

An Examination of the Influence of Behaviour Topography and Level of Severity of Learning Disability on Staff Attributions and Emotional Responses towards Challenging Behaviour shown by Adults with Learning Disabilities.

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Declaration.

**I hereby declare that, apart from the acknowledged help, this thesis is
all my own work.**

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ABSTRACT.

It has been long acknowledged that staff responses to challenging behaviour shown by people with learning disabilities often contributes to the long-term maintenance of the challenging behaviour. In recent years, in an attempt to understand staff responses to challenging behaviour, interest has been shown in the study of staffs' belief structures and attitudes towards challenging behaviour, the assumption being here that staffs' beliefs and attitudes towards challenging behaviour will influence staffs' behavioural responses to it. Much of this research has focused on staffs' causal attributions, their emotional responses to such behaviour and their views regarding appropriate interventions. Previous research has shown that these factors are influenced by a number of variables, such as experience in the job and topography of challenging behaviour. Knowledge of how different variables influence staff attributions is important as it may assist psychologist's and other professionals with the development of appropriate intervention packages for challenging behaviour that staff may be more able to implement.

This study examined the influence of topography of challenging behaviour and level of severity of learning disability on staff attributions and emotional responses to challenging behaviour. As in previous research, differences were seen in staffs' causal attributions, emotional responses and selection of appropriate interventions for the different topographies of challenging behaviour. Self-injury was more likely to be viewed as physiological in nature than aggression or stereotypy, and staff were more likely to recommend medical interventions. Stereotypy was more likely than aggression or self-injury to be viewed as environmental or a means of self-stimulation, elicited less in the way of negative emotions in staff and staff were more likely to recommend distraction and structuring the person's day as appropriate interventions. Aggression was found to elicit more intense negative emotions in staff than self-injury or stereotypy. However, very little support was found for any of the hypotheses for the examination of level of severity of learning disability on staff attributions and emotional responses. For only self-injury was there any support for many of the hypotheses.

The results of this study are discussed in the light of a number of methodological problems that may influence the study's findings. This study also highlighted a number of implications for clinical practice. Although staff had a reasonable understanding of causality of challenging behaviour, it was unclear as to how they assigned causality in actual clinical practice, as relatively few staff recommended conducting a functional analysis. Their suggestions for appropriate interventions and emotional responses may also mitigate against effective long-term interventions for challenging behaviour. On the basis of the results of this study, recommendations for possible future areas of research were made.

2. INTRODUCTION.

Direct care staff have the most contact with people with learning disabilities who display severe challenging behaviour, playing a key role in their socialisation (Hastings and Remington, 1995) and bringing into practice “national, regional and organisational philosophies and policies” for improving their quality of life (Hatton and Emerson, 1995; p 215). Staffing performance would seem therefore to be an important influence on quality of service provision; indeed a frequently employed measure of quality of life is the quality and quantity of staff : client interactions (Hastings *et al*, 1995a).

There have been a number of concerns voiced regarding direct-care staffs’ performance within learning disability services. Firstly, observational studies have shown the percentage of time people with learning disabilities are engaged in interactions with staff is around 10% (eg. Cullen *et al*, 1983), with relocation into small community homes (eg. Abraham *et al*, 1991) or improving staff : client ratios not necessarily improving the number and quality of interactions. Those with challenging behaviour are reported to receive more interactions from staff (eg. Duker *et al*, 1989), although it is unclear how positive these interactions are (Hastings and Remington, 1994b) as previous studies (eg. Grant and Moores, 1977) have indicated that those who present with challenging behaviour are more likely to be engaged in negative interactions. Secondly, both experimental and observational studies have shown that staff often respond in ways to challenging behaviour which, although quickly terminates the episode, contributes to it’s long-term development and maintenance, such as attending more to those whose behaviours serve an attention-seeking function (eg. Taylor and Carr, 1992), and less to those whose behaviours serve the function of escape from demands (eg. Carr *et al*, 1991). Finally, often staff fail to implement behavioural programmes consistently, with this considered to be the main reason for treatment failure (Hastings and Remington, 1993).

