of Client B with video and written scenarios.

	Video	1st Written	2nd Written
	scenario	scenario	scenario
<b>Attribution</b>			<b>N=23</b>
internal/ external	-2.9179**	-2.8181**	-2.9474**
stable/ unstable	-2.6036*	-2.5326	-2.4170
control/ uncontrol	-3.9199**	-3.4533*	-3.5711**
personal/ universal	-1.1835	-0.9385	0.9741

\*p<0.01, \*\*p<0.005

## 4.7 Discussion

The data from these studies suggest that staff are able to alter their explanations about aggressive behaviour depending on the information that is available to them. This therefore calls into question the idea that staff possess some form of attributional style about challenging behaviour and consequently challenges the prediction that care staff will use similar attributions to explain the aggressive behaviour of different clients.

There is some support for the second hypothesis (that care staff will use attributions that reflect behaviour analytic principles when explaining aggressive behaviour within a role play scenario). The data would suggest that the staff were more inclined to view the invented scenarios as possessing a stronger environmental influence and the imaginary client as having less control in causing the behaviour compared to explanations about known clients. This would reflect a basic tenet of the principles of applied behavioural analysis, that behaviour is influenced and maintained by environmental contingencies.

Previous research has suggested that staff are capable of offering explanations about challenging behaviour in imaginary scenarios that reflect behavioural principles (Hastings, Remington & Hopper., 1995). This may indicate that staff use different decision making strategies when explaining the behaviour of known clients. That is, staff are aware how aggressive behaviour can be shaped and maintained by the environment and therefore when they encounter the information in the invented scenarios they make explanations that reflect this. Yet when explaining the behaviour of known clients, the staff may base their judgement on their own personal retrieval of information which will contain attributional information within verbal categories that have been used to summarise previous experience. The data in



Study Two may reflect some firmly held beliefs about the origin of challenging behaviour in the two clients rather than observations about the most recent witnessed incidents.

Table 4.2 shows the mean scores for the attributions made for each of the three scenarios. It is striking how close they are to each other. Yet Table 4.3 again shows that there is a very wide range of scores within the staff group but there are a number of differences with the attributions made about the known clients. The most obvious one is that the invented client is not given maximum scores of 7 for control indicating that none of the staff viewed the invented character as having complete control in the cause of the aggression. The use of higher universal scores (indicated by scores of 1 and 2) in the written scenarios suggest that some staff regard the behaviour of the invented character to be typical of any member of his peer group. Yet alternatively there are some staff who regard these responses as very idiosyncratic to the resident.

In a comparison of the A.S.Q scores for Client A with the three scenarios of the imaginary client, a significant difference was found in the attributions of control for all scenarios. This would suggest that Client A was seen as having more control in the cause of his aggression.

There is a greater significant difference between the attributions about Client B's behaviour and all the scenarios involving the invented client, for the attributions of control and internal/external and for the video scenario for the attributions of stability. This would suggest that the staff are capable of making a wide range of explanations about aggression but they tend to regard at least one of their clients as making a permanent, contribution to the cause of their aggressive behaviour, which is independent to the environment and within the client's control.

Dunne (1994) suggested that attributional bias (first suggested by Ross, 1977, as the fundamental attributional error) may help in understanding the mistakes made by staff in explaining client behaviour. The fundamental attributional error refers to the inclination of the observer to underestimate the importance of situation factors and overestimate dispositional factors as causes of behaviour. The present data does not support Dunne's suggestions (1994). If a bias exists within care staff's explanations it does not generalise to all explanations about aggression. Although one may argue that a bias exists in the domain of stability, this is different from Ross' original idea.

Attribution theory may still provide an important perspective in understanding staff reactions to challenging behaviour. The different attributional dimensions may act as important variables that can be included in devising staff training and staff support programmes (Dagnan et al., 1998). Training has often focused on developing skills in staff (Landesman-Dwyer & Knowels, 1987; Farrell, 1982; Milne, 1984a) and paid little attention to challenging beliefs that staff may hold about client behaviour (Fenwick, 1995). Yet different attributional models of helping (e.g. Dagnan et al., 1998; Sharrock et al., 1990; Weiner, 1986) propose different levels of importance for the attributional dimensions of control and stability, which could influence the focus of work with care staff.

Weiner (1980, 1986), specifies the central role of controllability in the attributional model of helping behaviour. The decision to help is based on how much control an individual had in causing their own problems. If someone has little or no control, there is an increased likelihood of an emotional response of empathy which in turn increases the chances of offering helping behaviour. On the other hand, if a person in need did have control over the cause of their own difficulties, there would be an increased likelihood of more hostile emotions in a potential helper, such as anger, which in turn would reduce the chance of a helping response.

Three studies that investigated casual attributions of challenging behaviour (Dagnan et al., 1998; Sharrock et al., 1990; Stanley & Standen, 2000), found the causal path between attributions and helping behaviour to include optimism.

Dagnan et al. (1998) investigated the explanations of care staff and found evidence to support Weiner's model of motivation for helping (1986). Using a path analysis they found that controllability was causally related to negative emotion, optimism and an intention to help.

Sharrock et al. (1990), on the other hand, found a more direct link between optimism and helping behaviour. They found that stability and controllability were independently, negatively correlated with optimism.

More recently, Stanley and Standen (2000) found data to support Weiner's original model (1986) but also offered an extension to that model by suggesting that attributions of stability may directly influence optimism which in turn, influences helping behaviour.

Perhaps the most important distinction between the models is the relative importance placed on emotions in motivating helping behaviour. The Sharrock et al. (1990) study found emotions to have no significant causal influence on the decision to help. They propose that the primary motivating force on the decision to help is an optimism about client's behaviour. In contrast, Dagnan et al. (1998) and Stanley and Standen (2000) found evidence to support the role of affect in the decision to help. Their data expanded on Weiner's (1986) model of helping in different ways. Dagnan et al. (1998) found that helping was best predicted by optimism, which was in turn best predicted by lack of negative affect and control. Although Stanley and Standen (2000) could find no direct correlation between optimism and helping behaviour,

they did find a direct correlation between attributions of stability, helping and positive affect.

If there is a causal relationship between optimism and a desire to help, it would suggest that helping behaviour is related to the expectation of success. In other words, helping behaviour would be related to the prediction of positive behavioural change in a client.

The negative correlation between control and optimism (found by Sharrock et al., 1990 and Dagnan et al., 1998) suggests that if staff believe that clients who present with challenging behaviour, have control over what they are doing, the staff will also be less optimistic and therefore less likely to help. On the other hand, if staff explain client behaviour to be permanent they may be less optimistic about positive change and therefore less inclined to help (Sharrock et al., 1990).

These models have a number of implications for the staff group from study 2 and 3. The motivation to help the imaginary client is more likely to be greater than the motivation to help the two known clients. The Weiner model (1986) would suggest that the invented character would receive more help because there were lower rates of attributions of control. However the Sharrock et al. (1990) model would suggest that the high stable scores would lead to low optimism and therefore to less chance of helping behaviour. Yet both models would suggest that the staff group would have low motivation for helping their known clients. Client A received attributions of high control from over half the staff group which would fail to register feelings of empathy (Weiner, 1986) and be less likely to develop optimism (Sharrock et al., 1990). The staff who attributed Client B's behaviour as stable would be predicted to have low optimism and consequently low helping behaviour (Sharrock et al., 1990). The practical implications for both clients are that they may receive less help from the staff.

This discussion is of course speculative. The studies that produced the above research, (Sharrock et al, 1993; Dagnan, et al, 1998; Stanley and Standen, 2000) are all correlation studies and therefore have no evidence of real causal relationships between the key variables. Some of the core concepts that are used as dependent variables, such as the measures of emotional responses and optimism, are open to criticism of a lack of operational definition. Yet this is not a reason for abandoning the concepts but it is important to remain sceptical until further empirical evidence can verify them.

The ideas proposed by this type of attributional research could have implications for services for people with chronic behaviour problems. Many behaviour problems can begin in childhood which may mean that staff are asked to care for someone with a lifetime history of challenging behaviour. Even though the scientific literature contains many examples where challenging behaviours can be ameliorated, the reality for many staff maybe the opposite. Therefore staff may have low expectations for change which could influence the quality of their caring behaviour in the application of a behavioural programme.

An attribution may be no more than a verbal description of someone else's behaviour. Yet it may remain the most important data source available to staff when they reflect on why clients behave the way they do. If this is the case, understanding which type of attributional dimensions are the most influential in decision making about how to respond will be important in deciding what to include in a staff training package.

It would therefore seem important to investigate some of the claims of the above models that have attempted to understand staff responses to challenging behaviour. The main attributional dimensions implicated by the models are those of control and stability. There also appears to be some disagreement about the role of

optimism in the helping process. Therefore, the next study will investigate part of the claim that the attributions of control and stability influence optimism about a client with challenging behaviour (Sharrock et al., 1990).

#### *4.7.1 Criticisms of the Present Study*

There are a number of difficulties with the design of the present studies. There are obvious limitations with such a small sample size. The data from Study Two is only able to present a snap shot of how staff explain the behaviour of two known clients. Yet it was imperative that all the participants were able to discuss the same clients which made a bigger sample size impractical.

In Study Three there may be a problem of an influence of the order of presentation of the imaginary scenarios, that could shape the choice of attributions. Although the video scenario was scripted to show the background context for the behaviour, it may have been influential on the choice of attributional dimensions in the second and third scenarios. There is an implication in the video that the client has a 'propensity' for aggression. The first written scenario then gives an example of this propensity, thus implying a generalisation of the behaviour under a variety of settings. The scenarios themselves therefore imply that the behaviour is inherent to the individual (internal), non-specific to one single situation, and reoccurs over time (implying a stable property).

It is hard to know how to avoid this bias in the context of this type of research paradigm. Sharrock et al. (1990) chose a variety of 14 negative behaviours including acting with hostility to another patient, absconding, theft from another patient and an argument with a family member. One could assume that an order effect would influence the final choice of attributions after hearing a long list of negative

behaviours. For example, when asked to comment why a client has hit another client, the answer may be influenced by knowing that the client has also run away, stolen and had a range of arguments. All this information may influence the final choice of coding to produce more constitutional and permanent explanations, even though the behaviour under consideration would be analysed as having a specific, temporary cause.

This can be seen in the present data in reference to the imaginary client. The second scenario depicted the client displaying aggressive behaviour when pushed in a public place. This was considered by many staff to have the same causal origin as the behaviour displayed as a consequence of the disappointment experienced when a relative failed to visit (the third scenario).

In reality, care staff never make explanations about challenging behaviour in isolation. They will always be influenced by other factors, such as the concurrent behaviours being displayed by the client and how often the challenging behaviours occur. In this respect the design may resemble the reality of many care staff.

When someone is asked to give an account of why a client they work with presents with challenging behaviour they are able to draw on data from a variety of sources. They have observational data of different settings and different times of the day. They have opinions learnt from other care staff and professionals. Most importantly they have outcome data from the success or failures of their reactions and plans to prevent and lower the challenging behaviour. Compared to this rich context, questionnaires containing vignettes about imaginary people will provide a tiny amount of data about the history of the behaviour.

Finally, the repeated comparisons in study 3 increased the likelihood of making a type I error. To try and minimise this, the p-value's were set at a much more conservative estimate than is normal.

#### *4.7.2 Plan for Next Study*

The data from studies 2 and 3 have shown that staff are capable of using a variety of causal attributions for behaviours that share the same topography. This has three main implications. Firstly, it challenges the notion that staff possess an attributional style when explaining a challenging behaviour. Secondly, it would appear that staff explain the behaviour of an imaginary client displaying aggressive behaviour in a different way to how they explain real aggressive behaviour. Thirdly, staff would appear able to use attributions that reflect some of the core principles of applied behavioural analysis.

Most studies in this area have involved correlational designs (Dagnan et al., 1998; Sharrock et al., 1990; Stanley & Standen, 2000). The studies have proven inconclusive in demonstrating the dominance of a single attribution in the motivation of staff to help clients with challenging behaviour. Of particular interest in the present context is the proposal by Sharrock et al. (1990) that the attribution of stability and control may both be important in their affect on optimism. To test the validity of this claim, the next experiment will investigate the influence of attributions on the optimism of participants using an experimental paradigm.

The experiment will attempt to imitate how experienced staff may influence new staff by passing on causal explanations about challenging behaviour. Participants who have no prior experience of challenging behaviour, will be recruited. All participants will be exposed to the same video of a man who has an



aggressive outburst (from Study Three). The dependent variable will be the amount of optimism participants have about the client's future (as measured using the same questionnaire used in previous studies (Dagnan et al., 1998; Sharrock et al., 1990; Stanley & Standen, 2000)). The independent variable will be attributional information provided about the client. Sharrock et al (1990) have proposed that a motivation to help a client is influenced by feelings of optimism which is directly influenced by attributions of control and stability. One would therefore predict greater pessimism when participants are presented with information that is stable and controllable.

## **CHAPTER 5**

### **EXPERIMENT 4: CAN OPTIMISM ABOUT A CLIENT WITH AGGRESSIVE BEHAVIOUR BE INFLUENCED BY ATTRIBUTIONAL INFORMATION?**

## Chapter Summary

The next study investigates the effect of attributional information on optimism about someone with challenging behaviour. Previous studies have investigated this phenomenon by asking care staff to code an attributional style questionnaire and a questionnaire of optimism about a known client (Sharrock et al., 1990) or an invented scenario (Dagnan et al., 1998; Stanley & Standen, 2000).

The next study will use some of the same dependent variables from the above studies of the A.S.Q and a measure of staff optimism (a scale first used by Garety & Morris, 1984, that was itself an adapted version of the optimism subscale of the Optimism -Pessimism scale, Moores & Grant, 1976). By providing participants with the same video information and using participants who have no previous experience of challenging behaviour, it will remove extraneous variables that may impinge on the creation of explanations. The independent variable will be the type of attributional information (of stable and unstable and controllable and uncontrollable) on predicted optimism about a client. The client will be created through a video role play that depicts the development of aggressive behaviour. This should be an analogue of the experience of new staff meeting challenging behaviour for the first time and provided with information about the client by experienced staff.

## 5.1 METHOD

### 5.1.1 Participants

Ninety participants were recruited through the School of Psychology participant pool. Recruitment was dependent upon participants having no prior experience of people with learning disabilities, psychiatric problems or challenging behaviour in a paid or voluntary capacity. This was to ensure that there was no influence from prior experience as a confounding variable. Seven participants did not fulfil these criteria which left 83 participants (28 males and 55 females). Table 5 shows the age range of participants.

Table 5 Age range of participants.

Age range	Frequency
(19-21)	32
(22-25)	31
(25-30)	11
(>30)	9
Total	83

### *5.1.2 Apparatus*

Each participant was randomly allocated to one of four experimental groups. Participants had to sign up for the study and were then allocated to one of the four conditions prior to the day of the experiment by placing numbers in a hat and drawing out the numbers to four groups. The participants were then allocated a time to attend their group showing of a video. Each group was shown the same video but given different background information about the client on the video. The same video clip was used from Study Three.

The information was read twice to each group in a slow deliberate fashion by one of the experimenters. Each participant was given a sheet of paper with the same information written on it for the second reading. This was to ensure that each participant was exposed to the same amount of information.

The information given to each of the four groups varied in its attributional content. Each had the same amount of words and sentence length.

#### *Construction of each scenario*

Each scenario introduced the main character in the video with the same sentence. It was important to give the impression that the character needed some form of psychological treatment but it needed to be stressed that this was temporary. This was to stop participants assuming that the character was a long-term patient.

The second sentence contained stable and controllable information. This was done by referencing the frequency of his admission to the unit and secondly, whether he made the decision to enter or not.

The next sentence had two attributional pieces of information - the frequency of the behavioural problems (whether common or uncommon) and whether it had been 'shown' that the client had control over his behaviour.

The third sentence offered an example of a causal explanation either:

1. *He resents not being the centre of attention and will act up until he gets his own way.* (Stable, Controllable)

2. *John had a traffic accident and damaged part of his brain which makes him agitated and confused.* (Stable, Uncontrollable)

3. *If he has nothing to do he soon gets bored and will try to annoy staff.* (Unstable, Controllable)

4. *The staff have stopped John from going to work after staff shortages. When bored he will become disruptive.* (Unstable, Uncontrollable)

The second paragraph comments on the incident that will be shown in the video. It highlights the frequency of the behaviour and whether John was able to stop himself from behaving that way.

Each written scenario was matched for word length and amount of attributional content.

Group A received causal attributions that were *stable and controllable*:

*John is a 40 year old man who recently moved onto the ward.*

*He comes in on a regular basis when he decides that he wants a break from looking after himself. The problems on the video are common and it has been shown that John behaves like this on purpose. He resents not being the centre of attention and will act up until he gets his own way.*

*Most mornings John will pester staff and is not able to wait until it is time for him to have a cigarette. In the video, John seems to be making a deliberate decision to annoy two staff members who are in the middle of their coffee break.*

(112 words, 582 characters)

Group B received causal attributions that were *stable and uncontrollable*:

*John is a 40 year old man who recently moved onto the ward.*

*He comes in on a regular basis when he is no longer able to look after himself. He can not help the way he behaves. Although he often causes problems, John does not do it on purpose. John had a traffic accident and damaged part of his brain which makes him agitated and confused.*

*Most mornings John will pester staff and is not able to wait until it is time for him to have a cigarette. In the video John is agitated for reasons given above. Because of his difficulties he is not able to stop himself from interrupting the staff coffee break. (116) (603 ch)*

Group C received causal information that was *unstable and controllable*:

*John is a 40 year old man who recently moved onto the ward. He only needs to come in occasionally when he decides that he wants a break from looking after himself. John's behaviour on the video is uncommon but if it happens it was shown he behaves on purpose. If he has nothing to do he soon gets bored and will try to annoy staff.*

*Most mornings John does not pester staff and is quite happy to wait until it is time for him to have a cigarette. In the video, however, John seems to be making a*



*deliberate decision to annoy two staff members who are in the middle of their coffee break. (116) (593 ch)*

Group D received information that was *unstable and uncontrollable*:

*John is a 40 year old man who recently moved onto the ward. He only needs to come in occasionally when he is no longer able to look after himself. John's behaviour in the video is uncommon and it has been shown that he does not do it on purpose. The staff have stopped John from going to work after staff shortages. When bored he will become disruptive.*

*Most mornings John does not pester staff and is happy to wait until it is time for him to have a cigarette. In the video John is agitated for reasons given above. Because of this, he is not able to stop himself from interrupting the staff coffee break. (116) (608 ch)*

Each participant was given the same adapted version of the A.S.Q and the same two written scenarios used in study 3 - each participant completed three A.S.Q's. Each participant was also given an Optimism Scale (Garety & Morris, 1984) used in the Sharrock et al. (1990) and Dagnan et al. (1998) to measure optimism about the imagined client's future.

Finally each participant was asked to provide personal information age, sex and personal experience of challenging behaviour. After the questionnaires were completed a debriefing session was offered to all the participants to explain the theory of the study.

## 5.2 Results

The mean scores for each group for optimism can be seen in Table 5.1.

Table 5.1. Mean scores for optimism for each of the four groups.

Group	Attributional Information	Optimism Scores	
		Mean	SD
1.	Unstable/controllable	27.09	3.17
2.	Unstable/uncontrollable	28.42	3.09
3.	Stable/uncontrollable	25.66	4.66
4.	Stable/controllable	25.65	3.15

A two way analysis of variance of stability and controllability in the generation of optimism revealed no interaction effects of stability vs controllability ( $F(2, 83) = 0.713, n.s.$ ). Simple main effects were carried out on the two conditions. There were significant group differences between stable and unstable ( $F(1, 83) = 7.22, p < 0.01$ ). There was no significant difference in controllable vs uncontrollable.

Table 5.2 shows the composite A.S.Q scores for each of the four groups. Composite scores were chosen because there were no significant differences between any of the scenarios as measured by matched pair t-tests.