This state of affairs is not conducive to improving the quality of life of people with learning disabilities and challenging behaviour through the teaching of appropriate socialisation and adaptive behaviour skills, which would enable

them to live and function within the least restrictive environment possible. It highlights the need for an examination of the factors influencing staffing performance, so that more effective techniques for improving performance can be developed and implemented within services.

From the 1960's to the mid 1980's poor staffing performance was attributed to staff lacking the necessary skills and knowledge. Accordingly, there was an emphasis on providing staff training in behavioural principles and behaviour modification (eg. Hastings and Remington, 1993). Although this improved knowledge, generally it had little lasting impact on staff performance (eg. Ziarnik and Bernstein, 1982). Another factor believed to influence staffs' implementation of behavioural approaches is their attitude towards challenging behaviour (Hastings and Remington, 1993).

In recent years, there has been an increasing interest in examining staffs' attitudes towards challenging behaviour. The assumption here is that staff beliefs about challenging behaviour may partially determine their responses (Hastings and Remington, 1994a), thus examination of their beliefs may help explain why staff behave the way they do. If their beliefs are considered antagonistic to treatment, training focusing on altering the way they perceive challenging behaviour would appear to be a logical way of changing their responses to such behaviour (Hastings, 1997).

The study of attitudes is particularly important for two main reasons. Firstly, many challenging behaviours are social in nature, such that they both affect people and are affected by others actions (Taylor and Romanczyk, 1994). Therefore, the way in which staff interact with people with challenging behaviour is an important contributory factor to the development and maintenance of many such behaviours (Hastings, 1995). Secondly, current behavioural treatments for challenging behaviour are becomingly increasingly based on hypotheses about it's causation (Repp *et al*, 1988). Therefore, what staff view as the cause of the challenging behaviour may determine the intervention they select.

In the main, studies have examined staff beliefs regarding the causes of challenging behaviour and appropriate interventions for such behaviour. The aim of these studies has been to gain further insight into staff attitudes and their behaviour towards people with learning disabilities. This knowledge may assist trainers and psychologists in the development of appropriate training packages for staff and appropriate behaviour management programmes which staff may be more likely to implement.

This study aims to examine two factors influencing staff attitudes. Certain characteristics of the person with learning disabilities may also influence staff attitudes towards their challenging behaviour. Two such characteristics that will be examined in this study are the type of challenging behaviour and the level of severity of the person's learning disability.

2. REVIEW OF THE LITERATURE.

Attitudes, beliefs and values may be viewed as rules that people make, which enable them to make sense of their world by predicting the likely consequences of their actions (Ajzen and Fishbein, 1977). One influential model of attitudes is Attribution Theory (eg. Weiner, 1985). This model proposes that people seek to explain the events that happen to them in order to gain a sense of control, this being particularly so when events are unusual, unwanted or unpleasant. The outcome of an event and its perceived causes are believed to influence the emotions experienced (Weiner, 1985), and accordingly behavioural responses to such events. Based on this model, staff responses to challenging behaviour should be consistent with their beliefs about such behaviours (Hastings and Remington, 1994a). These beliefs are likely shaped by personal and societal values and the service philosophy. These factors influence not only staff responses to challenging behaviour, but also the person with learning disabilities assessment and intervention plan (Emerson *et al*, 1994b).

This literature review shall review the following :-

1. Attribution research relevant to this study.
2. Definitions of challenging behaviour.
3. Causes of challenging behaviour.
4. Assessments and interventions for challenging behaviour.
5. Influences on staff responses to challenging behaviour.
6. Research on the application of attribution theory to staff views of challenging behaviour.

2.1 Attribution Theory.

As stated above, this theory states that people seek to explain unpleasant or unusual events they observe, and try in order to gain a sense of control, to find causes of or reasons for the behaviour (Weiner, 1985). Weiner (1985) identified three dimensions that people use to classify causes of behaviour : *locus* (whether the cause is perceived to be internal or external to the person), *stability* (whether the event is perceived to be due to stable or unstable factors within the person) and *controllability* (whether the event is perceived to be under the control of the person or outwith their control). It is considered that these dimensions play a key role in the emotion process, such that each dimension is believed to be uniquely related to a set of feelings. These feelings influence cognitive and behavioural reactions to the event, for example, anger is believed to be elicited when people perceive another's negative behaviour to be controllable. This then reduces that person's motivation to assist the person exhibiting the behaviour.

It is believed that self-related emotions are influenced mainly by the locus of causality dimension. Success and failure perceived as due to internal causes (eg. personality, ability and effort) respectively raises or lowers self-esteem whereas external attributions for positive or negative outcomes do not influence self-related emotions (Weiner, 1985). To preserve self-esteem, people when explaining their own negative actions typically attribute them to the situation, for example, a reasonable response to a difficult situation rather than to their disposition. Hence, when people believe themselves to be personally involved in a given situation, cognitive processing becomes selective with the aim of

maintaining a positive self-concept (Brown, 1986) and enhancing feelings of self-worth. In contrast, people typically attribute the same action by someone else to that person's disposition (Mirels, 1980). This bias in the categorisation process has been termed *Actor/Observer Divergence*, with its main effect being the removal of blame for one's own negative actions and avoidance of responsibility for others' negative behaviours.

Most of the research on people's attributions for others' behaviour has focused on their negative behaviours rather than their positive behaviours. Previous research has indicated that positive affect towards others' positive behaviour is largely unrelated to attributions, or in other words it does not appear to be mediated by cognitive appraisal (Kanouse and Hausen, 1972). In contrast, negative affect has shown to be related to attributions for negative behaviour. Compared with positive behaviour, negative behaviour often has greater impact and more often activates the search for a reasonable explanation (Wong and Weiner, 1981).

2.1.1 Effect of attributions on help-giving behaviour.

A person's motivation and willingness to help another is believed to be influenced primarily by the controllability dimension (Weiner, 1980). If a negative event is believed to be outwith the person's control, it will elicit feelings such as pity and sympathy from others which increases their motivation to help. However, if the event is perceived to be within the person's control, it tends to elicit anger and disgust from others, which reduces willingness to offer help. Supporting this theory, Dix *et al* (1986) found parents were more likely to rate children's negative behaviour as dishonest, hostile or selfish if they viewed their behaviour as intentional. Brewin *et al* (1991) in a study examining expressed emotion in relatives of patients with schizophrenia, found that relatives were more critical and hostile towards their relative with schizophrenia if they believed that their behaviour was directed personally towards them and they had control over it. Weiner (1980) demonstrated that people tended to experience disgust and were not willing to provide help to someone who had fallen if they perceived him to be drunk (ie. due to controllable causes), but

tended to feel sympathy and were more willing to help if they believed the person to be ill (ie. outwith the person's control).

Sharrock *et al* (1990) proposed that the stability dimension may exert an important influence over helping behaviour. Attributional stability is regarded as the most important determinant of the expectation of success and failure (Weiner, 1980) and influences the perceived costs and benefits of helping and tendency to help (Carlson and Miller, 1987). According to this model, unstable attributions should increase staff optimism because the behaviour is seen as modifiable (Weiner, 1980). Staff optimism is very relevant since it has a close association with quality of care (eg. Garety and Morris, 1984). Being guided by expectations of success may be a feature in many services, where limited time and resources may necessitate staff to make judgments as to where they should target their resources.

Sharrock *et al* (1990) examined the influence of the controllability and stability dimensions on psychiatric nurses attributions towards challenging behaviour. As hypothesised, helping behaviour was found to be strongly related to staff optimism with unstable attributions being associated with increased staff optimism and motivation to help. Contrary to Weiner's (1980) research, they did not find helping behaviour was influenced by emotional responses, such that no associations were found between either the controllability dimension or optimism and emotional responses. This would suggest that their attributions were influenced more by the stability dimension than the controllability dimension. However in this study, any incidents of challenging behaviour were relatively frequent, whereas much of the attribution research (eg. Weiner, 1980) concerns infrequent events. It is possible that nurses habituate to these behaviours so that their responses are no longer influenced by their emotions. The controllability dimension in the above study did however exert some influence. When behaviour was perceived as controllable by the patient, optimism and willingness to provide extra help decreased. Sharrock *et al* (1990) considered that this was because the behaviour was seen as 'intentional', the patient did not want to change and the nurses had no control over it.