Table 5. 2 Mean scores for each attribution for each group

Group	Attribution			
	Internal/ External	Stable/ Unstable	Controllable/ Uncontrollable	Personal/ Universal
Group 1	3.8	4.5	3.3	3.9
S.D	(1.1)	(.94)	(1.0)	(1.3)
Group 2	3.2	3.9	3.2	4.1
S.D	(1.2)	(1.0)	(1.2)	(1.4)
Group 3	3.75	5.02	2.19	3.8
S.D	(1.4)	(1.0)	(.98)	(.95)
Group 4	4.32	5.02	3.9	3.5
S.D	1.3	1.2	1.6	1.2

Two way analysis of variance revealed interaction effects of stability vs controllability ( $F(1, 83) = 9.563$   $p < 0.005$ ) with the attribution scores of

controllability. There were no other significant interaction effects for the other three attributions.

Simple main effects for each of the attributions revealed significant differences for internality - controllable vs uncontrollable ( $F(2, 83) = 4.43, p < 0.05$ ); personal/universal - controllable vs uncontrollable ( $F(2, 83) = 5.872, p < 0.05$ ); stability - stable vs unstable ( $F(2, 83) = 12.5, p < 0.005$ ).

Pearson product correlation was performed on all the attributional dimensions and the optimism scores. The participant's age band was also included to investigate whether general life experience was correlated with optimism or type of attributions. The results can be seen in Table 5.3.

Table 5.3 Correlations between dimensions of attributions, scores in optimism and age.

	1	2	3	4	5	6
	Age	Control	Internal	Optimism	Personal	Stable
1. Age		-0.07	-.17	.12	-.19	-.06
2. Control			.30*	.01	.40	.07
3. Internal				-.30*	.41***	.52***
4. Optimism					-.20	-.33*
5. Personal						.36**
6. Stable						

\* P<0.05; \*\*p<0.01; \*\*\*p<0.001

### 5.3 Discussion

The results of this study suggest that optimism about challenging behaviour is not influenced by the interactive effect of stable and controllable attributional information regarding the causal origin of the behaviour. It would appear that the participant prediction of future outcomes for the character from the video role play were more influenced by whether the information was stable or non-stable.

The choice of some attributions recorded on the A.S.Q would appear to have been influenced by an interactive effect of the two independent variables. The group that received a combination of stable and controllable information attributed a higher degree of the attribution of control compared with the group that received unstable and uncontrollable information.

There is evidence that the choice of causal attributions is influenced by the type of attributional information. The group that received stable and controllable information chose significantly higher scores in the attributions of locus of control (e.g. internal/external) and stability, compared to the effect of unstable and uncontrollable information.

The group that received the stable and controllable information and the group that received the stable and uncontrollable information chose significantly higher scores in the domain of stability compared to the group that received unstable and uncontrollable information. There was no significant difference in any of the groups in how the participants chose the personal/universal scores.

The correlation data would suggest that the greater the internal and stable attributional score, the lower the optimism. There was no correlation between control and optimism. Control only correlated with internal/external attributions.

The data from this study suggests that when a new member of staff is given stable, controllable information about the challenging behaviour of a client, they will be more likely to choose stable, internal, controllable attributions in their own explanations. What may be significant for the delivery of more therapeutic responses to challenging behaviour is that if new staff are given unstable information to describe the behaviour of a client they may be more likely to be optimistic about the client's future. The possibility of understanding how staff may develop an immunity to pessimism would be an important development for the support of residential staff.

The data would offer some support for part of the model proposed by Sharrock et al. (1990) that suggests a strong influence of stability on optimism, yet the data does not support the other part of the model that suggests a negative correlation between the attribution of control and optimism. Dagnan et al. (1998) found that optimism was the best predictor of helping but that optimism itself was best predicted by an absence of negative affect and attributions of control. One consequence of the lack of dominance of the attributions of control is to call into question Dagnan et al.'s (1998) assumption that Weiner's (1986) model can be easily applied to explain the responses of care staff to challenging behaviour (Dagnan et al., 1998).

The nature of the present analogue study meant that it was not possible to examine the influence of emotional responses and helping behaviour, because the participants had no prior experience that they could draw on to help them imagine how they would respond to the role play character.

Sharrock et al. (1990) suggest that one reason why optimism may be influenced, inversely, by stability is based on resource management. That is, if staff believe that there will be little return for their effort, because the behavioural problem is unchangeable, they will be less inclined to invest in helping behaviour.

It is difficult to test either the variable of stability or controllability in isolation from each other. If one attributes control to an individual, it is inevitable that that attribution will have some temporal reality (the control will be assumed either to be transitory or permanent). Previous researchers appear to have made the assumption that these attributions can be distinguished from each other (Dagnan et al., 1998; Sharrock et al., 1990; Stanley & Standen, 2000).

Stanley and Standen (2000) suggest that Weiner's earlier model (1979) of achievement motivation, which suggested a negative correlation between perceived stability and optimism, should be used to expand Weiner's (1986) attributional model of helping. They investigated this relationship through a correlational study using analogue scenarios and found a relationship between the dependency of a client's challenging behaviour and reduced optimism.

### *5.3.1 Criticisms of the Present Study*

Optimism in the present study is recorded by the seven point scale used by Sharrock et al. (1990) and based on earlier work by Garety and Morris (1984) and Moores and Grant (1976). It uses 12 hypothetical questions to judge how an individual will predict the future. There is a limit to what can be extracted from hypothetical data of this kind and some of the assumptions being made by some authors that care will be influenced by emotional responses and causal explanations still require further scrutiny.



### *5.3.2 Significance of the Findings*

The significance of the present data may help to understand the influence of experienced staff on the formation of predictions by new staff about the therapeutic outcome of people with challenging behaviour. It is virtually impossible that experienced staff will not reference a causal explanation about challenging behaviour. It may be made implicitly in non-technical, colloquial language but nevertheless could serve to shape the expectations of a naive carer.

Therefore, a throw away statement by the staff nurse about a client, during the induction of a new staff of, “Watch that one, he’s always kicking off,” may be dismissed by professionals as inappropriate and theoretically naive language. Yet it can be also seen as possessing internal and very stable attributions that could begin to shape the new staff members view about that client.

Hastings, Remington and Hatton, (1995) have suggested that services possesses a local culture (formal and informal) that may develop certain rules that influence and control staff behaviour. The data may go some way to support this idea by showing how information can influence the expectations of carers but it is not able to contribute to understanding how staff behaviour would be affected by the rules of others.

The central question is how can we apply the findings of research to the attributions of care staff into practical strategies that improve the life of people who challenge services with their behaviour. Attribution theory offers a way of classifying an explanation into a number of domains. Researchers have suggested that some of these domains are more important than others but the attributions of control and stability stand out as being the most influential in shaping helping

behaviour. Study four has suggested that stability is more influential in shaping optimism than attributions of control but it is now important to examine if this is the case in shaping helping behaviour. If this was demonstrated it would call into question the applicability of Weiner's (1986) model of helping.

This brings into question what type of design of study should be used to investigate this question. To date, most of the research has been correlational and involved imaginary scenarios. It is important that the ideas being discussed can be applied in a clinical setting. Therefore, rather than examining whether one type of explanation will increase helping behaviour, an alternative method would be to increase the helping behaviour of care staff and monitor the change in causal attributions. This would enable an investigation of how care staff explain challenging behaviour over a period of time and test the practical utility of the ideas discussed so far in this thesis.

Therefore the next study will move the focus of research from an analogue design to an applied setting. It is hoped to measure changes in staff causal attributions following participation in an intensive training programme designed to facilitate the service to becoming more effective in helping clients with challenging behaviour and designed to enable the staff to believe that they have become more helpful. The improved service would be the independent variable acting on the dependent variable of causal attributions. It would therefore be possible to test whether attributional dimensions change under these circumstances and if so which ones.

In such a design there would be three possible outcomes. Firstly, there may be equal change in all the dimensions. Secondly, there may be no change in any of the attributional dimensions. Or thirdly, there may be change in some of the dimension and not others. This would enable two important issues to be raised.

Firstly, it would provide a chance to apply the principles of attributional analysis in the context of a real situation with real staff, discussing real clients. Secondly, it would allow the questions raised earlier in this chapter to be addressed.

## **CHAPTER 6**

### **EXPERIMENT 5: CAN CAUSAL ATTRIBUTIONS CHANGE AS A CONSEQUENCE OF INTENSIVE STAFF TRAINING?**

## 6.1 Introduction

A Behavioural Analysis and Intervention Training (BAIT) course was developed. Although conceived as a research question it eventually became a county-wide initiative by the local Psychology Department to offer staff training to groups of staff working with clients with high levels of challenging behaviour. This provided opportunities to pilot teaching programmes before running the study.

The course was designed to reflect best practice from the literature on staff training and the guiding principles were as follows. An important first step was to arrange that management support would be provided. This recognises that all training happens within the context of a complex organisation and is essential to develop a structure that will support any new skills or procedures that are developed through training (Fleming & Sulzer-Azaroff, 1989).

Based on the idea that peer groups may represent a natural 'community' of social reinforcement (Kohler & Greenwood, 1986), it was decided to work with a whole staff team to ensure that staff could provide feedback on each other's performance.

Training supervisors within a staff team has been shown to be effective (Parson & Reid, 1995). Therefore, two mentors were identified prior to training. These were to become involved in planning and data gathering and received extra training to enable them to offer on-the-job support and training.

All staff were to be trained in core skills necessary for functional analysis, especially in the in data collection of behavioural observations. Hastings and Remington's (1994b) proposed that behavioural analysis of challenging behaviour should be expanded to include the functional analysis of staff behaviour and in particular an analysis of verbal rules. It is a relatively easy step during the teaching of the principles of functional analysis to direct staff to apply these principles to their own behaviour. This is especially important given the research that has demonstrated that staff behaviour is implicated in the maintenance of challenging behaviour (Carr et al., 1991; Hall & Oliver, 1992; Taylor & Carr, 1992). It is also important in helping staff to appreciate how their own motivation, can be understood in terms of reinforcements and punishers in the work environment. Therefore, self-monitoring procedures were developed with the staff team, to set daily goals. This procedure has been shown to be effective in managing staff behaviour (Burgio, Whitman & Reid, 1983).

The literature has been consistent in depicting the stressful nature of caring for clients with challenging behaviour (Bersani & Heifetz, 1985; Bromley and Emerson, 1995; George & Baumeister, 1981; Quine & Pahl, 1985). Staff would therefore be taught the principles of stress management. This would involve helping staff to become more effective in appraising stressful events on the ward and to increase their range of adaptive responses (Lazerus & Folkman, 1984). They would therefore be taught how to record ABC charts of their own emotions. Kushlink, Trower and Dagnan (1997) successfully incorporated techniques and ideas from rational-emotive-behaviour therapy (Ellis & Harper, 1975) into staff training that involved self-monitoring of emotional responses to challenging behaviour using A-B-C charts.

Teaching was provided by a trained nurse behaviour therapist (under supervision of the author, a clinical psychologist). The nurse therapist was available through the week to work along side individual staff to practise core skills and offer

assessment (ecological assessment) of each trainee's skills before and after the course in the natural environment. This has been proposed as the best way of evaluating skills transfer (Landesman-Dwyer & Knowels, 1987; Farrell, 1982; Milne, 1984 a) together with follow-up data on the maintenance of skills after training (Ivancic, Reid, Icvata, Faul & Page, 1981).

Finally, the training will adopt experiential teaching methods (Kolb, 1982) and incorporate practical examples from the team's working experience. Once workshops were finished a follow-up period was offered to the team while they established regular data gathering and decision making protocols.

With such a detailed and thorough training programme it should be possible to demonstrate improvement in the therapeutic help offered to clients. In doing so, it will be possible to measure what change occurs in how care staff attribute causality about challenging behaviour.

### *6.1.1 Summary*

The present study will investigate the effect of intensive staff training on how nursing staff attribute causality about challenging behaviour. Because previous research (Stanley and Standen, 2000; Dagnan, et al., 1998; Sharrock et al, 1993, has implicated both attributions of stability and control in the desire to help it is predicted that both attributions will change as a consequence of effective, intensive staff training.

## **6.2 Method**

Recruitment of participants depended on three variables. The first required a stable team of staff who worked with clients that presented with challenging behaviour. The second was organisational and management support to ensure that all the staff would be able to attend all aspects of the training. Finally, the staff team would co-operate with the teaching and the study.

The study was carried out on a ward designated for clients who had challenging behaviour within a large psychiatric hospital. None of the clients had learning disabilities but all presented with problems with aggressive behaviour. Many of the clients had been on the ward for over 12 months. There was a high ratio of staff to clients.

### ***6.2.1 Participants***

The full compliment of 14 nursing staff began the study. This included all grades, charge nurse to nursing assistant. The range of experience was from 7 months to 16 years and the mean was 5 years. The average age was 34 years. The sex ratio was 6 males and 8 females. The staff team gave their agreement to allow the study to take place.

### ***6.2.2 Staff interviews***

Permission for the study was given by management and verbal consent for participation in the study was obtained from each staff member. Anonymity and confidentiality were maintained at all times and this was stressed to the participants.



Participants were also verbally debriefed individually, a few weeks after completing the semi-structured interview.

Interviews took place in a quiet room. The time for each interview had to be made with the ward manager to ensure that cover could be provided when staff left the ward to be interviewed. The same interviewers were used as in Study One. All were supervised by the author and followed the same format. The interviews lasted over an hour and a half and were recorded onto audio tape following which each transcript was typed for analysis.

### *6.2.3 The Development of the Interview*

The interview was a development of the earlier format used in Study One (See appendix C). First, Participants were asked to list the full range of behavioural problems presented by clients on the ward. Secondly, general questions were asked about meeting the needs of these clients. They were then required to recount their last working day. This was intended to act as a reference point in remembering. The second part of the interview focused on the behaviour of two clients who were regarded as the most challenging. (When the interview was repeated after training, the staff had to discuss the clients chosen at this stage). The same questions were asked about each client. A hierarchy was drawn up of behaviour problems for each client. Participants were then required to remember the last time they had directly experienced the behaviour that they regarded as most challenging. To this specific incident they were required to answer questions on what caused the behaviour, their response to the behaviour and what they thought and how they felt during the incident. They were also required to state what they thought and how they felt after the incident was over and they had time to reflect on what had happened. This was included to reflect the transactional model of stress that states that a two appraisal to a stressful event (Lazarus & Folkman., 1984). As in the First Study, participants were

asked to imagine what the client was thinking and feeling as they behaved in a challenging manner. Again this was to try and ascertain how participants attributed intent to the clients.

#### ***6.2.4 Measures***

##### ***Attributional codings***

The responses were recorded verbatim and typed up as transcripts as recommended by The Leeds Attributional Coding System (Stratton et al., 1986). Each transcript was coded by the author using an amended version of the Content Analysis of Verbatim Explanations (Schulman, Castello and Seligman, 1989; Peterson & Seligman, 1988). Inter-rater reliability was tested for 20% of the codings. Samples were taken from the interviews before and after teaching. This was achieved by training a second coder who had opportunity to practice with scripts that were then discussed to agree on discrepancies. Once agreement was achieved the second coder received samples of staff attributions with all personal information of staff removed, chosen randomly and out of order. To calculate inter-rater reliability Cohen's Kappa was used and as can be seen from the Table 6, good reliability was achieved.

Table 6. Cohen;s kappa Scores for inter-rater reliability for each attribution.

	Attribution			
	Internal	Stable	Controllable	Personal
Time				
Before	0.74	0.71	0.81	0.58
After	0.78	0.74	0.78	0.69

The C.A.V.E was chosen because it has a seven-point scale for each attribution. This provided a greater sensitivity to any changes that occurred in the explanations of care staff. Small changes were made to the original coding system (Peterson et al., 1991). The dimension of global/specific was omitted for reasons given in chapter three. This was replaced with the dimension of personal/universal to enable a comparison with the previous studies.

A variety of methods of content analysis exist. It was decided to use a method that had been previously used to investigate staff explanations about challenging behaviour. Hastings (1995) incorporated Dey's (1993) content analysis in his analysis of interview data with nursing staff. This included (a) dividing the data into manageable parts (b) collecting responses together that related to the area of interest (c) creating categories that describe similar responses within the general groupings and (d) combining or splitting categories where data can best be described in a rearranged structure (Hastings, 1995 p. 302). This inevitably leads to subjective data but this can be improved by one of two ways. The first is to get independent raters to generate blind -rater comparisons (Cassell & Symon, 1994). Secondly the categories

can be left as broad as possible to increase the ease of use for other coders but also by making the data transparent increases the chances that others can understand how the decision of coding were reached. In this way separate codings were developed to code staff thoughts, feelings, responses and accounts of frequency and duration. A second person coded 30% of the codings. The same equation of rater reliability was used and achieved reliability scores between 85% and 100%.

To measure the effectiveness of the course a number of measures were taken. It was important that the course was effective in improving the general therapeutic climate rather than just increasing the number of individual behavioural programmes. A measure was therefore needed to record change in how staff viewed the therapeutic climate of the ward to show that the training had been successful in enabling staff to be more helpful in their work with clients.

*Ward Atmosphere Scale (Moos, 1974)*

The Ward Atmosphere Scale (Moos, 1974) is a measure that can be used to compare how a staff team view their ideal ward with their existing work environment. It consists of 100 statements that require a true or false answer around three main themes of relationships, treatment programme and system maintenance. It has the advantage of being easy to administer. It was administered to all the staff before the teaching started and after the course was completed.

The category of relationship covers three sub-headings of involvement, support and spontaneity. These assess the extent to which clients are involved in therapeutic programmes, the extent to which staff support clients and clients support and help each other and the amount of spontaneous and free and open expression within all these relationships.

The next four sub-scales (Autonomy, Practical Orientation, Personal Problem Orientation and Anger and Aggression) are conceptualised as Treatment Programme dimensions. Each assesses a dimension specifically relevant to the type of treatment that has been developed. Autonomy assesses the extent to which clients are encouraged to be self-sufficient and independent and to take responsibility for their own decisions. Practical Orientation and Personal Problem Orientation reflect two of the major treatment orientations. Examples given of these type of approaches in the manual are token economy programmes and client-run employment service programmes. Both these treatments can have an emphasis directing clients toward practical preparation for release from hospital; on the other hand, other treatment programmes may have an emphasise on personal problem and seek to orient client's toward increased self-understanding and insight.

The Anger and Aggression subscale is also conceptualised as assessing a Treatment Programme dimension since the amount of emphasis on the expression of anger is related to psychotherapeutic values of staff, i.e. a belief that it is beneficial to express angry feelings openly. Together these four subscales assess the major dimensions along which different psychiatric programmes may vary.

The last three subscales (Order and Organisation, Programme Clarity and Staff Control) are viewed as assessing System Maintenance dimensions. These dimensions are system oriented in that they are related to keeping the programme functioning in an orderly, clear, organised and coherent manner.

#### *Coping Response Questionnaire (Billings & Moos, 1982)*

To measure general improvements in coping, The Coping Response Questionnaire was administered to all staff at the first workshop. This was developed by Billings and Moos (1982) as a means of measuring coping responses to stressful events. It is an easily administered questionnaire that requires participants to consider a recent stressful life event and to answer 19 yes/no items that probe how they dealt with that event. The items are grouped into three methods of coping categories: active-coping, 6 items; active-behavioural, 6 items; avoidance, 5 items.

Although caution is advised when using this measure when attempting to identify consistently positive or negative types of coping, it was thought appropriate to measure general coping within each staff member during the course of the study to elicit if individual change occurred in the use of general coping strategies.

#### *Permanent Product Record of Aggressive and Violent Episodes*

The hospital keeps a record of all violent incidents. This provides a means of measuring any change in the frequency of aggressive outbursts on the ward on a monthly basis. This would allow a comparison of the ward receiving training with the rest of the hospital. To do this a 4-month period prior to the training starting was used as a measure of baseline. Monthly records could be taken for the duration of the course and for a specified follow-up period once the course was completed. The

great advantage of this is that staff would be unaware that this data was being scrutinised.

### ***6.2.5 Procedure***

Agreement was given by management to ensure that every member of the staff team was able to attend each workshop and fulfil the course work. This required substantial planning meetings between managers in the hospital and the course directors. Most importantly, agreement was given to allow the course to run for a minimum of 12 weeks with additional workshops to ensure competence in the staff if necessary.

Workshops were offered twice a week to ensure that all members of each shift were able to attend. Cover was offered on the ward by management to allow staff to attend. Staff who missed any workshops were offered catch-up sessions.