2.1.2 Correspondence Inference Theory.

Given the importance of the controllability dimension in guiding behaviour, it is worth looking at some of the factors influencing judgments of intentionality. Jones and Davis (1965) proposed a theory, *Correspondence Inference Theory*, to describe how people ascribe intentionality to another's negative behaviour. They stated that for an action to be intended, the person observing must believe that the other person carrying out the behaviour *knew* the consequences of his actions, and he possessed the *ability* to perform the action. Much of the research on this theory has examined parents' perceptions of children. Since knowledge and ability are believed to increase with age, it follows that older children, because they have greater knowledge and ability than younger children, will be perceived by parents as having more control over their behaviour and thus seen as more to blame for their negative actions (Dix *et al.*, 1986). This theory may also be relevant to the field of learning disabilities, if staff when making attributions regarding challenging behaviour consider factors such as their ability level.

Applying this theory to parents' perceptions of their children's misdemeanors, Dix *et al.* (1986) proposed that parents will assess children's intentions by considering whether they felt children were sufficiently motivated to behave in this way, and whether they met the following three criteria for adequate control over their behaviour: The child's knowledge of the effects of their behaviour, the child's ability to produce the outcome deliberately if they want to and the extent to which the child was influenced by external control. They asserted that if parents think their child has sufficient motivation and control (ie. knowledge, ability and lack of external pressure), they will infer that their child must have intended their actions and its effects. If, on the other hand parents believe that the knowledge, ability or motivation was not present, or that the behaviour was influenced primarily by external factors, they will perceive the child's actions to be unintended, reflecting developmental or situational constraints on their control.

Several studies (eg. Dix *et al.*, 1986; Gretarsson and Gelfand, 1988) have demonstrated that as children develop, parents perceived children's

misbehaviour to be increasingly caused by dispositional factors and to be increasingly under the child's control. Furthermore, parents affective reactions to children's misbehaviour have been found to be related to their attributions regarding causes of the behaviour (Dix *et al.*, 1986) and become increasingly negative as children develop (Dix *et al.*, 1986; Gretarsson and Gelfand, 1988; Johnston *et al.*, 1992). These negative attributions may be associated with negative responses, for example, studies by Dix *et al.* (1989) and Bugental *et al.* (1989) have shown that parental attributions of children's misbehaviour to internal causes the child can control are associated with coercive or power-assertive methods of control by the parent. In contrast, positive affect has been found to be unrelated to attributions for altruism (Dix *et al.*, 1986).

Although it seems widely accepted that parents do appear to attribute less intent and dispositional causation when children are believed to show limited control over behaviour, it is unclear as to which aspects of knowledge and ability influence their assessments of control and intent (Dix *et al.*, 1986). The above authors found that parents rarely considered constraints on control from external pressures as an important influence on behaviour, a result which studies on adults' perceptions of adults' negative behaviours (eg. Miller *et al.*, 1981) have demonstrated. In other words, parents did not feel that external pressures would undermine their child's control over behaviour.

Parents, on the other hand tend to view altruistic behaviour as more intentional, under the child's control and more dispositional than misbehaviour (Dix *et al.*, 1986) with that of older children being seen as no more dispositional than that of younger children (Gretarsson and Gelfand, 1988). This appears to reflect parents' positive bias towards their children. However, when children are perceived by their parents as difficult to manage, this positive bias weakens. In general, people attribute experienced or anticipated problems in managing others to that person's negative traits or dispositions (Miller and Ross, 1975). For example, Gretarsson and Gelfand (1988) found that although parents normally viewed their children's desirable behaviours as dispositional, and their undesirable ones as situational and unstable, mothers who viewed their children as difficult to control perceived them to be dispositionally and stably oppositional. Perceiving their children in this way is believed to be adaptive to

the parent, as viewing the child as impaired in some way, relieves parents from being responsible for their child's behaviour, thus preserving their self-esteem (Gretarsson and Gelfand, 1988). Bugental *et al* (1989) found that compared to nonabusive mothers, abusive mothers perceived children, rather than themselves as responsible for their negative interactions and these attributions were associated with negative responses towards the child.

As mentioned above, this theory may also extend to other populations such as learning disabilities, where judgments regarding the ability level of the individual are considered when ascribing controllability. Indeed, Fincham and Roberts (1985) found that children and adults considered to be mentally disturbed were seen as less responsible for their actions, and this was associated with attributions of lack of knowledge that their behaviour was wrong.