It finally took 17 two-hour training sessions to complete the curriculum to specified levels of competence in all staff. The curriculum had been developed over an 18 month period of running training programmes for ward staff within a number of health settings. It can be broken down to a number of core components:

1. Identifying groups aims
2. Observation and recording

3. Understanding the principles of reinforcement and applying them to staff behaviour.
4. Understanding and identifying and problem solving stressors in the work place using cognitive reappraisal model (Lazarus & Folkman, 1984).
5. Functional analysis of challenging behaviour - primarily using ABC direct observation and analogue assessments.
6. Creating functional goals for clients
7. Developing valued roles for clients. Incorporating the principles of The Framework for The Five Accomplishments (O'Brien, 1987).

The design of the order of the workshops was specifically to encourage staff to examine their own reinforcements within a ward before they began examining the influences on client behaviour.

(See appendix D for more detailed over view of course content).

In addition to the workshops, staff had to complete assignment work. Each of the first three categories required each staff member to practice skills within the work setting under supervision. This involved:



1. Formal data gathering on client behaviour and interactions with staff, using a variety of observational techniques, e.g. continuous recording, momentary time sampling, interval recording
2. Graph data and present findings at team meeting.
3. Charts were recorded which included a corresponding category of how the staff member thought through each part of the observation. This then had to be discussed with a supervisor.

All staff attended weekly data analysis meetings on the ward, as part of hand over time. Staff were encouraged to offer ideas but had to seek empirical verification of their ideas.

### **6.3 Results**

To measure the effectiveness of the course in reducing the frequency of aggressive behaviour, a permanent product measure of the frequency of violent incidents forms reported on the ward was compared to the rest of the hospital. This is a routine measure that has to be recorded by law and allowed a comparison to be made of a four-month baseline period prior to training, the subsequent training period with an additional eight month supervised follow-up period. Data was gathered for a further three months when all teaching and supervision support was removed from the ward. Because all the hospital use the same record forms, a comparison could be made between the trained ward and the rest of the hospital over the same time period. The results can be seen in Fig 6.1.

Although the training course lasted for 17 weeks, a number of weeks were lost due to holidays. Therefore the training course took five months to complete.

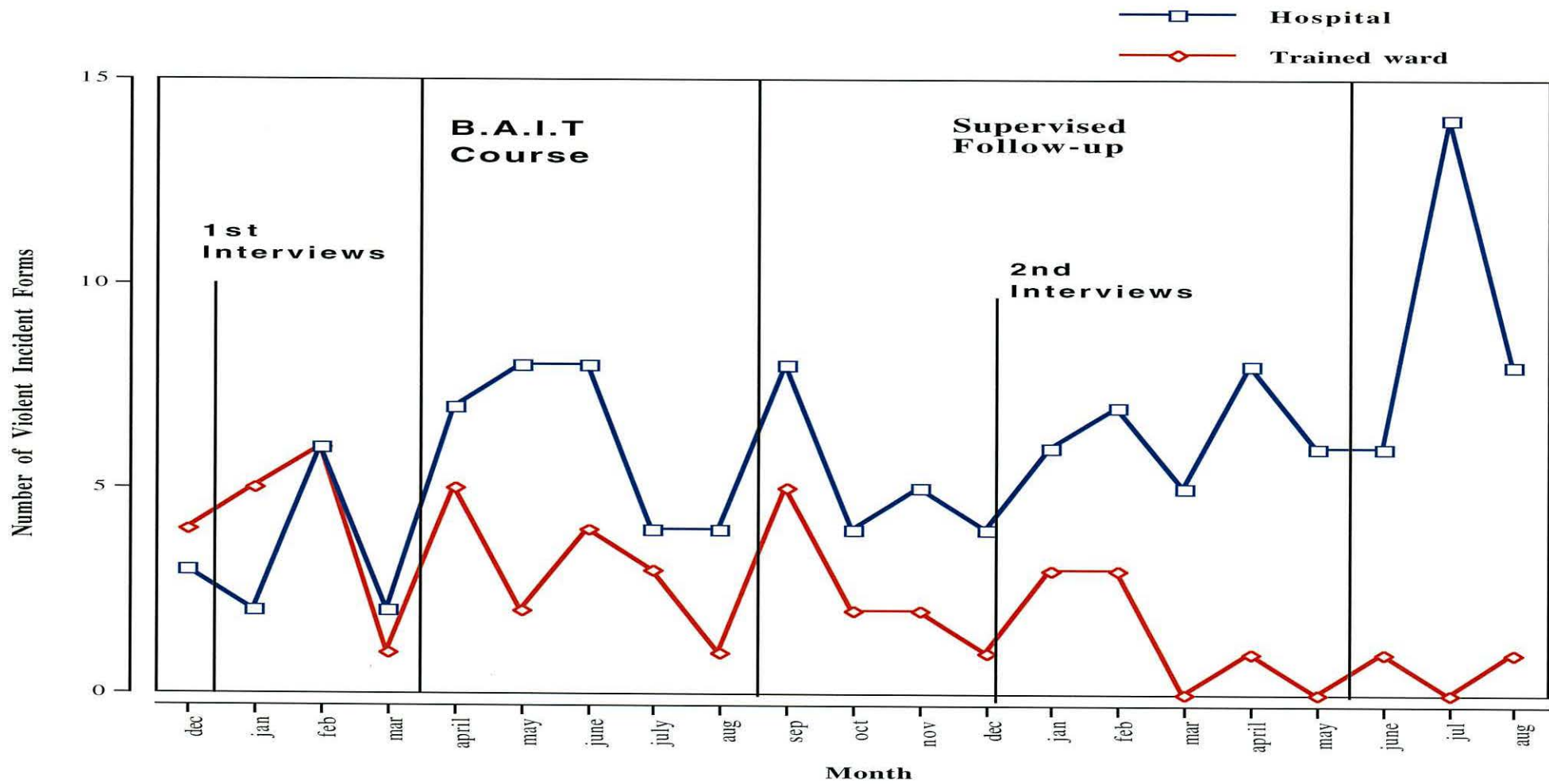
Consistent lower frequency rates of incident forms do not occur until the end of the supervised follow-up period. During the training, the trend tends to fluctuate. Therefore, staff would not have been able to experience any major reductions of high impact aggressive behaviour until nearly twelve months after the training started.

There is a large increase in the number of violent incident forms reported by the rest of the hospital that coincided with the end of the supervision and support period. This may be explained by the opening of a new secure unit on the grounds of the hospital that catered for acute admissions of psychiatrically ill people with disturbed behaviour.

Changes in the scores of the Ward Atmosphere Scale can be seen in Figure 6.2. The shaded area reflects the mean scores of staff opinion prior to training, of what would constitute an ideal ward environment. The unbroken line reflects the views of the staff, again taken prior to training, of how they regarded their present ward environment. The dotted line shows how the staff team rated their ward environment ten months after starting training.

The data from the Ward Atmosphere Scale would suggest that a number of important changes had occurred in how staff viewed the environment of their ward after the training was complete. The ward environment is regarded as more supportive and helpful as a consequence of training. This can be judged by the subscale scores of involvement, support and spontaneity moving closer to the original staff view of an ideal ward. This suggests that the staff see themselves as more understanding of the needs of the clients and more able to help and encourage

them. The clients are seen as being encouraged to openly express their feelings towards other clients and staff. This is reflected in the spontaneity score, which overtook the score for the original ideal ward.



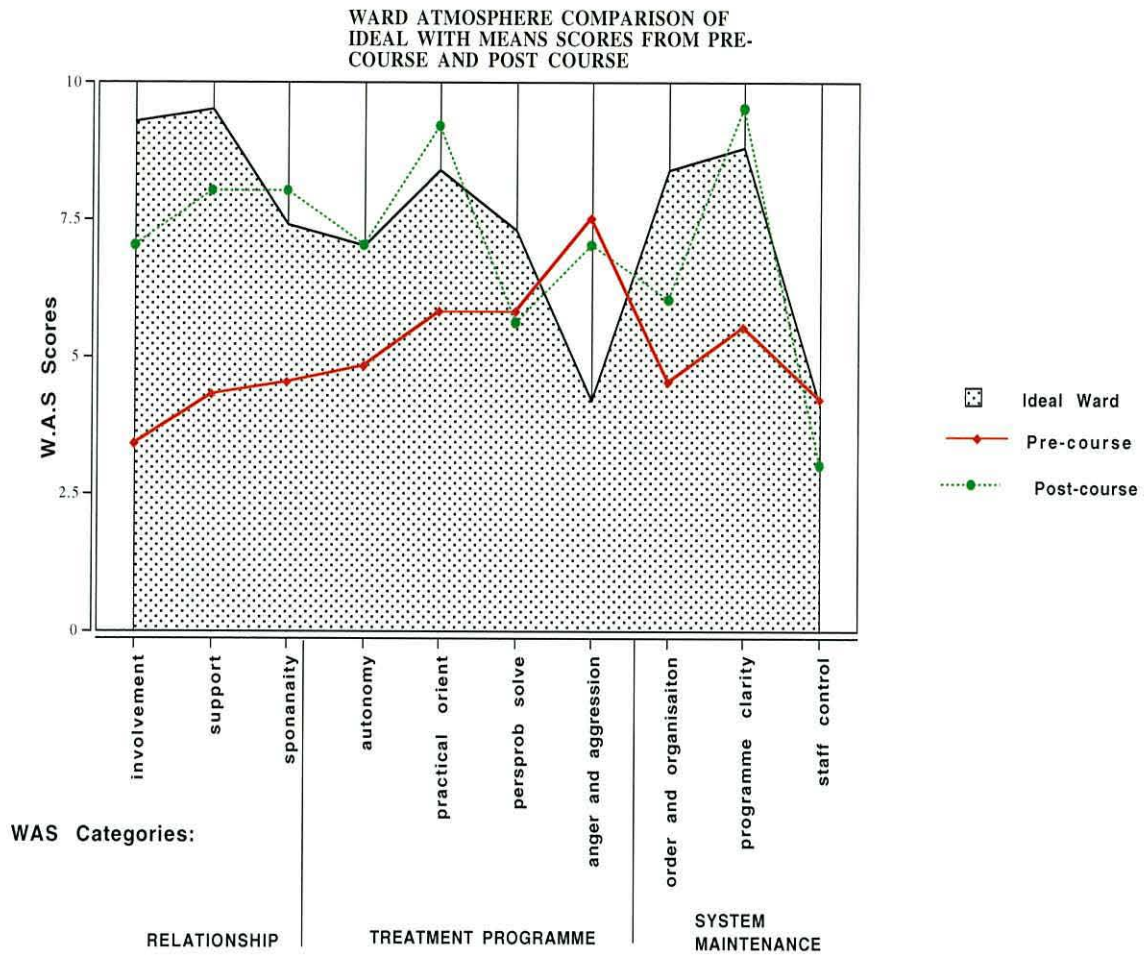
**Figure.6.1 Comparison of Monthly Violent Incident Form Totals for Trained Ward Compared to the Rest of the Hospital.**

A number of interesting changes occurred in the way staff regard the treatment programme. Post training, the clients are regarded as having more autonomy (more than was originally conceived as the ideal). The treatment programme itself is viewed as having an increased practical orientation (perhaps as consequence of using behavioural programmes). Yet personal problem solving by clients remains unchanged (shown as category personal 'prob solve').

There would appear to be a reluctance in allowing clients to express their anger and aggression which again remains unmoved from the original view of the present ward atmosphere (represented by the category anger and aggression in Fig 6.2).

Finally, the three categories of system maintenance would suggest that there has been improvement in the working of the system post training. There was a small increase in the category of order and organisation and much greater increase in the programme clarity, while there seems to be a small reduction in the amount of staff control that may reflect a restriction of client's behaviour.

Figure 6. 2.



The mean scores for each attributional dimension for each of the two clients can be seen in Table 6.1 to 6.4.

A series of repeated measure ANOVAs compared the attributions of staff before and after the training for explanations about two clients. The predicted change

in controllability or the personal-universal dimension was not found. There was significant change in the stable-unstable attributions, yielding  $F(1, 14) = 7.81$ ,  $p < 0.005$  for the client regarded as the most challenging and  $F(1, 14) = 4.82$ ,  $p < 0.05$  for the second most challenging client.

An examination of the mean scores (Table 6.1) reveals that all the changes were in the predicted fashion. The repeated measures ANOVA for the attribution of internal/external yielded a significant change in the first choice client  $F(1, 14) = 8.28$ ,  $p < 0.005$  but not with the second client  $F(1, 14) < 1$ .

Table 6.1. Mean attribution scores, for two clients, for internal & stable attributions pre- and post training. (Standard deviations are in parentheses).

	<b>First Choice Client</b>	<b>Second Choice Client</b>
<b><u>Attribution</u></b>		
<b>Time</b>	<b>Mean</b>	<b>Mean</b>
<b><u>Stable/Unstable</u></b>		
Pre course	5.883 (0.78)	5.991 (0.749)
Post course	4.425 (0.898) F (1, 14)=7,81**	4.591 (1.393) F (1, 14)=4.82*
<b><u>Internal/External</u></b>		
Pre course	6.017 (1.33)	5.7 (1.11)
Post course	3.917 (1.69) F(1, 14) =8.28 **	4.845 (1.56) F(1,14)=0.80

\*P<0.05, \*\* P<0.00



Table 6.2. Mean attribution scores for two clients, personal & control attributions, pre- and post training. (Standard deviations are in parentheses).

		<b>First Choice Client</b>	<b>Second Choice Client</b>
<u>Attribution</u>			
	<b>Time</b>	<b>Mean</b>	<b>Mean</b>
<u>Controllable/Uncontrollable</u>			
	Pre course	5.33 (1.155)	5.182 (1.537)
	Post course	4.667 (1.497)	4.6 (1.174)
		$F(1, 22) = 1.13 < 1$	$F(1,14)=0.70<1$
<u>Personal/Universal</u>			
	Pre course	4.727 (1.489)	5.182 (1.401)
	post course	4.9 (1.595)	5.2 (1.135)
		$F(1,14) = 1.00 < 1$	$F(1,14) = 2.52 < 1ns$

Table 6.3 reveals the mean scores for each of the three parts of the Coping Response Questionnaire taken before the training started and after it was completed (the same time as the second interviews). To test for significance a repeated measures one way analysis of variance was performed on the data and revealed no significant changes.

Table 6.3 Comparison of scores for the Coping Response Questionnaire, before and after the course. (Standard deviations in parentheses).

Coping Styles	Mean Scores		F-scores
	Before training	After training	
Active Behaviour	15.9 (3.27)	13.7 (4.2)	0.456 n.s
Active Cognitive	18 (2.7)	17.7 (2.9)	0.87 n.s
Avoidance	17.2 (3.9)	15.8 (3.8)	0.473 n.s

### *6.3.1 Content Analysis of staff responses to challenging behaviour*

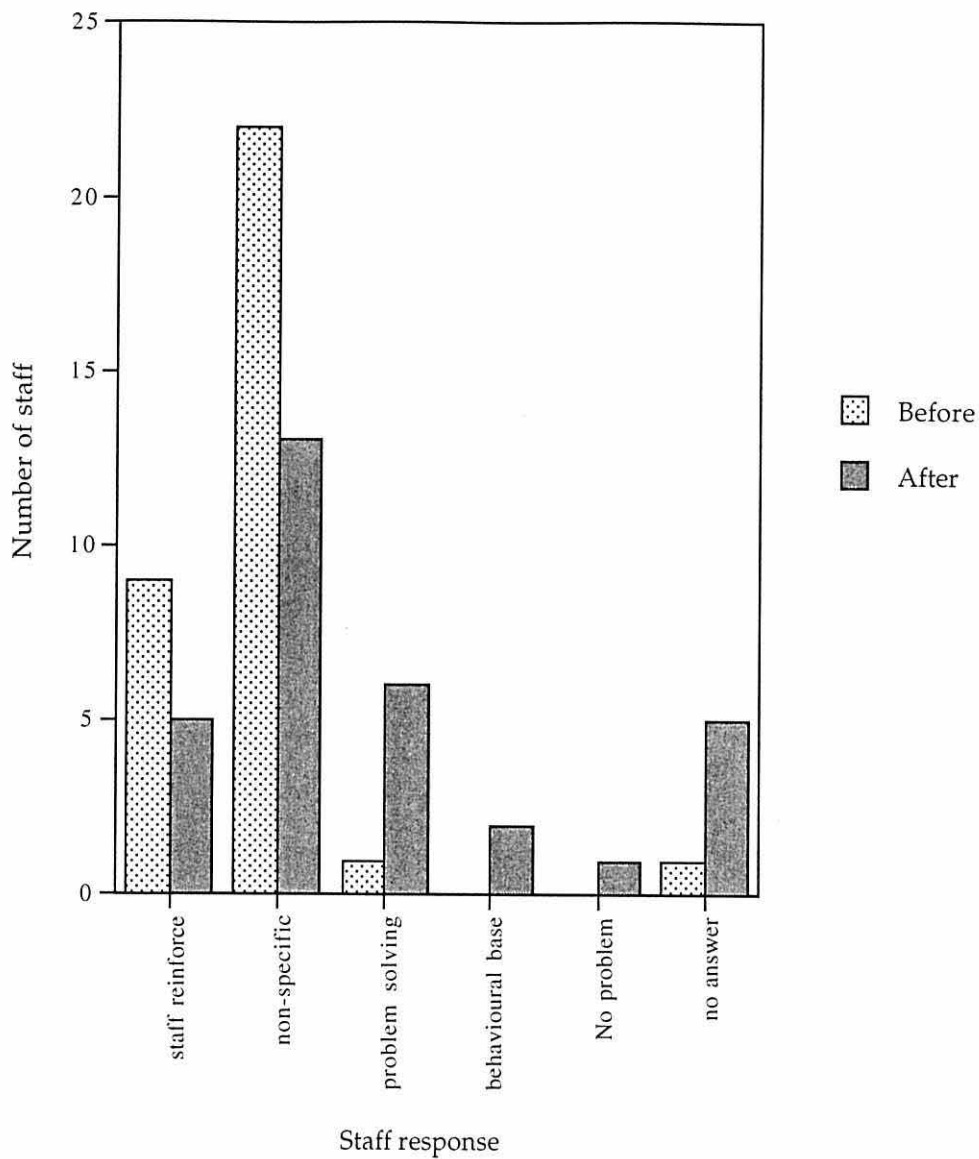
Staff reports of their own response to challenging behaviour produced six categories. These are:

1. 'Staff reinforcement,' was used when staff expressed a response that could be clearly identified with their own reinforcement, such as, "removed him,.. because he was interfering with my break."

2. 'Non-specific' was used when the staff response was unclear and not related to a behavioural programme, for example, "...make sure everyone is all right."
3. 'Problem solving' was used when staff suggested a response that was attempting to problem solve but did not show evidence of a formal programme.
4. 'Behavioural base' refers to the application of a written behavioural programme.
5. 'No problem' was used when the client no longer presents with a challenging behaviour.

Figure 6.3 shows the difference between how staff reported their responses to clients with challenging behaviour prior to training compared to how they reported after training.

Figure 6.3 shows that staff reduced their non-specific descriptions and increased their use of problem solving strategies. There is a smaller decrease in responses that suggested staff reinforcement. Surprisingly few accounts of behavioural programmes were listed (even though several were in place during the interview).

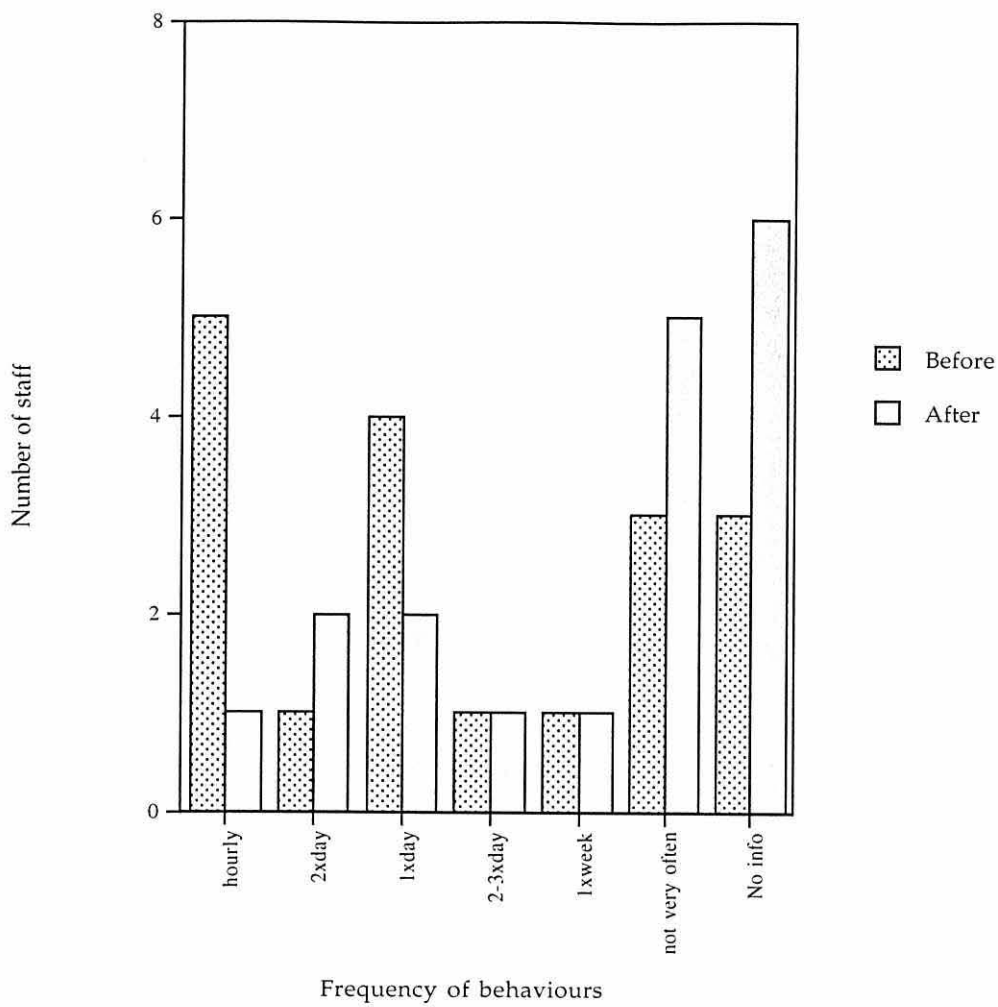


**Figure 6.3 : Staff Responses to Challenging Behaviour Pre and Post Training.**

To compare staff reports of frequency and duration of the recent behaviours of the two clients, several categories of time were constructed. Although a number of staff failed to offer answers to these questions the data can be seen in Fig 6.4 and Fig 6.5.

Staff reports of the frequency of the challenging behaviours are inconclusive. There would appear to be a reduction in the most frequent category (hourly) and also in once a day. Post training seemed to inhibit many of the staff's answers.

The data on self-reports of duration are equally inconclusive. Again the training has limited the answers given to this question but one member of staff would appear to still believe that behaviour of one client has lasted consistently for more than one week. (Full week corresponds to a behaviour lasting for a seven-day period).



**Figure 6.4: Comparison of Reports of Frequency of Challenging Behaviour. Pre and post course**

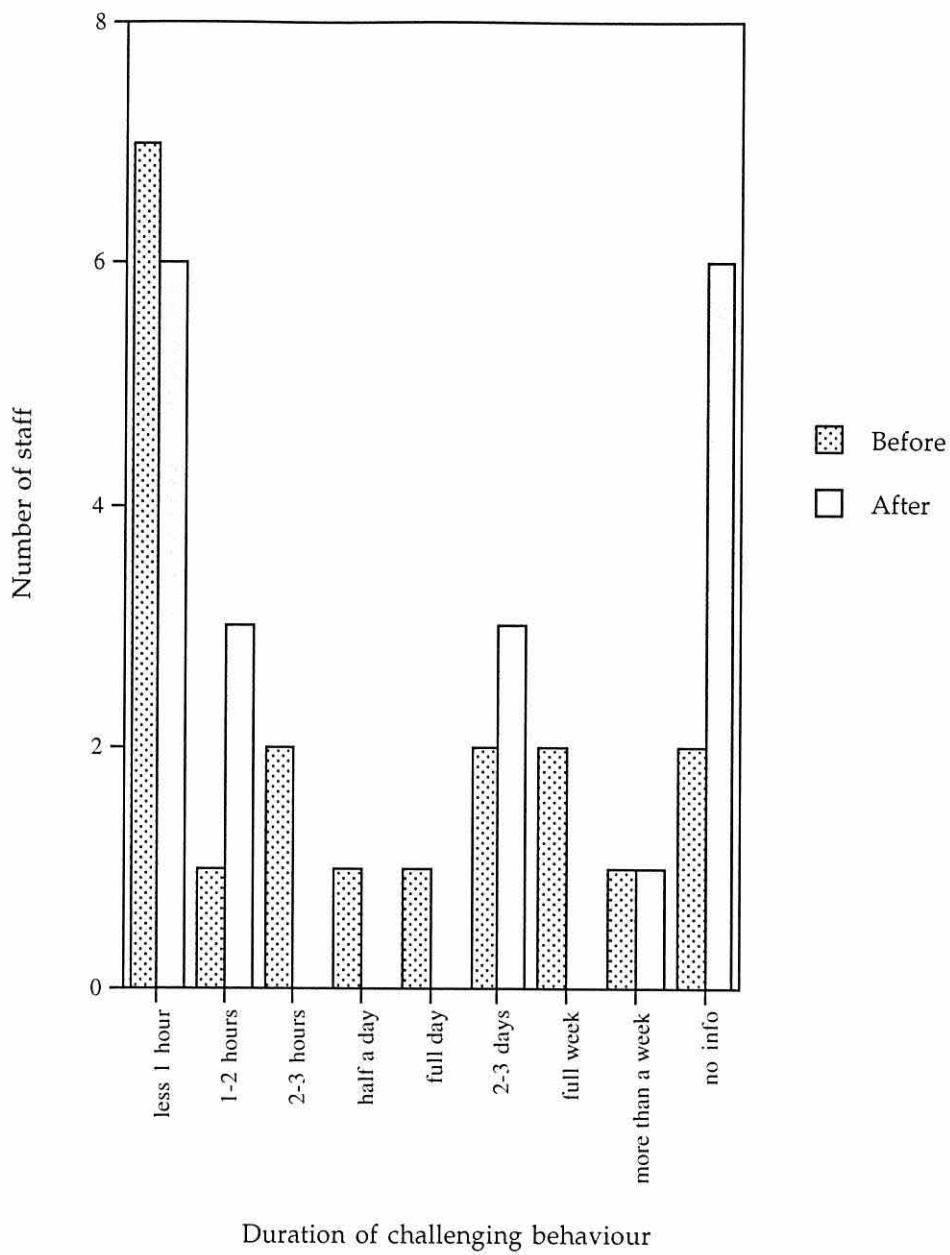


Figure 6.5: Duration of Challenging Behaviour - Reported by Staff

### ***6.3.2 Content Analysis of Staff Accounts of Their Thoughts and Feelings during a Challenging Behaviour Incident.***

A content analysis of staff responses about their thoughts produced eighteen categories for thoughts and seven for feelings.

#### ***What staff think during and after a challenging behaviour incident***

The categories for coding thoughts were grouped into three main headings. Negative, to denote when there was no evidence of a therapeutic response towards the client. Positive, when the thought possessed some aspect of responding positively to the needs of the client. Neutral, when it is not clear how to code the thought. Each of the three main headings were broken down to several sub-headings to try and make the data as transparent as possible.

The negative heading covers the following categories:

1. 'Threat,' was used when staff described a fear of some form of threat of aggression from the client.
2. 'Happen again,' was used when the staff suggested that the behaviour may occur again.
3. 'Remove the client' is a self-explanatory category of what the staff thought should happen.



4. 'Curse.' A number of staff revealed that they had sworn or cursed as a consequence of the challenging behaviour.
5. 'Can't change,' was used to denote that the staff thought the client was not capable of changing.
6. 'Waste of time' was used when the staff declared that their response was ineffective.
7. 'Guilt.' This was only used in the record of secondary thoughts that denoted that the staff felt some form of guilt.

There were five categories that were difficult to code as either positive or negative and are included under the heading of neutral thoughts. These are:

1. "OK," when staff had very little to say about their thoughts, such as, "Nothing really, I was fine,"
2. "Here we go again," was a common response but it is an ambiguous statement in regard to therapeutic response.
3. 'Relieved,' was ambiguous because it was not clear if it referred to the relief that to the success of carrying out a programme successfully or to the relief that accompanies avoidance of an aversive situation.

4. 'Raison d'être' when staff commented that 'this is what we are here for.' Again, an ambiguity exists over the focus of the statement and whether it refers to helping or to excluding a client. For example, by expressing a desire to keep other clients safe by the removal of an aggressive client it is difficult to know of the therapeutic intent for the client who has been aggressive.
5. 'Vacant', was used when staff said categorically that they did not have a thought.

Seven further categories were used when there was evidence of some form of positive therapeutic response.

1. 'Own performance' was used when there was some indication that the staff had reflected on their own behaviour or some form of self-evaluation against a designed programme.
2. 'Improvement', referred to an acknowledgement that an improvement had taken place in the behaviour of the client.
3. 'Cause,' signified that staff had started to ask questions about what factors might lead to the behaviour.
4. 'If only I could', was used to refer to statements that indicted that the staff would like to do something different to help a client but are not able due to organisational constraints.

5. 'Like client,' refers to when staff made a direct comment that they appreciate or personally like the client.
  
6. "Self-control," was used when there was an indication that the staff were attempting to stay calm.
  
7. "Clients needs" was used when staff considered some aspect of the clients needs.

Figure 6.6 shows a comparison of the categories of thoughts experienced by staff during challenging behaviour. It is a simple frequency count. Staff gave more than one example of each category and many had positive with negative and/or neutral thoughts. The graph demonstrates how the number and type of thoughts among the staff

team changed as the training progressed.

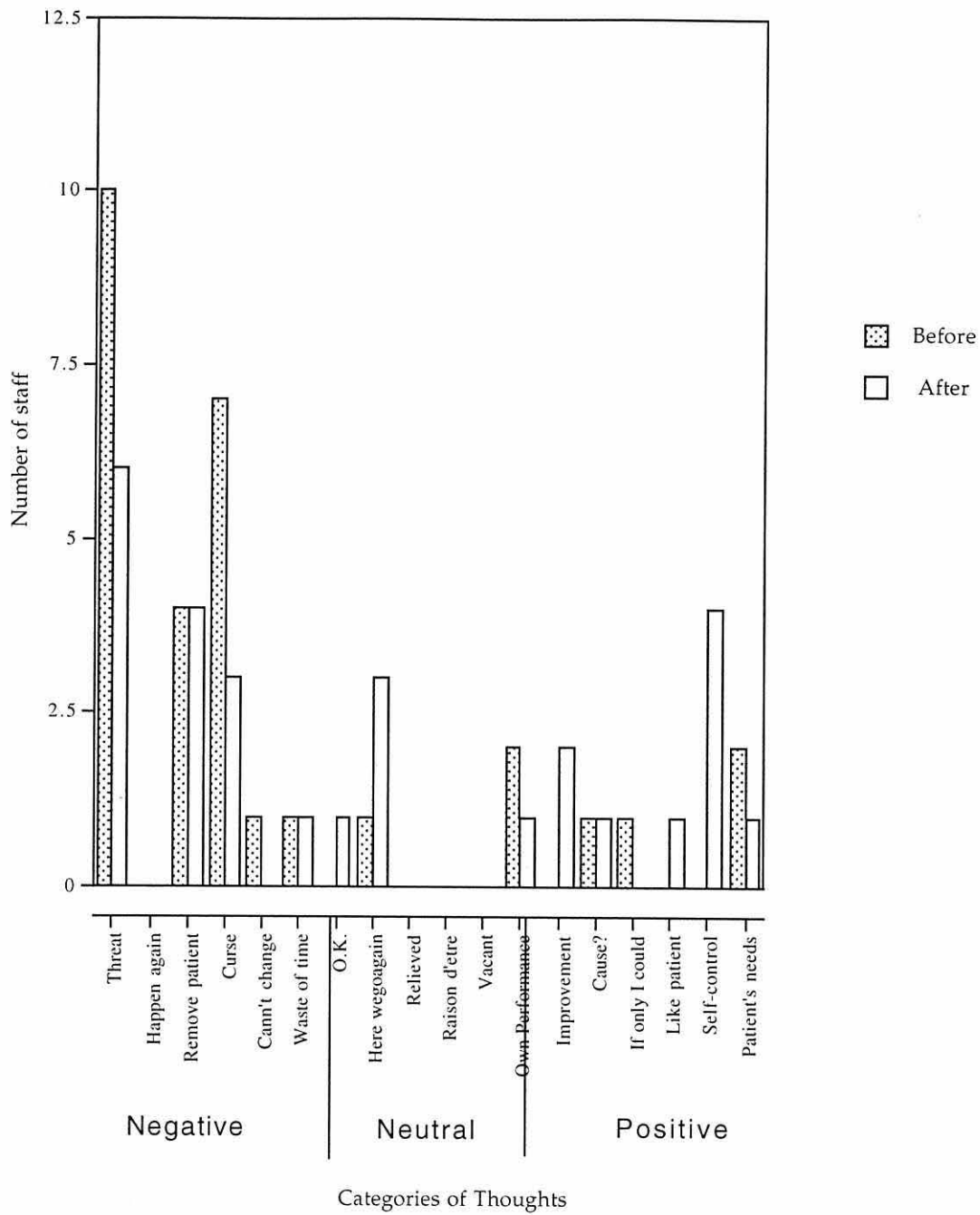


Figure 6.6: Comparison of first thoughts about challenging behaviour

Many staff acknowledged that the behaviour was some form of a threat to their own or others safety. While several staff considered the removal of the client as their first thought. Again this may have had safety in mind or it may have motivated primarily to remove an aversive situation.

Clear obvious therapeutic responses only start to occur after the course has finished and then only in small numbers. Such thoughts are about self-monitoring and maintaining control, considering the clients needs or acknowledging that the client is liked or that the client is showing signs of improvement.

Figure 6.7 shows a similar comparison of self reports of how staff thought about challenging behaviour before and after training but this time the focus was after the incident was over.

There is a small increase in the number of thoughts that were related to some form of threat but a relatively large decrease in the amount of cursing used in staff thoughts. There is an interesting increase in thoughts that suggests care is a waste of time while guilty thoughts cease to exist after the course is complete.

The frequency of thoughts about staff performances shows little variation. There are two examples of new types of thoughts that corresponds with the training and both fall in the positive category. The first is one account of liking the client and the second is four accounts of self-control.

Overall, the graphs shows a decrease in the frequency of negative type thoughts and a small increase in positive and neutral thoughts.

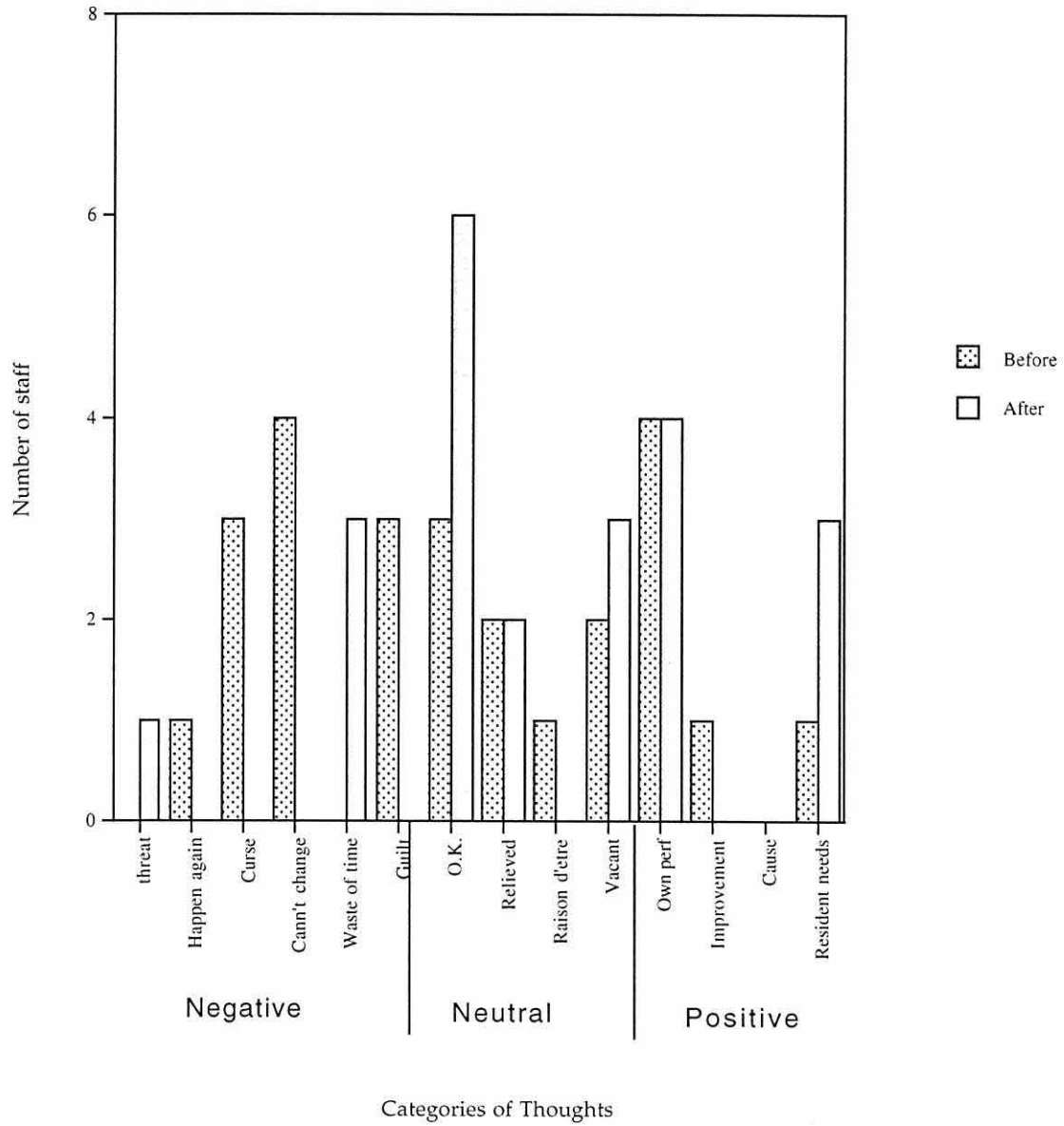


Figure 6.7: Comparison of secondary thoughts about challenging behaviour

*Change in staff reports of emotional response to a challenging behaviour incident.*

The self-report of emotional responses were content analysed and placed into 7 categories. These are as follows:

1. 'Unease,' was used to categories any description of mild distress such as 'felt tense' or "on edge."
2. 'High arousal,' was used when the staff gave a clear description of physiological arousal such as dry mouth, shaking legs, heart beating, sweating, adrenaline pumping and increased breathing.
3. 'Emotionless' was used when the staff explicitly stated that they had felt nothing.
4. 'Empathy.' this is self-explanatory and was used when staff expressed empathy towards a client.
5. 'Job satisfaction,' was used when staff revealed that they had felt good about their job.
6. 'OK,' was used when the staff said "OK" to the question and was assumed to be a minimal but generally, neutral response.
7. 'Not stated' was used when no information was offered

Emotionless was a category used when staff had said they had felt nothing. This is in contrast to the category, 'Not stated,' which was used when the staff answered with an irrelevant answer and failed to answer the question.

Figure 6.8 shows the frequency of different feelings expressed by the staff prior to training and after the course was complete. As expected, there was lowering in the number of accounts of high arousal states, while the number of accounts of unease remained the same. There was no account of empathy prior to training but this did emerge in a relatively small group of staff once the course was complete.

There is a decline in the job-satisfaction category after training. This does not mean that staff lost job satisfaction but rather that no one made reference to just doing their job when asked how they felt.

Finally, Figure 6.9 compares the staff accounts of their emotional response to challenging behaviour sometime after the incident was over. This shows how staff felt when they had time to reflect on the incident and were no longer under threat.

There is some similarity between the pre and post scores for reports of emotional response after the behaviour is over. The most notable change is that after training there were no reports of high arousal at this stage.



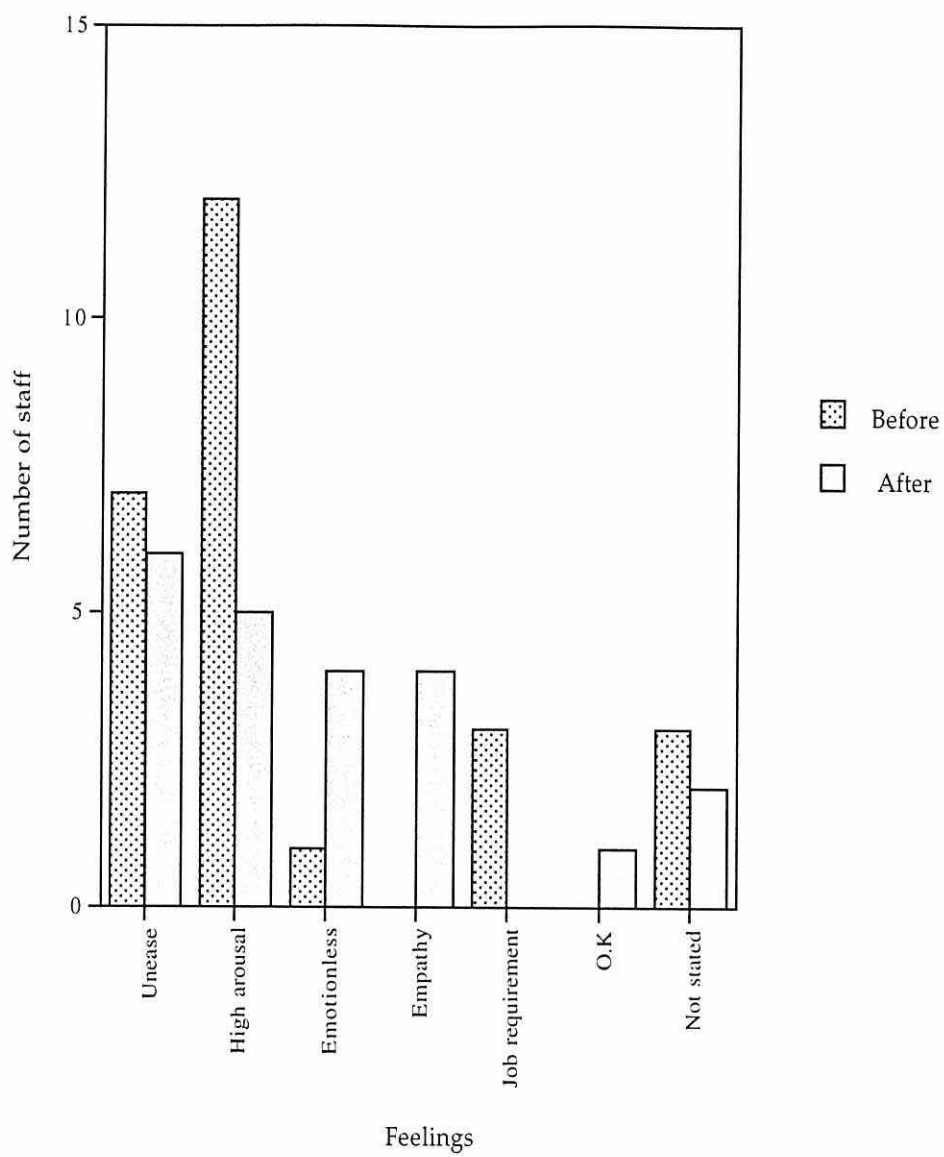


Figure 6.8: Staff Feelings in Response to Challenging Behaviour. Pre and Post Training

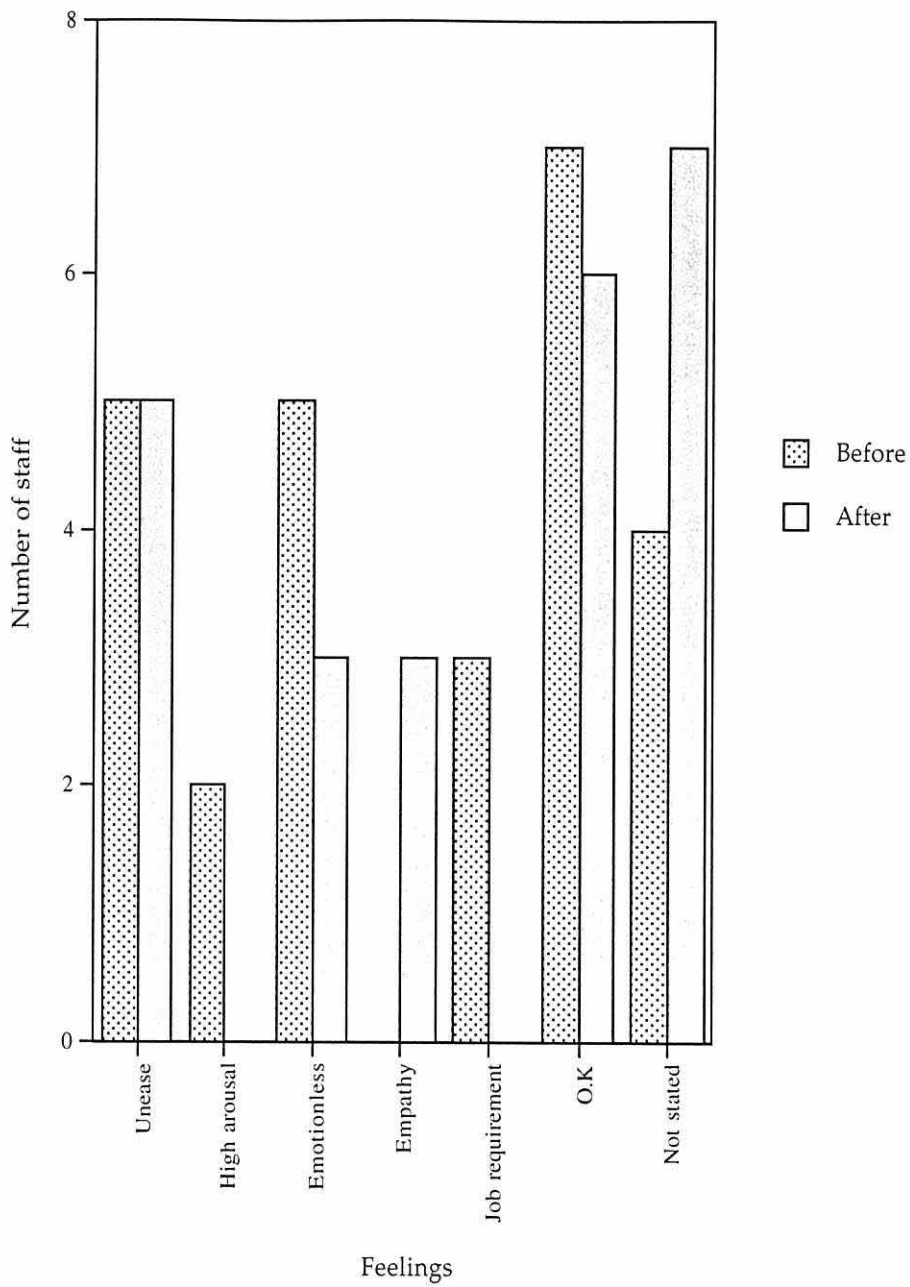


Figure 6.9: Staff Feelings Sometime After a Challenging Behaviour Incident

## 6.4 Discussion

The data suggests that the staff have partly altered the structure of their explanations about challenging behaviour as a consequence of receiving training. Although a failure to compare with a control group means that any conclusions should be approached with caution. There was a significant change in how staff made stable attributions about both clients, suggesting that staff made less stable attributions. Yet there was only a significant change in the domain of external/internal with the first choice client. Other attributional dimensions of controllability and personal/universal remained unchanged. This supports the prediction that the course would influence the attributions of stability but not controllability.

The evidence from the frequency of incident forms and the Ward Atmosphere Scale suggests that the ward may have become more therapeutic during the time of training. The self-reports by the staff about the frequency and duration of challenging behaviour would concur with this.

There are a number of reasons why change in attributions may have occurred more with the first choice client. Firstly, training exercises focused on the behaviour of three clients. The staff team had chosen these three clients to be the most challenging of all their clients (and hence became their first choice). This would have meant that all the staff would have been exposed to alternative explanations for the behaviour of these clients. The staff would have collected data and taken part in generating a variety of hypotheses to explain the behaviour and then tested each hypothesis through functional analysis. The data also would have started to show reductions in the rate of behaviour problems during the lifetime of the course. It may not be surprising therefore, that a sufficient number of the team altered their use of causal explanations to describe the behaviour of these clients. What is significant is

that change could only be detected within two of the attributional dimensions (internal/external and stable/unstable).

This provides further data to question the claims of Stanley & Standen (2000) and Dagnan et al. (1998) that Weiner's model (1986) can be easily applied to understand how care staff respond to challenging behaviour. Although staff became more therapeutic over the lifetime of the training, they still tended to attribute the same amount of control to the client in causing challenging behaviour.

Similarly the self-report data did not follow a pattern predicted by Weiner's model (1986). In some cases staff report an empathic feeling towards a client but the majority make no reference to this. The most significant alteration in the self-reports of feelings is in the reduction of explicit descriptions of autonomic arousal. Although staff still state feelings of being tense or on edge, they reported less physical descriptions of high autonomic arousal (e.g. dry mouth, shaking legs, heart beating fast etc.)

The present data adds further weight to the findings of the previous study suggesting that stable information may play an important role in the expectations of care staff about how a client will behave in the future. It inevitably raises the question, why out of all the attributional dimensions, would stability be most susceptible to change? There appears to be several possible reasons.

Firstly, the nature of the data collection exercises may have helped to demonstrate to staff that challenging behaviour is not permanent. Staff were encouraged to use a wider vocabulary that emphasised causal relationships between behaviours and environmental antecedence and consequences. They recorded objective evidence on the frequency of challenging behaviour. Before the training

began, most staff tended to explain the cause of behaviour as a character trait of a client. This would have been challenged each time staff took part in data gathering, data analysis or formal discussion about client behaviour. Therefore, when staff responded to the post-training interview, any reference to non-personal and more immediate specific causes, even if no technical vocabulary was mentioned, would have produced causal explanations that would have been coded as non-stable.

Secondly, the staff had experienced lower outbursts of the most severe aggressive behaviours (as recorded in the incident forms). Therefore, although challenging behaviour continues, the climate of the ward may have improved considerably as a consequence of the reduced disruption that severe aggressive behaviours would have caused.

Thirdly, several organisational changes may have influenced the way staff explain behaviour. Increased staff meetings, that had a clear focus of data analysis, exposed staff to regular information about specific causes of challenging behaviour. The staff were involved in more structured behavioural programmes and were encouraged to contribute ideas about future directions for therapy with clients. This meant that staff were surrounded by more people who understood, and were able to speak about, the functional nature of the challenging behaviour of certain clients.

All these changes would have challenged previous beliefs held by staff and helped to systematically create new, less stable attributions. Yet these changes would appear to have had little effect on the attributions of control/uncontrollable or on personal/universal. The staff still continued to attribute an intention to the client's behaviour, as if the client knew what they were doing. In answer to the question, "What do you think goes through the clients head when he behaves like this?" A female nursing assistant answered:

“I’ve got them, I’ve got them just where I want them.”

This supports previous research on self-reports by staff on the causes of challenging behaviour. As mentioned previously, Hastings (1995) found that 74% of his population viewed challenging behaviour to be an intentional act. An example given by Hastings (1995) is of a male nursing assistant:

“I think the clients can to some extent control what’s happening.”

In the present study, the attributions for controllability and personal/universal were mainly found in the answer to this question. It constitutes a prompt to elicit the staff perspective on client thinking. It accesses a first-order attribution as defined by theory of mind tasks (Baron-Cohen, 1985) and explicitly seeks to know what staff think a client is thinking in a particular situation. The fact that it remains unchanged after training may be significant because it may suggest that staff are able to maintain their original theories about a client’s thinking and intentions even after intensive behavioural training.

The implications for the lack of change in controllability and personal/universal can only be addressed through speculation. One possibility is that training has enabled staff to change their descriptions of challenging behaviour and adopt new explanations into their verbal repertoire, yet it has failed to change more fundamental beliefs about the origins and motivations of clients’ behaviour. The long histories that staff have with clients may mean that some core beliefs are immune to intensive training.

A second important issue is whether it matters that staff continue to attribute control to the behaviour of clients. The present study suggests that considerable

improvements can be achieved even in the context of unchanged controllable and personal/universal attributions. The answer to this will lie in long-term follow-up studies that are able to monitor the continued causal attributions of care staff, the rate of challenging behaviour and the amount of support required by staff.

Although the teaching made staff more aware of environmental influences (shown by a significant shift to more external attributions) when explaining the behaviour of some clients, this did not transfer to the clients who were excluded during the functional analysis exercises of the training. This has important implications for the generalisation of skills as a consequence of training. Further work needs to examine how well skills can transfer from one exemplar to a wider range of behaviours.

One of the most surprising findings was how little technical behavioural vocabulary was used in the descriptions given by staff about their interventions. Only three staff made any reference to a behavioural procedure that involved the use of consequences, antecedence or a formal part of a written behavioural programme, even though all the staff had demonstrated core competencies in observational skills, functional analysis and behavioural knowledge. This concurs with previous findings (Hastings, 1995) that revealed high levels of non-behavioural responses in staff. Yet the present data would not support the suggestions made by Hastings (1995) that the incongruity between staff beliefs about the causes of challenging behaviour and interventions may reflect a lack of understanding of behavioural methods and theory. This present staff team had demonstrated a competence in the understanding of core behavioural principles and had constructed effective behavioural programmes with three client, yet they failed to generalise these skills into ordinary discourse.

Why were so many staff failing to incorporate the formal language of behaviour analysis into their explanations and descriptions of interventions?

The most obvious answer is that the majority of staff, even after four to five months of training, had still not mastered the concepts sufficiently to allow them to discuss them freely in ordinary conversation. The problem with this answer is that all the staff had demonstrated competence in core principles in the knowledge questionnaires and during supervised sessions on the ward. This would suggest that although they know the concepts, for some reason, they were not being used.

One possible explanation maybe related to the interview procedure. The interview had been designed to try and record the ordinary explanations used by staff. Before staff were asked anything about causal explanations, they were encouraged to describe a number of features about the routine of the previous working day. This was to help them reflect on the detail of their experience and encourage them to talk freely. All the interviews were conducted in an informal way. Because the staff were encouraged to talk freely this may have increased the chances of resorting to cultural norms to discuss their experience. This would have meant a stronger reliance on a colloquial language and style to the exclusion of technical behavioural analysis. This would require further investigation to see if staff do differ in their responses in formal and informal interview situations.

The style of language used by staff after training, has implications for how training courses set competence. Should the aim be to produce staff who have such a level of competence in their understanding of behaviour analysis that they will use the same language as a behaviour analyst even during informal chatting with other staff. Or should the aim be to overcome any colloquial styles of labelling and explaining used by staff that may hinder therapeutic outcome. The data from this study would suggest that the former goal is difficult to achieve but the latter goal may be sufficient to deliver better therapeutic outcomes for clients.



There is evidence to suggest that the course contributed to an improvement in the general therapeutic climate on the ward. This is supported in the positive changes found in the Ward Atmosphere Scale.

Why would staff have altered their view of the ward atmosphere to the extent that it came much closer to the original ideal first proposed by the staff? The shift found in the first category of 'Relationship' would suggest a number of important changes. Clients were regarded as being more involved in the ward. Staff showed a greater understanding of clients needs and there was a spirit of encouragement towards clients to express feelings and opinions.

The second category of 'Treatment Programme' reveals a belief that the staff regarded themselves as encouraging clients to be more independent and to take more responsibility (Autonomy) as a consequence of the training. Perhaps most interestingly, the ward was considered as preparing clients for rehabilitation back to the community (Practical Orientation) to a greater degree than the original view of the ideal ward. This suggests that the staff began to regard themselves as offering a treatment service with treatment goals to return someone back to the community. The danger for any treatment ward is when no one moves off because no one improves sufficiently. This condemns staff to caring for long-term behavioural problems which would inevitably support stable causal attributions.

The domain of personal problem orientation is the only area that showed no shift from the original view of how the ward was assumed to function. This maybe due to the difference in the needs of the clients on the ward compared to the general population of a psychiatric hospital and a change in the theoretical emphasis that underpins the treatment model. Moos (1974) use this domain to consider how clients are encouraged to be concerned with their feelings and problems and to talk openly with other clients and staff about their past. This may be a feasible goal for the

majority of psychiatric clients but it may not be as important with clients who present with high frequency aggressive behaviour.

The staff appeared to believe that the therapeutic regime had some way to go before it would have achieved the ideal goal of encouraging clients to be openly angry and displaying expression of anger. This may reflect a restrictive environment that followed legislation for safety reasons but it also may include beliefs that the staff team remain too restrictive.

The most significant finding in the 'System Maintenance' category was the significant increase in the domain of programme clarity. This reflects how much the clients were aware of procedures and day-to-day routines

There are a number of problems with the Ward Atmosphere Scale. A matched control group would be important to demonstrate that change does not happen with no intervention. The changes would suggest that the ward has become more therapeutic and responsive to the needs of the clients but this by itself would not create a more therapeutic environment for challenging behaviour.

There are small but perhaps important changes in the accounts given by staff about their immediate thoughts during a challenging behaviour incident. Challenging behaviour requires an incisive response to offer the most therapeutic outcome. The main problem for care staff is that once the behaviour has started they are faced with a major problem that needs resolving and it may be difficult to take a longer-term perspective of the consequences of their own responses. It is very striking how little reference is made about any therapeutic regime by the staff team.

In many cases the staff acknowledged that the behaviour is some form of a threat to their own or others safety. This may be a response that acknowledges the potential danger or alternatively it may reflect their own increased arousal. A number of staff consider the removal of the client as their first thought. Again this may have safety in mind or it may be a response to remove an aversive situation.

Even if the primary motive is that of safety, there is the possibility that the function of the behaviour could be demand avoidance or withdrawal from social interaction. In this case the therapeutic response of making the situation safe may have a detrimental effect of strengthening this behaviour. This is an example of a common-sense explanations being insufficient for the demands of a therapeutic regime. Hastings and Remington (1994a) have argued that when staff give attention to clients who present with aggressive behaviour that is maintained by social attention, they are reducing the possibility of increasing the frequency of the behaviour in the short term. Therefore staff thoughts may be seen as verbal accounts of existing contingencies that have shaped their behaviour over time. The effect of training may have helped staff to adopt more rules to help them overcome the immediate contingencies of negative reinforcement of avoiding the aversive stimuli of challenging behaviour. Yet the present training does not appear to have helped staff to produce detailed causal statements that articulates the danger of negatively reinforcing challenging behaviour.

Clear therapeutic responses start to occur after the course has finished but only in small numbers. Such thoughts are about self-monitoring and maintaining control, considering the clients needs or acknowledging that the client is liked or that the client is showing signs of improvement.

Self-statements that require staff to self-assess could be regarded as the first step to preventing the escalation of an aggressive incident. Models of aggression

(Green, 1990) suggest that the potential aggressor may mis-interpret the signs of higher physiological arousal in others as a hostile response and thus activate aggressive behaviour. Staff who take steps to remain calm would therefore stop this from happening. The most often cited principle in how to respond to an aggressive client is to *remain calm* (DHSS, 1976; COHSE, 1977; McDonnell, Dearden & Richens, 1991). Although self-monitoring is described, it only occurs in very small numbers. A possibility remains that staff are self-monitoring but do not give an account of it during interview.

One simple explanation for the reduction in reported arousal is that reduced incidence of very aggressive behaviour would create a less threatening environment and therefore less situations to trigger a higher arousal response. If high intensity aggression had become a conditioned stimulus for increased arousal in staff then it would follow that a reduction in the frequency of intensive aggression would lead to lower rates of higher arousal in staff. This would be an important therapeutic finding because previous studies have found high levels of stress in staff working with people with aggressive behaviour (Bersani & Heiffetz, 1985; Bromley & Emerson, 1993).

There are a number of anomalies in the premise that reduced account of arousal in staff is a consequence of reduced aggressive behaviour in clients. Firstly, the data would suggest that challenging behaviour continues on the ward throughout the course (the self report graphs of frequency suggest this). Only the behaviour that is sufficient to warrant an aggressive incident form appears to reduce. There are only a small number of incident forms each month to a maximum of five, yet all the staff would appear to report high levels of arousal prior to the course starting. Therefore, high arousal may not be restricted to the occurrence of extreme aggressive behaviour. It maybe possible that staff embellished the description of their emotional response to present a general overview of how they feel in similar situations. Then over time, they may have learnt to draw upon more specific and recent accounts of what they

experienced. The course would have helped by requiring staff to self-monitor their reactions on ABC charts and increase the accuracy of their accounts. Therefore the graph may not be showing actual change in the arousal state of staff but rather an increase in the accuracy of the accounts of staff.

As it was suggested in the introduction, stress in staff is a concurrent problem with challenging behaviour but will be an independent component that is individually self-maintained. Resolving staff stress may not reduce challenging behaviour and reducing challenging behaviour may not reduce staff stress. Interventions need to address both needs and therefore we can be left only with speculations about the causal relationships between the two.

The questionnaire data would support the idea that the staff group had not developed any general coping skills that may have influenced their work. This helps to support the premise that any change in explanations and coping within the work environment is specific to the work environment.

The main problems with the study are the small numbers and the lack of a matched control group. The advantage of the small group of participants has allowed a much closer examination of individual staff responses to the experience of working with people with challenging behaviour. The use of a control group may always prove difficult for practical reasons, few services are willing to invest precious time in taking measures while receiving no intervention. The use of single case designs of individual staff may be one way around this problem in the future.

Finally, there is a lack of objective behavioural data to support some of the self-statements of the staff. Because the focus of the study was on how care staff made explanations it was not a feature of the design but it would clearly be an

advantage to examine the correlation between what staff say they do and behavioural measures of what they actually do.

#### ***6.4.1 Conclusion***

In conclusion, Weiner's model (1986) has not been shown to be effective in explaining the responses of care staff to challenging behaviour. It fails to take into account that staff experience high levels of physiological arousal and must work closely as a team to ensure that what they do is effective. Arousal in decision-making has not been addressed in previous studies (e.g. Dagnan et al., 1998; Sharrock et al., 1990; Stanley & Standen, 2000; Weiner, 1986).

It is impossible to make causal inferences from correlational data, but it is clear that the teaching course correlated with improvements in the rate of aggressive behaviour and improvements in the ward atmosphere. The most significant change in staff, however, was the reduction in the use of stable causal attributions used to explain challenging behaviour.

## **CHAPTER 7**

### **MAIN DISCUSSION**

## 7.1 Review of Results

The first study was an exploratory investigation into how nursing staff explain the challenging behaviour of a client within their care. Forty seven participants from three hospital services in one rural county took part. All the wards were staffed by trained and untrained staff and served people who displayed high levels of challenging behaviour. Three quarters of the participants worked with people with learning disabilities and the remaining quarter worked with clients with psychiatric problems.

Participants were interviewed using a semi-structured interview and each interview was tape-recorded, transcribed and coded using an adapted version of the Leeds Attributional Coding System (Brewin, MacCarthy, Duda & Vaughn, 1991).

The aim of the study was to investigate the language used by the participants to understand challenging behaviour and in particular attributional categories. The results showed that overwhelmingly, attributions of internal, stable, controllable and personal dimensions were used.

Contrary to the dominant theoretical model used to explain challenging behaviour, that proposes the cause of most challenging behaviours to be environmental and capable of reduction in frequency (Emerson et al., 1994; Jones & Eayrs, 1993), the nurses used causal explanations that implied the opposite. The high



number of internal and stable attributions used suggested that the behaviours were permanent with a causal origin within the client and not in the environment.

Not all staff used the same explanations for all challenging behaviours and there was evidence of influence on the type of attributions by training and work environment.

The conclusion of this study was that care staff show an inclination to explain challenging behaviour by using attributions that may be counter-habilitative. Examination of the participants' explanations revealed that there were differences between how qualified and unqualified staff attributed control to clients. A difference was found between the staff from the psychiatric hospital compared to staff from the learning disability hospitals in how they attributed control to clients.

One possible explanation for the findings were that participants demonstrated an attributional style. To test this hypothesis an experiment was devised to examine how a group of staff explain the behaviour of two clients with similar topography that served different functions. This second study investigated whether staff from the same ward differed in their explanations of the behaviour of two known clients who both presented with aggressive behaviour. A functional analysis had indicated that the aggression served different functions for the two clients (for one, it served to avoid demands while for the second it served to gain tangibles). The second client displayed aggression at a higher frequency.

The results showed that, out of four possible attributional dimensions, the staff showed significant differences in two of the causal attributions in explanations of the behaviour of the two clients. There was a significant difference in the attributions of internal and external, suggesting that Client A's behaviour, that served

a function of demand avoidance, was thought to be caused by more environmental sources. There was also a significant difference between personal and universal attributions suggesting that Client B, who had higher frequency behaviour, was considered more idiosyncratic. Although there were no significant differences in the attribution of control, there was a one-point difference in the mean scores approaching significance. This suggests that Client A was regarded as having more control than Client B. Only the attributional dimension of stability showed no significant difference and revealed the same trend as found in experiment one.

The second part of this experiment investigated whether staff had a wider attributional style. The staff were given a questionnaire based on a video role play and two written scenarios.

The results showed two things. Firstly, there was a significant difference between how the staff explained the behaviour of a known client and that of the invented client with the same behaviour.

Secondly, there was no correlation between how staff explained the behaviour of their known clients and the behaviour shown in the invented scenario. This would support the hypothesis that an attributional style does not exist among care staff when explaining aggressive behaviour. It would also suggest that staff exercise some form of discrimination between clients who display behaviours with the same topography. This discrimination may not reflect the current literature, based on the findings of study 1. Therefore some other variable or variables may be in operation.

To investigate the impact of attributional information on optimism about a client with challenging behaviour, an analogue study was devised to measure how

participants are affected by different attributional information on their expectation for positive change about a video scenario of a client with challenging behaviour. A 2x2 factorial design demonstrated that all participants who had received the unstable information were more optimistic about the character's future. No interaction effects were found between stability and control in the optimism measures. The implications of this may relate to how a new member of staff can be influenced by the information produced by other staff who used descriptive language about a client that possessed a heavy attributional bias.

The final study was designed to investigate the influence of intensive staff training on the causal attributions of a staff team working on a ward for aggressive clients. A qualitative content analysis investigated the changes in verbatim accounts given by each staff member. The Content Analysis of Verbatim Explanations was used to analyse transcribed semi-structured interviews. Categories of staff thoughts and personal-emotional responses during and immediately after a challenging behaviour were also measured. The results showed a number of important changes.

Firstly, there was a lowering in the frequency of aggressive behaviour on the ward. Secondly, there was a positive change, in staff reports, in the ward atmosphere on the ward, as recorded by the staff. Finally, there was a change in the type of causal explanations used by staff. In addition, after training there were significantly less stable attributions used about all the clients and significantly lower internal attributions used to describe the clients discussed during training. Yet personal and controllable attributions remained unchanged. There was also a notable change in the type of categories in staff thoughts used during an incident of challenging behaviour and a notable reduction in accounts of physiological arousal. There were no significant changes in general coping .

This data would suggest that staff operate some informal system for explaining challenging behaviour and this would concur with the suggestions of Hastings and Remington (1994a) who highlight the importance of informal theories used by staff to explain client behaviour. This informal system would appear to operate some method of discrimination about the causality of similar behaviours and would appear to demonstrate a high resistance to change.

## **7.2. Implications of Findings**

### *7.2.1. Stability versus Control*

One might have predicted from Weiner's model (1986) that, in Study Five, as staff became more helpful, their explanations would have contained fewer attributions of control. Yet the consequence of intensive staff training produced no significant change in the attributions of control even though the training did correlate with a reduction in the recording of aggressive behaviour. The major change of attributions was found in a significant reduction in the domain of stability (from stable to unstable).

Stanley and Standen (2000) have recently proposed that the findings of Weiner's earlier model of achievement motivation (1979) could be used to explain recent research findings that helping was best predicted by optimism, which was in turn predicted by negative affect and control (Dagnan et al., 1998; Sharrock et al., 1990).

Weiner's earlier model of achievement motivation proposed that optimism is based on the perceived stability of a cause (Weiner, 1974, 1979). Stanley and Standen (2000) project this model into the care situation when they say:

“..if carers experience an episode of challenging behaviour and then attribute this to a stable cause (e.g. high level of dependency), Weiner's (1979) model would predict that this would reduce the carers' optimism for any future success in the management of that behaviour” (p. 158).

Stanley and Standen (2000) investigated Weiner's model of helping (1986) through a correlational analysis that investigated three different topographies of challenging behaviour. The results supported Weiner's model (1986) that the desire to help was negatively correlated with reported affect and attributions of low control. It also supported the proposed negative relationship between optimism and perceived stability (Sharrock et al., 1990).

This raises an important question, regarding the data from this thesis, why has the attribution of stability been found to be more influential than the attribution of control?

### *7.2.2. The Present Data and Weiner's Model of Helping*

The present data does not contradict Weiner's model (1986) of helping behaviour. It may, however, challenge the assumption made by Dagnan et al. (1998) and Stanley and Standen (2000) that Weiner's (1986) model can be easily applied to care staff working with challenging behaviour. Although Weiner (1986) believes that his model would generalise to a variety of helping situations, much of his

experimental work involved novel situations with participants encountering someone in acute need.

Weiner's (1986) original paradigm asked students how they would respond if someone fell in front of them or if a friend asked to borrow lecture notes after missing a lecture. The important feature of these scenarios is that they involved novel situations. This is in marked contrast to care environments for challenging clients. Here, the stimulus to help can occur several times in a day. The failure not to help is also much more serious than in Weiner's paradigm and could result in a client or member of staff being hurt or even a staff member being accused of failure of duty. Care staff often experience high levels of stress (Bersani & Heifetz, 1985; George & Beumeister, 1981; Quine & Pahl, 1985). Bromley and Emerson (1995) have identified that the most stressful aspect of caring for people in this client group is that staff have to encounter the same behaviour day in day out. A major difference therefore, is that Weiner (1986) did not consider situations when the helper was constantly having to respond to the same request for help or when a failure to respond may result in personal injury.

Much of the research to support Weiner's model of helping behaviour is correlational, using imaginary scenarios (Betancourt, 1990; Dagnan et al., 1998; Stanley & Standen, 2000; Weiner, 1985). Written scenarios may fall somewhat short of the reality of direct experience of caring for an aggressive client. The fact that Dagnan et al. (1998) replicated Weiner's (1986) methodology in the use of written scenarios and found similar results may be an indication of how people respond to a questionnaire about an imaginary help situation. It may provide little information about what really happens in the thinking of carers when they actually witness challenging behaviour. This of course is an empirical question and could be answered by further study.

One reason why the present studies failed to replicate the importance of the attributions of control is that the present studies had a very different focus to the Weiner (1986) paradigm. Studies One, Two and Five all examined staff explanations of challenging behaviour they had witnessed and not what staff thought they would do in an imaginary situation.

### *7.2.3. Why Might Attributions of Stability be More Influential in Deciding to Help than the Attributions of Control?*

Three important issues emerge regarding how care staff use stable attributions to explain challenging behaviour. Firstly, the most striking feature of the verbatim accounts was the extremely high scores of stability recorded by the majority of the staff. This would suggest that many staff use language that denotes a permanence about the problem they were explaining. Secondly, stability would appear to be the most influential out of all the attributional dimensions in generating optimism. Thirdly, stability was the most sensitive of all the attributional dimensions to the influence of the intensive training course. Before examining any theoretical components about these findings it is important to address some of the technicalities in the use of the coding system.

Fundamentally, the coding of stability is a measure of how permanent an individual regards the cause of a behaviour. Any information that contains stable attributions will provide the listener with advice about future events. It is normally present in one of two forms. Either within the logic of a description that proposes longevity of the cause (e.g. “it’s just him,” or “it’s the way he is,” or “its his personality”), or else through the use of adjectives such as “always” “regularly” and “constantly”. There is a distinction between the frequency of the behaviour and the frequency of the cause of the behaviour. It can be possible that a low frequency behaviour may have a single constant cause (e.g. “she is aggressive now and then

because she has a personality that likes to wind people up”). Alternatively, a high frequency behaviour may have an unstable cause (e.g. “she screams all the time, the first time she visits somewhere new”).

One reason why stable attributions may have showed significant change as a consequence of training is that they were more extreme at baseline. The majority of answers to the initial interview in Study One tended to have limited causal detail and used non-specific descriptions that personalised the behaviours. For example:

**“His general attitude and getting away with behaviour for long.”**

(Male State Enrolled Nurse)

**“Badness and Madness.”**

(Female Staff Nurse)

**“His personality.”**

(Female unqualified Nurse)



The interview procedure may have contributed to the quality of the answers. Before they started to talk about a named client, each staff member had to talk about their previous working day and offer their opinions of what needed to change in their work environment. Therefore each staff member had over twenty minutes before being asked questions about a client. This may have increased the chances of them using their usual form of speech or natural idiom.

The findings of Study Four and the conclusions of Sharrock et al. (1990) are in many ways obvious. If participants are told that someone always behaves in a particular way and is then asked to imagine how that person will behave in some future situation, the only source of data available to the explainer, is contained in the earlier descriptions. Yet the implications of this for care services, should not be underestimated. It implies that any information about clients that contains stable attributions may influence the expectations of care staff (especially new care staff) and possibly affect their future care practice.

Whereas stability provides information about future events, the attributional dimension of control informs about the personal intentions of an individual.

As new staff begin to formulate their own personal theories about the causes of challenging behaviour, they will be influenced by the theories from other staff. Those theories will contain stable and controllable attributions. It will be easier for new staff to corroborate that a cause is permanent rather than that the cause is controllable. The fact that most challenging behaviours are multi-functional, will appear in different situations, and may have been resistant to treatment in the past will all be seen to provide empirical evidence to support the proposition of a stable cause. This may go some way to explain why so many staff use stable explanations.

After the training course finished in Study Five, the staff used very little behavioural terminology in their final interview. But the change in language may have been sufficient to record significant changes in the data. By not using certain adjectives and dropping old labels, the causal explanations would have received less stable scores. As participants were increasingly able to reference specific detail such as the immediate antecedence or consequences, they also produced less causal statements suggesting permanence.

One reason why attributions of control may have remained unchanged throughout training in Study Five, is that one can attribute control to an individual, assuming intent, yet still explain the behaviour of that individual as being reinforced by environmental contingencies. For example, staff may have learnt that a client will start to shout and bang furniture after periods of being ignored and that this behaviour is maintained by social contact. Yet the staff still believe that the client is having thoughts about gaining control over the behaviour of the staff.

A specific question in the interview probed what the staff believed the client was thinking during the behavioural incident. A common reply suggested high control (e.g. "he's thinking, I've got you just were I want you"). It could be argued that the staff were being prompted to offer this information but it does not follow that because they were probed they will answer with attributions of control. The staff could have easily answered with non-controllable attributions such as, "he's thinking, I'm lonely," or "will someone talk to me."

Clements (1992) has suggested that a comprehensive ecological framework is needed to remedy the "conceptual vacuum" that he believes exists in services for people with challenging behaviour. A number of authors have suggested that the dominant behavioural model needs to be expanded to incorporate social-cognitive ideas (e.g. Jones, Miller, Williams, & Goldthorpe, 1997) and other commentators

have suggested that the attribution theory of Heider (1958) may help to understand why interventions for challenging behaviour may fail due to attributional bias (Dunne, 1994). Similarly, Fenwick (1995) has suggested that Weiner's (1985, 1986) attributional theory may help in understanding the emotional response of carers and the commitment to help a client.

The underlying predicate of these arguments is that applied behavioural analysis is insufficient to understand carer responses. The danger of this argument is that it may create two separate theoretical models for two different groups – a behavioural model for clients and a cognitive -emotional model for staff. It is important, therefore, that this assumption is examined as applied behaviour analysis may indeed be able to offer a coherent model to understand both the behaviour of clients and the needs of staff. Indeed the conceptual vacuum that Clements (1992) speaks of may be no more than a limited application of behavioural analysis.

### **7.3. Towards a Behavioural Analysis of Staff Explanations of Challenging Behaviour**

#### ***7.3.1 Philosophical Underpinnings***

As has been seen in the introduction, Weiner's (1986) model is fundamentally different from the theoretical basis of other studies that have investigated carer responses to challenging behaviour (Hall & Oliver, 1992; Hastings, 1995; Hastings, Remington & Hopper, 1995). A cognitive model differs from approaches based on operant theory in a more radical way than simply focusing on covert events. When Skinner 'discovered' the principle of a behavioural operant, he broke with earlier mechanistic views of causality to one that focused on function (Chiesa, 1992). Skinner expressed this very clearly when he said:

“We may now have that more humble view of explanation and causation which seems to have been first suggested by Mach and is now a common characteristic of scientific thought, wherein...the notion of function [is] substituted for that of causation” (Skinner, 1931/1971, pp. 448-449).

In a Skinnerian analysis, the word ‘cause’ is viewed only as a “change in the independent variable” and an effect is replaced with a “change in the dependent variable,” transforming the cause-effect connection into a “functional relation” (Skinner, 1953, p. 53). The implications of this for the concept of causation and human behaviour is that it eliminates the concept of agency.

Attributional theory, on the other hand, assumes an internal mediating factor when explaining human behaviour. At the basis of Weiner’s (1986) model is a mechanistic paradigm that links a chain of responses. It starts with an observation of someone in need. This is then followed by a causal analysis, which in turn mediates an emotional response, which finally leads to a behavioural response.

Some authors have suggested that Functional Analysis should be expanded to incorporate attributional models. Dagnan et al. (1998) have stated that:

“Functional analysis that includes an understanding of the reinforcing contingencies and/or attributions and emotions of staff may lead to more informed interventions” (p. 67).

One problem with this idea is how to teach the principle of causality when the two models have very different perspectives on the participant. There would also appear to be a problem with the implicit assumption by Dagnan et al. (1998) that applied behavioural analysis is insufficient to provide a framework to understand the

complexities of staff responses and therefore a cognitive-emotional model is needed. The data from this thesis has failed to support a central component of a cognitive-emotional model (Weiner's attributional model of helping). It is therefore important to examine the assumption that applied behaviour analysis needs to be expanded to incorporate another paradigm.

Therefore in the final part of this discussion, applied behaviour analysis will be examined for its capacity to account for some of the surprising findings of the present data and its general utility in helping to understand carer responses to challenging behaviour.

### *7.3.2. Staff Knowledge of Behaviour-Analytic Principles*

Before offering a behavioural analysis of the staff explanations, it is important to comment on the record of knowledge of behavioural analysis shown by the staff. One of the central features of the self-report data in Study Five is that it did not produce categories that concurred with current behavioural theories. Other authors have found that staff are more able to reference current theories in their explanations. Hastings (1995) found that staff beliefs about the causes of challenging behaviour:

“were partially congruent with those of psychological analyses but their reported interventions for challenging behaviour could not be characterised as ‘functional’ strategies” (p. 296).

Hastings (1995) had used a semi-structured interview that began with establishing whether the staff member understood what was meant by the term ‘challenging behaviour’. If it was clear that the staff did not understand the term, the

interviewer discussed, self-injury, aggression and stereotypy to establish a common understanding.

In this respect, Hastings (1995) was examining the concepts that staff hold about the broader concept of challenging behaviour and its causes. Therefore the examples given by staff may have taken a 'meta position' of the concept of challenging behaviour from their experience. This is different from the present studies (Study One and Study Five) that asked staff to think of the client who is most challenging and to recall the most recent example when they displayed challenging behaviour. Then from that incident staff had to recall what they think caused the behaviour.

A number of authors (Guerin, 1994; Street, 1994) have compared how the different paradigms of cognitive and behavioural-analysis view the phenomena of self-reports. Guerin (1994) suggests that a cognitive perspective views attitudes expressed in self-reports as internal dispositions that are relatively independent of settings. They arise from and direct other behaviours and are considered as enduring as any emotional responses. On the other hand, a behaviour-analytic view considers an attitude as a response to a stimulus that is determined by a respondent's history in the social context of the measurement setting.

Therefore if the question, "What causes challenging behaviour," is viewed from these two conceptual frameworks, two very different questions are being asked. If using a cognitive view of attitudes, it would effectively mean "What is your enduring belief about the causes of this phenomenon." Alternatively, from a behaviour analytic perspective, it may mean, "What verbal behaviour is elicited when asked this type of question by an interviewer like me." It would seem important to be as specific as possible when asking what people say to themselves in the context of observing another person's behaviour.

If staff are failing to give accounts that reflect the literature it raises a number of possibilities.

1. First, their accounts are simply inaccurate and have no relationship with client's behaviours.
2. Secondly, they reflect a basic ignorance of behaviour analysis.
3. Staff accounts are verbal behaviour that serves a function within the social context that it is used.
4. Fourthly, they are an attempt to provide the interviewer with what is expected.

The staff in the final study were able to demonstrate proficiency in knowledge of behavioural principles and were able to demonstrate skills in observation and recording. This would tend to undermine the suggestions in points 1 and 2. The critical questions about responses to challenging behaviour were part of a long interview that covered many aspects of the nursing experience. The interviews were carried by nurses rather than psychologists to limit preconceptions about expectations yet it remains a possibility that the answers were influenced by a desire to please. A more likely possibility, however, is that the accounts given by the staff reflect the verbal behaviour used within the staff culture, something which may not necessarily be accessed through general questions at the conceptual level.

### *7.3.3 Verbal Behaviour Used Within the Staff Culture*

This theme has been discussed by behaviour analysts (Guerin & Foster, 1994; Lloyd, 1994; Street, 1994) in an attempt to consolidate verbal accounts with behaviour analysis. An early social psychology experiment (Nisbett & Wilson, 1977) is used by Lloyd (1994) to illustrate how causal theories are culturally supplied and how rationalisations about behaviour can remain independent of immediate direct experience.

Nisbett and Wilson (1977) examined the accuracy with which people report their own thought processes by investigating the explanations of responses made during previous experimental sessions. They found that when participants gave their opinion on a topic and then had to discuss the topic with an observer, who took an opposing view to them, they reported that their final opinion was the same as their original one, even when they changed their opinion during the discussion.

Lloyd (1994) proposes that from a behaviour analytic point of view, self-reports conform to learned cultural rules about causality and appropriate verbal behaviour. The rules of self-reports may therefore be best regarded as socially defined and that a member of a group will be reinforced by the community for close approximations of group rules.

Therefore, it maybe reasonable to discount the idea that the staff from Studies One, Two and Five simply gave inaccurate behavioural accounts about clients. Rather, staff descriptions should be regarded as verbal behaviours that serve a function within the context of the social group in which they originated. This then raises the question about what function non-specific behavioural accounts could serve within a staff group?



Street (1994) suggests that non-specific global descriptions may have a functional basis that provide a greater chance of reinforcement from the verbal community. A person who responds to the question, "What are you doing?" by giving a detailed description of their behaviour (including motor movements and step by step coverage of behavioural detail) would probably cause a listener to disengage and provide minimal feedback. The nature of global statements may function to allow a broader range of specific behaviours to become eligible for reinforcement.

This would suggest that staff who use non-specific descriptions for a wide range of behavioural topographies may be able to receive a wider range of reinforcement from other staff members than if they gave more specific descriptions. If a member of staff reports to other staff that a client, "Has gone off it," or "kicked off," the immediate responses from staff may be more reinforcing than if they had said, "he is beginning to show repetitive hand to face slapping behaviour, contingent on being asked to put the breakfast dishes away."

#### *7.3.4 Implications of the Concept of Rule Governed Behaviour to Present Data*

There would appear to be a strong argument for investigating the content of what staff actually say. Hastings and Remington (1994a, 1994b) were the first researchers to introduce the idea of rule-governed behaviour within the context of staff responses to challenging behaviour. Their initial proposal for analysis of staff verbal behaviour was based on categories first developed by Zettle and Hayes (1982).

Hastings and Remington (1994a, 1994b) suggest that services for people with challenging behaviour possess two distinct forms of rules: those instructing staff

verbal behaviour was based on categories first developed by Zettle and Hayes (1982).

Hastings and Remington (1994a, 1994b) suggest that services for people with challenging behaviour possess two distinct forms of rules: those instructing staff about what to do or advising them about how to work with challenging behaviour and those relating to hypotheses about the motivation for challenging behaviour. Any hypothesis about the cause of challenging behaviour can come either from formal sources such as teaching or staff supervision or from informal sources such as other staff members.

Such a model assumes that informal teaching will lead to some type of rule following through 'pliance' or 'tracking'. A 'ply' is followed because the speaker of the rule has control of some contingency that is able to shape the rule followers behaviour, whereas 'tracking' refers to following a rule because it reflects some aspect of how the world operates (Zettle & Hayes, 1982).

It would therefore follow that when staff give accounts of non-specific responses to challenging behaviour they may be providing examples of informal rule following. "Make sure that everyone is safe," or "Sit down and talk out the problem," may not be very sophisticated but if it results in a lowering of the aversive consequences of challenging behaviour it can serve to negatively reinforce staff. Whether it is 'tracking' or 'pliance' will depend on the source of reinforcement. The important thing is that they are functional for the staff and make it likely that they will operate on behaviour under similar circumstances. When staff share a non-specific rule in the company of other staff they may receive social reinforcement for their comments. As Street (1994) suggests:

From the behavioural analytic perspective, self-reports are socially reinforced for plausibility, not for objective accuracy (p. 147).

Therefore, when staff answer questions about the causes of challenging behaviour with non-technical, non-specific colloquial answers, they may do so, not because they are ignorant but because these verbal statements have been functional in the past, in the context of their social group.

In the context of Study Five, it might have been predicted that the training would have provided staff with a broader vocabulary about behavioural-analysis and a new conceptual framework to incorporate into their explanations. From the answers given, however, such a change is not immediately apparent. To illustrate this point, it will be useful to take an example from one of the staff reports from Study Five and examine the change that did occur by the time the training course was complete.

Firstly, if we compare the answers given by a female staff nurse, before and after the course, to the question of what caused the behaviour, a number of points stand out.

(Each question is shown in italic and the response of the staff is given in bold).

Prior to the course

*What do you think causes the problem.*

**His personality. A lot of people say that brain damage changes your personality. But talking to the parents, it more and more seems that this has always been his personality. Very demanding. Sometimes frustration.**

After the course.

*What do you think causes the problem.*

**His frustrations. Sometimes maybe our response like the consequence we give him.**

The client being discussed had received a detailed functional analysis involving baseline observations, ABC charts and analogue assessments. A detailed programme had been established and had started to show a major decrease in the frequency of challenging behaviours and an increase in more adaptive self-help skills. Yet a qualified nurse is only able to suggest that the cause of challenging behaviour is:

**“...maybe our response, like the consequence we give him.”**

From the quality of this answer it would appear that the course has only made marginal improvements in the response of this staff nurse. Whereas prior to training, the answers were lists of descriptions, post training, the explanation is at least able to reference some causal sequence and reference part of a behavioural concept.

This raises a number of possibilities about the impact of training on the ordinary explanations and language used by staff. One is that some resistance may exist in care staff in incorporating new ideas into their every day speech. An opposite view is that staff do not need to speak like behavioural analysts in order to be effective. As long as certain change occurs in their language they will be able to improve the quality of their treatment responses.

This is representative of many of the answers given by the staff to the same question. It may be possible that the question “What caused the behaviour” is itself problematic. Although it is the most obvious question to ask, it may require considerable rehearsal before someone is able to give a more theoretically rich answer.

It may therefore be worth examining other parts of the interview for evidence of appropriate change. If a similar comparison is made for the same staff member, with the broader questions about thoughts and feelings in relation to challenging behaviour, more substantial change can be seen to emerge.

### *7.3.5 Example of Verbal Behaviour Prior to Training*

*What do you do when he behaves like this?*

**Approach him and see what has caused the problem; try to control the situation as quick as possible. See if anyone else is involved in the incident, see that they are cared for as well.**

*What thoughts do you have?*

**Upset my coffee break again.**

*How does it make you feel?*

**It makes you, well, when you know he's just doing it for attention it's got to be bitterness towards him.**

*How would you think about this later on?*

**You sometimes feel guilt because of his physical problems.**

*How would you feel later on?*

**Well, I shouldn't have taken that attitude.**

The first answer is given as a list of principles. These are: understand (see what caused it), control the situation (stop the behaviour) and ensure that the safety of others is maintained.

The rule of controlling the situation maybe a 'ply', that has its origin in the local culture of the verbal community (it would be reasonable to assume that social approval by other staff would constitute the necessary reinforcement). If a member of staff was thought to be culpable for a client presenting a major outburst on the ward, it is highly likely that many staff would find this inconvenience aversive and consequently might punish that staff member through social disapproval.

There is a clear indication that the staff nurse has been punished by the client in the past. The inclusion of the word “again” to the phrase “interrupted my coffee break,” serves as an augmental- by helping to heighten the emotional content of the verbal information.

The staff nurse makes an attempt to justify her negative emotion about the client. Yet the overall picture is of a staff member being punished by the client’s behaviour, feeling negative about the client and then experiencing a sense of guilt about these negative feelings.

From this example the issue is not just the lack of behavioural analysis expressed but more to do with the aversive experience of the staff. The staff nurse would appear to be in a no win situation.

### *7.3.6 Examples of Verbal Behaviour After The Course*

*What do you do when he behaves like this?*

**Usually go to.... and intervene to try and find out if there is a cause. If no obvious cause try to get him to tell me what has been the particular problem to him. Try and see if there would be an alternative to the aggression.**

*What thoughts do you have?*

**When occurring on a regular basis, I mean you get a bit sick because you know it'll be over nothing or something. But I think what has happened over the last two weeks, his behaviour being limited, I think you've more time to talk through and help with the problem that has occurred.**

*How does it make you feel?*

**If over something silly or simple you feel annoyed. The fact that it was unnecessary. I think I feel a little sorry for him on many occasions, a lot of it is due to frustration and the fact that he does get pushed away because of his attention-seeking behaviour.**

*How would you think about this later on?*

**I think it's at this time I would feel sorry for him as I'd have had more time to think about the incident, what led up to it, what happened.**

*How would you feel later on?*

**I would like to feel I had coped with the situation right and hadn't added to the problem.**

There is an obvious change from the earlier answer that simply attempted to establish control. The course would appear to have expanded the options available to



the staff nurse, who now seeks to establish functional equivalence. The staff nurse is also expressing a need for problem solving.

The post-course answers show evidence of the staff member monitoring the frequency of behaviour (which has reduced). Also the reported strategy is now based upon a more recent and specific analysis. The actual formula is presented in the form of a rule - when there is time it is possible to be more helpful towards a client. A principle is stated that an emotional response of anger to challenging behaviour, is reasonable when the origin of the behaviour is 'trivial'. The staff member develops this theme to state that on many other occasions empathy is now felt towards the client (especially when other staff operate a form of extinction procedure).

What is significant about the answers, is the lack self-chastisement. The staff member describes a self-reflection, that was absent in the first interview, that examines antecedence. It would suggest that empathy is directed towards the client as a consequence of this analysis whereas, prior to the course, the sole emotion expressed was self-blame.

It is not possible to distinguish between different types of rules ('plys' and 'tracks'). In order to do this it would be necessary to support the verbal statements with direct behavioural data. Yet the type of changes shown in the above staff member's responses may indicate a rich source of data for future clinical intervention and further research.

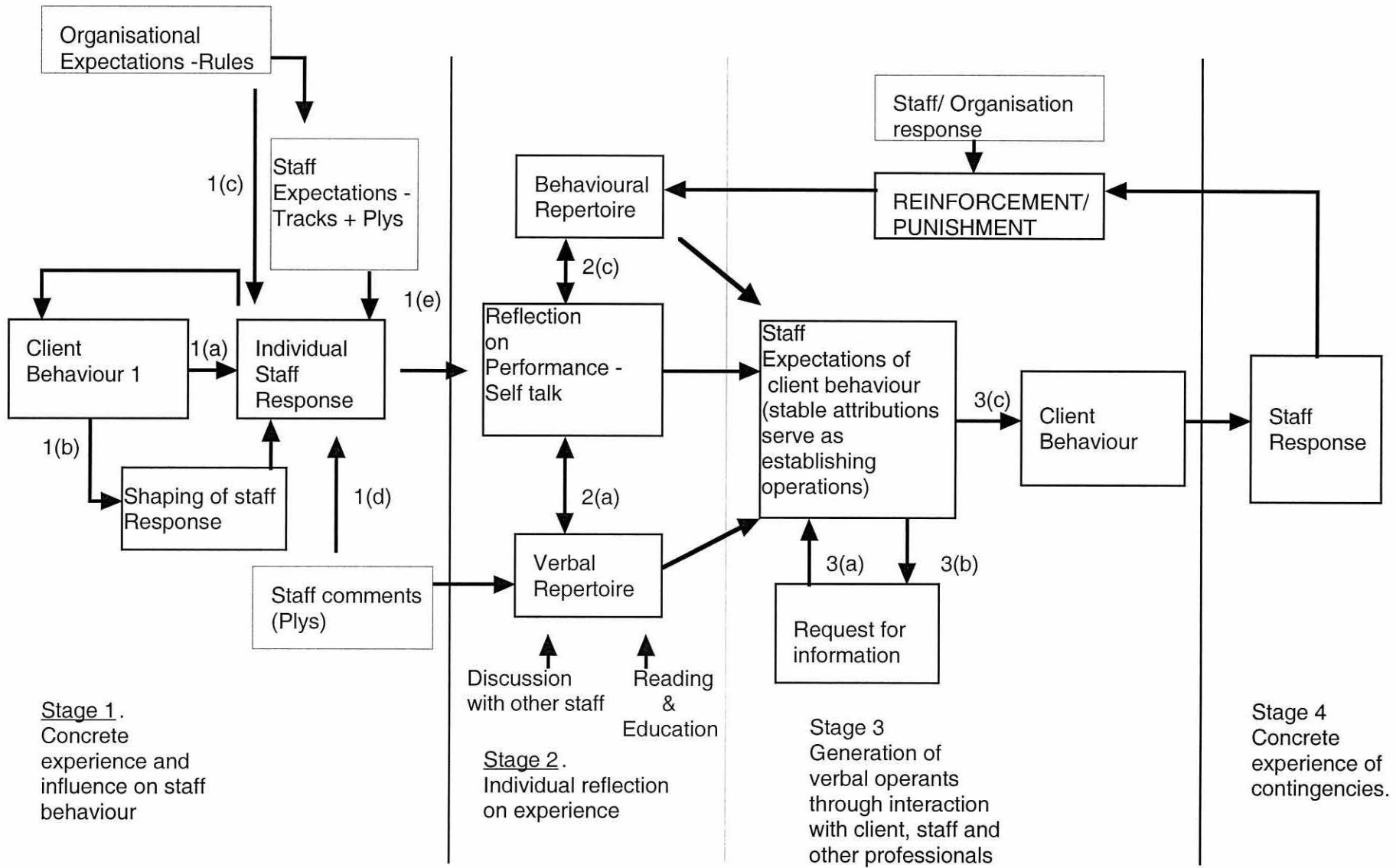
#### **7.4. Towards a Model of Understanding Staff Responses to Challenging Behaviour.**

Hastings and Remington (1994a) have suggested that functional analysis should be expanded to include an examination of staff explanations and rules. They also suggest (Hastings & Remington, 1994b) that staff will be influenced by formal rules set down by an organisation and informal rules supplied within the staff culture. As a way of expanding these ideas to incorporate the findings and concepts presented in this thesis I would like to propose a model for understanding the influences on staff behaviour.

To help conceive the model I have adapted Kolb's (1984) experiential learning cycle that is made up of four distinct parts. Essentially a cognitive model, it attempts to explain the constant learning cycle that happens through direct concrete experiences. The first stage is the concrete experience stage when an individual apprehends a new phenomenon. The sensations of this experience move to the second stage of reflection. This is a stage of comparison with previous experiences. From reflection follows abstract conceptualisation, forming a new concept of the experience. Finally, the accuracy of the concept can be tested through active experimentation, which inevitably leads again to concrete experience and thus the cycle continues.

These four categories have been altered into a radical behavioural paradigm as a way of drawing together the important concepts discussed thus far and can be seen in Figure 8.1.

**Fig 8.1 Model of Influences on Staff Explanations**



Stage 1 depicts the concrete experience of challenging behaviour that directly influences staff response.. Therefore, the primary influence, the challenging behaviour, 1(a) impacts itself onto a staff member. The diagram assumes that the staff member is not a naive carer experiencing challenging behaviour for the first time and response is based on previous experience that includes; previous consequences to responding to similar behaviours 1(b); the influence of rules and policies set down by the organisation 1(c); verbal descriptions by other staff on what to do in these situations 1(d). These verbal descriptions could be in the form of a 'ply' if it corresponded with a reinforcing or punishing contingency - such as social approval/disapproval); finally, modelling of responses by other staff assumed to be best practice 1(e). If staff model a response because they believe it reflects a natural rule, it is an example of tracking. If they expect other staff to imitate them and offer reinforcement or punishment contingent on a response it would be an example of pliance.

A number of studies have shown that staff behaviour is directly shaped by the consequences of client behaviour (Carr et al., 1991; Hall & Oliver, 1992). This is depicted by 1(a) and 1(b). Several authors have commented on the negative contribution made by organisations (Burdett & Milne, 1985; Fergusson & Cullari, 1983; Meinhold & Mulick, 1990a, 1990b) that may influence the capacity of staff to provide the necessary help to a client. This is represented in 1(c). A variety of studies have implicated staff as creating counter habilitative contributions to client care (Burdett & Milne, 1985; Donat & McKeegan, 1990; Emerson & Emerson, 1987; Fergusson & Cullari, 1983; Hall & Baker, 1973; Reppucci & Saunders, 1974) and is represented in the form of 1(d) and 1(e).

Stage 2 corresponds to the reflection stage of Kolb's (1982) cycle. It is a time when staff may reflect on what has happened to them. In doing so they have two resources at their disposal, their verbal repertoire and behavioural repertoire. The verbal repertoire 2(a) is made up of the language and concepts that are used to describe experience on a regular basis. Descriptions of client behaviour, informal theories and concepts are encoded through discussion with other staff, self-talk, or reading and further education. The verbal repertoire will be made up of functional, verbal behaviour and some of this verbal behaviour may contain rules which will direct future responses. The behavioural repertoire, 2(c), is the range of behaviours that have proven functional in the past. This may include a range of social behaviours (listening, chatting playing games) that have engaged clients and prevented or reduced challenging behaviour. It may also include technical responses such as restraint procedures.

In Kolb's (1982) cognitive model, stage three is the creation of an abstract conceptualisation about one's experience. It proposes that having created a concept it is then possible to test out its validity (stage four - active experimentation). In applied behavioural analysis, abstract theories would be conceived as rules. The important issue is how these rules are accessed. Stage 3 of the diagram shows an exchange of information. This may involve being asked by another about one's experience of a client's challenging behaviour 3(a). This may happen informally when another staff member asks how the previous shift has been or when the reverse happens a staff member seeks information (3b), about a client's behaviour. The content of the verbal information passed over may serve as an establishing operation in one of two ways (Michael, 1992). Firstly, when the description of client's behaviour is embellished with powerful adjectives that serve as augmentals to create a heightened physiological response in the listener (Hayes, Zettle & Rosenfarb, 1989). Secondly, when the information contains implicit information about the future permanence of the problem (as recorded through stable attributions). In both cases, such verbal information will serve to establish any staff behaviours that are able to reduce the

aversive nature of the client behaviour, or the heightened physiological response in the listener, as negatively reinforcing. To help illustrate this point, let us examine the following example:

During a hand over, one staff asks another how a client has been and is given the reply, "He's been a right bastard." This may appear offensive and the product of ignorance but such a statement may have considerable behavioural consequences.

Firstly, the term, 'right bastard' is a verbal account of several topographies, such as screaming, physical aggression and non-compliance. All these behaviours may serve a variety of functions. For example, the screaming may serve to gain a tangible, the physical aggression may serve the function of obtaining attention and the non-compliance may serve the function of demand avoidance. Yet this wide topography of behaviours is reduced to the phrase, "a right bastard."

The words 'right' and 'bastard' could be described as augmentals that serve to raise the emotional response in the listener and act in the same way as an establishing operation (Hayes, et al., 1989). Like an establishing operation, it may create a physical arousal in the listener that will increase the chance of any staff behaviour that reduces the client's behaviour and leads to lower physiological arousal in the listener. Therefore, the term "right bastard' may correlate with a repertoire of 'right bastard' response behaviours. Consequently, the staff about to start their shift may actively seek strategies to limit and reduce behaviours they have not directly observed. There is a chance that this would impede ordinary interactions with the client.

Translating this idea into the diagram, the staff have increased expectation that a challenging behaviour will occur again 3(c). This is because verbal information

has evoked staff responses that will endeavour to reduce or prevent the aversive stimuli of this behaviour. Therefore, if challenging behaviour does not occur or is of a low level, the staff responses are negatively reinforced. In this way vigilance can be the source of its own reinforcement.

The conclusion is that the staff response in stage 4, active experimentation in Kolb's (1982) cycle, will be reinforcing for the staff because it reduces the immediate frequency of challenging behaviour. It may also receive reinforcement from other staff members if it complies with one of the shared rules. Perhaps the essential feature of this proposed model is that it shows how a self-maintaining system can be produced.

#### *7.4.1 Implications for Teaching*

This model is clearly speculative but it provides a way of appreciating the potential complexity of a dynamic system and why staff training initiatives that view the needs of staff merely in terms of lack of knowledge and skills may ultimately be ineffective. Any clinician attempting to teach staff will have to compete with an existing functional understanding made up of 'tracks' and 'plys'. When trainers introduces the principles of behavioural analysis as a series of rules to understand behaviour, they effectively present a series of tracks that must compete with the existing tracks that have been followed by the staff team.

Cullen (1993) argues that successful intervention must operate on two out of three areas. These are staff training, staff management and staff support. The findings of the studies in this thesis suggest that this should be expanded further to view staff training as fundamentally a development of staff verbal behaviour (descriptions,

discussions and rules about client behaviour) and that such training should be accompanied by a greater respect for the way staff describe their world. EXPAND

Perhaps one new focus of staff training is to examine and expand the language staff use about client's behaviour in the context of their verbal community (i.e. other members of the staff team). This would inevitably lead to establishing a number of principles. The first would be to gain management support to ensure that staff could meet as a team (the relevant 'verbal community') for the required term of training. Secondly, the focus of training would be to help staff regulate their verbal behaviour so that it would correspond better with the functional relationships of client behaviour. Behavioural analysis could be used to help staff develop verbal categories that corresponded with the behaviour of clients (Gurin & Forster, 1994). Thirdly, involving the whole staff team would increase the chance that the verbal community would adapt to incorporate and support new rules. Finally, staff should be taught to apply the principles of functional analysis to themselves and to their jobs. Of course such developments would require extra resources but it is unlikely that effective challenging behaviour services can be delivered with inadequate funding.

#### *7.4.2 Future Research*

Any research to investigate the influence of verbal behaviours will have to overcome a number of methodological and practical problems. Shimoff and Catania (1998) who prefer the term 'verbal governance of behaviour' to rule-governed behaviour, outline a number of principles for future research. One central idea is:

We cannot expect all subjects to do the same thing. The experimental analysis of human verbally governed behaviour is concerned with the behaviour of individual



organisms and usually leads to procedures that are incompatible with group designs (e.g., Catania, Lowe & Horne, 1990; Shimoff, Matthews, & Catania, 1986). Such procedures are defining features of behaviour analysis as a discipline (Shimoff & Catania, 1998 p. 374).

Shimoff and Catania (1998) suggest a number of strategic points to aid research designs in this area but two stand out in particular as helpful in designing applied studies with care staff.

1. Treat verbal behaviour as behaviour. What staff say should be recorded and analysed with the same rigour as the behaviour of staff (which in turn should be treated with the same level of interest as client behaviour).

2. Pit variables against each other. Staff behaviour will be shaped by some non-verbal contingencies and an important scientific question is which variables influence which behaviours.

An immediate question to investigate following from this thesis is what is the accuracy of questionnaire data compared to verbatim accounts in recording verbal operants. One possible way to investigate this would be through a longitudinal study. Several measures would be taken. These would include objective behavioural observations of staff and client behaviour sampled through out the day. Individual staff responses to the same client behaviours recorded through direct observation would be measured using two forms of data collection. The first would be a seven point questionnaire about client behaviour and its causes. The second would be through verbatim accounts of semi-structured interview (which would also be coded, by independent coders, using seven point dimensions). Multiple measures of each method would enable a comparison of the accuracy of each measure with the behavioural data.

A second study could investigate the effectiveness of correspondence training as a means of staff training and whether it would serve as an effective intervention model. Two dependent variable measures would be taken. The first would be the frequency of a client's challenging behaviour (c.f. Cullen, 1988). The second would be the verbal behaviour of identified staff, chosen at random, recorded at set intervals through out the day (speaking into a tape recorder and through transcribed meetings with the staff team).

The independent variable would be the correspondence training. Key staff would be interviewed to access a comprehensive list of colloquial descriptions of client behaviour. The staff team would have to operationalise their terms and organise behavioural observations. The team would meet to review tape recordings of behaviours that corresponded with behavioural data. Each member of the team would have to complete the same series of exercises with an overall goal to develop strategies to help a client. The role of the trainer would be to facilitate the goals by providing theories and techniques when required. Thus the teaching becomes functional rather than curriculum led.

By recruiting several groups of staff it would be possible to monitor staff and client behaviours at baseline and maintain the baseline records to create a multiple baseline design across participants in different settings.

## **Conclusions**

In Chapter 1 evidence was cited suggesting that much staff training fails to effect change in client behaviour (Cullen, 1988; Duker & Seys, 1980; Kissell Whitman & Reid, 1983; Hersen Bellack & Harris, 1993; Page, Iwata & Reid, 1982; Parsons, Reid & Green, 1993; Reid & Green, 1990; Smith, Parker, Taubman, &

Lovaas, 1992). Clearly there are many reasons as to why staff-led behavioural programmes ultimately fail and a number of these were outlined in the introduction. These included lack of resources (Corrigan, Kwartarini & Pramana, 1992), staff turnover (Burdett & Milne, 1985; Emerson & Emerson, 1987; Reppucci & Saunders, 1974), the influence of management decisions (Hall & Baker, 1973), the inability of staff to overcome bureaucratic machinery (Reppucci & Saunders, 1974), and the inflexibility of working shifts (Backer, Liberman & Kuehnel, 1986).

The research presented in this thesis has outlined a further variable that may be responsible for attenuating the effectiveness of behaviourally-based staff-training in the area of challenging behaviour. This is the effects of the language staff use about client's behaviour in the context of their verbal community. The results of this research suggest that not only is the non-verbal behaviour of staff a vital ingredient in the functional analysis of challenging behaviour in clients, but also that the verbal behaviour of staff should be recorded and analysed with the same analytical rigour as their non-verbal behaviour.

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## **Appendices**



## Appendix A

### Gender of Participants Within Each Hospital in Study One

Table.1 A Gender of Participants Within Each Hospital in Study One

---

Hospital	No of participants	
	Female	Male
1	8	3
2	10	13
3	7	7

---

Table 2.A  
Distribution of Qualifications by Hospital for Study One

Hospital	Man	Grade			
		CN	SEN	ST	NA
1	0	1	1	0	9
2	0	1	1	6	15
3	1	1	0	6	6

Code for Grade :

Man = Ward Manager  
 CN = Charge Nurse  
 SEN = Staff Enrolled Nurse  
 ST = Staff Nurse  
 NA = Nursing Assistant

Table 3.A

Range of Experience for Each Hospital for Study One

---

Hospital	Experience					
	1	2	3	4	5	6
1	0	2	2	4	0	3
2	2	3	0	6	6	6
3	0	1	2	4	3	4

---

Code for Experience:

- 1 = Less than one year
- 2 = Over one year and less than 3 years
- 3 = Over 3 years and less than five years
- 4 = Over 5 years and less than 10 years
- 5 = More than 15 years

## Appendix B

### Gender and Grades of Staff in Studies two and Three

Table B.1

---

---

Gender of participants in studies 2 and 3	
Female	Male
10	12

---

Table B.2

---

---

Grade of participants in studies 2 and 3			
CN	SEN	ST	NA
1	1	6	15

---

**APPENDIX C**

**BEHAVIOUR ANALYSIS AND INTERVENTION TEACHING PROGRAMME**

**STAFF INTERVIEW**

The aim of this questionnaire is to survey the need within your ward. It is not a test of staff knowledge, yet it is important that each staff member has a chance to contribute their ideas and their experience. It would be very helpful if you didn't consult with other staff to enable us to ensure that all viewpoints are properly presented.

NAME OF STAFF:

POSITION:

DATE:

YEARS OF EXPERIENCE:

---

Q.1 Briefly list the clients who present behaviour problems on the ward. Give a short account of each problem.

CLIENTS NAME

PROBLEM

Q.1 (a) Consider the name in Q.1. What in your opinion are the positive things about person.

CLIENT'S NAME

POSITIVE

Q.2 List the two clients who you regard as presenting with the most challenging behaviour problems

1.

2.

Q.3) Describe to me what you did in chronological order on your last working day.

Q.4) How much does the day represent your work style and usual practises.

Q.5) What interactions did you have with clients and staff on that day?

Q.6) What was the last interaction you had on that day.

Q.7) Now you have remembered this interaction can you think of any others?

Q.8) Did you do anything with clients away from the ward?

Q.9) What was good about the day and why?

Q.10) What was difficult about the day and why?

Q.11) In what way do other staff differ in their work style from you?

Q.12) What needs to change in order for new things to happen?

Q.13) What specific things would you like to see changed?

Q.14) What is stopping these changes from happening?

NOW TAKE EACH OF THE CLIENTS YOU HAVE LISTED IN Q.2 AND ANSWER THE FOLLOWING QUESTIONS.



- Q.15 a) Client's Name:
- b) Read back the earlier description (in Q.1). Would you like to expand on this?
- c) How often does this happen?
- d) How long does it last?
- e) when was the last time you witnessed this behaviour
- f) what was happening at the time?
- g) What do you think caused the problem?

h) What effect does this have on

i) the client

ii) others

iii) property

16) What do you do when the client behaves like this? (actions)

17 a) What runs through your mind?

17 b) How does it make you feel?

18 a) How would you think about this later on?

18 b) How might you feel?

19 a) What do you think runs through the client's head during their behaviour?

19 b) How do you think they might they might be feeling?

REPEAT FOR THE SECOND CLIENT.

## Appendix D

### Workshop Topics – Used in Study Five

Week one	Introduction – contracting – evaluation
Week two	Defining & observing behaviour. Continuous observations and using the video camera
Week three	Specifying types of observation Event Duration Time sample
Week four	Presentation and interpretation of data
Week five	Introduction to the principles of reinforcement
Week six	Understanding occupational stress
Week seven	Understanding the functions of challenging behaviour
Week nine	Analogue assessment
Week ten	Understanding aggression
Week eleven	Understanding aggression
Week twelve	Understanding aggression
Week thirteen	Developing desirable futures for clients
Week fourteen	problem solving barriers to desirable futures
Week fifteen	Skills analysis, developing behavioural objectives
Week sixteen	teaching techniques – discrete trial instruction
Week seventeen	Review of course, feedback and problem solving

### **Assignment Work – completed by all staff**

1. Complete time sample observations using behavioural observations instrument (B.O.I) data. Focus on client behaviour.
2. Prepare a graph of B.O.I Data.
3. Complete time sample observation looking at interaction between staff and clients.
4. Presentation and interpretation of data.
5. 'Discuss' desirable future about a named client.
6. Complete observations of named client.
7. Complete a series of analogue assessments.
8. Complete a behavioural worksheet for a named client.
9. Undertake a skills analysis.
10. Prepare a programme plan for teaching a skill to a named client.
11. Complete a functional analysis of a named client.
12. Complete a behavioural profile.

**Appendix E-**  
**Used in StudyTwo**  
**Carers Attributional Style Questionnaire**

When you have seen either of the two clients being aggressive complete the following questionnaire. If you are unsure of a cause then choose a 4 . Thank you for your cooperation.

Staff name \_\_\_\_\_

Date: \_\_\_\_\_

Client's name \_\_\_\_\_

1.1 Write down the one major cause \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1.2 Is the cause of the aggression due to something about himself or to something about other people or circumstance. (circle one number)

*Totally due to other  
or circumstances*

1 2 3 4 5 6 7

*Totally due to  
himself*

1.3 The next time you start your working shift, will this cause be present ? (circle one number)

*Will never again  
be present*

1 2 3 4 5 6 7

*Will always  
be present*

1.4 How much control did the client have in the outcome of the events? (circle one number)

*No control*

1 2 3 4 5 6 7

*Complete control*

1.5 Would you expect another resident to behave in the same way as this client in similar circumstances? (circle one number)

*Very unlikely*

1 2 3 4 5 6 7

*Very likely*

**Appendix F-  
Used in Study Three  
Carers Attributional Style Questionnaire**

1.1 John became aggressive at the end of the video shoot.

Write down the one major cause \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1.2 Is the cause of John’s aggression due to something about himself or to something about other people or circumstance. (circle one number)

*Totally due to other  
or circumstances*            1 2 3 4 5 6 7            *Totally due to  
himself*

1.3 The next time you start your working shift, will this cause be present ? (circle one number)

*Will never again  
be present*            1 2 3 4 5 6 7            *Will always  
be present*

1.4 How much control did John have in the outcome of the events? (circle one number)

*No control*            1 2 3 4 5 6 7            *Complete control*

1.5 Would you expect another resident to behave in the same way as John in similar circumstances? (circle one number)

*Very unlikely*            1 2 3 4 5 6 7            *Very likely*

\_\_\_\_\_

2.1 John had a similar behaviour several days later when out in town with a member of staff. It happened when they were getting on a bus to come home and a large group of people all tried to get on the bus at the same time. In response to being pushed and shoved, John started to behave in the same way as on the video.

2.2. What would you say was the underlying cause of John's behaviour ?

---

---

2.3 Would you think that John's behaviour would be due to something about himself or to something about other people or circumstances? (circle one number)

*Totally due to other  
or circumstances*      1 2 3 4 5 6 7      *Totally due to  
himself*

2.4 The next time you start your working shift, would this cause be present ? (circle one number)

*Will never again  
be present*      1 2 3 4 5 6 7      *Will always  
be present*

2.5 How much control would John have in the outcome of the events? (circle one number)

*No control*      1 2 3 4 5 6 7      *Complete control*

2.6 Would you expect another resident to behave in the same way as John in similar circumstances? (circle one number)

*Very unlikely*      1 2 3 4 5 6 7      *Very likely*

---



# WARD ATMOSPHERE SCALE FORM R

Rudolf H. Moos

## Instructions

There are 100 short statements in this booklet. They are statements about wards. Please decide which of these statements are true of your ward and which are not. On the separate answer sheet, mark under T (True) when you think the statement is true or mostly true of your ward; mark under F (False) when you think the statement is false or mostly false. Please be sure to answer every statement and to fill in your name and the other information requested.

**Do not make any marks on this booklet.**



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P. 2

- 76. The patients rarely talk about their personal problems with other patients.
- 77. On this ward staff think it is a healthy thing to argue.
- 78. The staff set an example for neatness and orderliness.
- 79. People are always changing their minds here.
- 80. Patients will be transferred from this ward if they don't obey the rules.
- 81. Discussions are pretty interesting on this ward.
- 82. Doctors sometimes don't show up for their appointments.
- 83. Patients are encouraged to show their feelings.
- 84. Staff rarely give in to patient pressure.
- 85. Staff care more about how patients feel than about their practical problems.
- 86. Staff strongly encourage patients to talk about their pasts.
- 87. Patients here rarely become angry.
- 88. Patients are rarely kept waiting when they have appointments with the staff.
- 89. Patients never know when they will be transferred from this ward.
- 90. It's not safe for patients to discuss their personal problems around here.
- 91. Patients often do things together on the weekends.
- 92. Staff go out of their way to help patients.
- 93. The ward always stays just about the same.
- 94. The staff discourage criticism.
- 95. Patients must make plans before leaving the hospital.
- 96. It's hard to get a group together for card games or other activities.
- 97. A lot of patients just seem to be passing time on the ward.
- 98. The day room is often messy.
- 99. Staff tell patients when they are getting better.
- 100. It's a good idea to let the doctor know that he is boss.

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TO: 9383718

P02

1. Patients put a lot of energy into what they do around here.
2. Doctors have very little time to encourage patients.
3. Patients tend to hide their feelings from one another.
4. The staff act on patient suggestions.
5. New treatment approaches are often tried on this ward.
6. Patients hardly ever discuss their sexual lives.
7. Patients often gripe.
8. Patients' activities are carefully planned.
9. The patients know when doctors will be on the ward.
10. The staff very rarely punish patients by restricting them.
11. This is a lively ward.
12. The staff know what the patients want.
13. Patients say anything they want to the doctors.
14. Very few patients have any responsibility on the ward.
15. There is very little emphasis on making patients more practical.
16. Patients tell each other about their personal problems.
17. Patients often criticize or joke about the ward staff.
18. This is a very well organized ward.
19. Doctors don't explain what treatment is about to patients.
20. Patients may interrupt a doctor when he is talking.
21. The patients are proud of this ward.
22. Staff are interested in following up patients once they leave the hospital.
23. It is hard to tell how patients are feeling on this ward.
24. Patients are expected to take leadership on the ward.
25. Patients are encouraged to plan for the future.
26. Personal problems are openly talked about.
27. Patients on this ward rarely argue.
28. The staff make sure that the ward is always neat.
29. If a patient's medicine is changed, a nurse or doctor always tells him why.
30. Patients who break the ward rules are punished for it.
31. There is very little group spirit on this ward.
32. Nurses have very little time to encourage patients.
33. Patients are careful about what they say when staff are around.
34. Patients here are encouraged to be independent.
35. There is very little emphasis on what patients will be doing after they leave.
36. Patients are expected to share their personal problems with each other.
37. Staff sometimes argue with each other.
38. The ward sometimes gets very messy.
39. Ward rules are clearly understood by the patients.
40. If a patient argues with another patient, he will get into trouble with the staff.
41. Nobody ever volunteers around here.
42. Doctors spend more time with some patients than with others.
43. Patients set up their own activities without being prodded by the staff.
44. Patients can leave the ward whenever they want to.
45. There is very little emphasis on making plans for getting out of the hospital.
46. Patients talk very little about their pasts.
47. Patients sometimes play practical jokes on each other.
48. Most patients follow a regular schedule each day.
49. Patients never know when a doctor will ask to see them.
50. Staff don't order the patients around.
51. Patients are pretty busy all of the time.
52. The healthier patients on this ward help take care of the less healthy ones.
53. When patients disagree with each other, they keep it to themselves.
54. Patients can wear what they want.
55. This ward emphasizes training for new kinds of jobs.
56. Patients are rarely asked personal questions by the staff.
57. It's hard to get people to argue around here.
58. Many patients look messy.
59. On this ward everyone knows who's in charge.
60. Once a schedule is arranged for a patient, the patient must follow it.
61. The ward has very few social activities.
62. Patients rarely help each other.
63. It's O.K. to act crazy around here.
64. There is no patient government on this ward.
65. Most patients are more concerned with the past than with the future.
66. Staff are mainly interested in learning about patients' feelings.
67. Staff never start arguments in group meetings.
68. Things are sometimes very disorganized around here.
69. If a patient breaks a rule, he knows what will happen to him.
70. Patients can call nursing staff by their first name.
71. Very few things around here ever get people excited.
72. The ward staff help new patients get acquainted on the ward.
73. Patients tend to hide their feelings from the staff.
74. Patients can leave the ward without saying where they are going.
75. Patients are encouraged to learn new ways of doing things.

(Continued)