The type of behaviour displayed may also influence attributions of controllability and stability. Johnston *et al* (1992) found that aggression in children was seen as more controllable by the child than hyperactivity, elicited more negative reactions such as upset and disapproval in parents and was viewed as more problematic. However, if hyperactivity occurred in the context of aggression, it elicited the same negative evaluations as did aggression on its own.

2.2 Definition of Challenging Behaviour.

Previous terms have included problem behaviour, maladaptive behaviour and aberrant behaviour. In more recent years, these have been replaced by the term 'challenging behaviour', which reflects the view that the problem not only exists within the individual, but also for those who have to understand and respond to it. Therefore, the extent to which it is regarded as a 'challenge' depends not only on the intensity and nature of the behaviour but also on others ability to understand, manage or treat the challenge (Lowe and Felce, 1995). This would suggest that which behaviours are considered 'challenging' is very subjective, and dependent on individual staff perceptions.

2.3 Causes of Challenging Behaviour.

Over the past number of years, there has been a substantial amount of research conducted with respect to determining the factors influencing challenging behaviour, and it is now widely agreed that knowledge of these factors is fairly comprehensive (Murphy, 1994).

2.3.1 Biological Causes.

People with learning disabilities may have specific chromosomal defects, such as having an extra chromosome 21 as characterises Down's Syndrome, or have genetic defects as characterises Fragile X. Considerable research has been conducted with respect to establishing any links between challenging behaviour and the medical diagnosis or known neurotransmitter disturbances, much of which has proved disappointing. For some, for example Fragile X, there may be an association between the specific behaviour disturbance and brain dysfunction. Borghgraef *et al* (1990) found that 29% of their subjects with Fragile X showed evidence of attention deficit, hyperkinesia and 'autistic like' behaviours compared with 16% of the control group comprising people with a similar level of severity of learning disability. Whilst this indicates that people with Fragile X show an increased prevalence of occurrence of these behaviours, having Fragile X does not necessarily mean that they will exhibit these behaviours. Similarly, people who exhibit these behaviours do not necessarily have Fragile X syndrome. This pattern seems to typify many syndromes associated with learning disabilities. Indeed, there are only two known conditions, Lesch-Nyhan and Prader-Willi Syndrome, which can be biologically defined and always lead to a specific behavioural difficulty (Murphy, 1994). However, she also stated that there was no particular challenging behaviour associated with a single biological syndrome.

Considerable interest has been shown in relation to the possible links with neurobiological or neurophysiological factors and specific challenging behaviours, for example a possible link between endorphins and self-injury. Endorphins are opioid peptide neurotransmitters that are released during periods of pain and stress. They can produce analgesic and euphoric effects, which can

lead to physical dependence. It has been suggested that the analgesic and euphoric effects released during self-injury may act as an automatic reinforcer for self-injury (Sandman and Hetrick, 1995; Thompson *et al.*, 1995). Evidence of this link comes from studies that have shown elevated levels of endorphins in people who self-injure (Coid *et al.*, 1983), and the frequency and intensity of self-injury to reduce through administration of opiate antagonistics, which are believed to act by blocking the analgesic and euphoric effects of the endorphins (Oliver and Head, 1990). On its own, endorphins cannot account for the appearance of self-injury, but they may be able to contribute to explanations of maintenance of chronic self-injury, particularly in combination with other biological and social factors (Oliver and Head, 1990).

It is frequently asserted that there is a link between epilepsy and aggression (Murphy, 1994). Temporal lobe epilepsy has been associated with aggression (Lindsay *et al.*, 1979), although Fenwick (1993) in a review of this literature considered that in view of a relatively high proportion of people with epilepsy also showing associated brain damage and various socioeconomic problems, (both factors are associated with aggression), it makes it very difficult to conclude any links between epilepsy and aggression. He did however acknowledge that epilepsy may make a small contribution in some cases.

2.3.2 Homeostatic or Arousal Theory.

This theory attempts to explain the mechanism by which challenging behaviour may be influenced by environmental conditions or events. It states that people for survival reasons, seek an optimal level of stimulation. When understimulated, a person may engage in various behaviours to increase arousal. Similarly, when overstimulated, a person may engage in the same or other types of behaviour to decrease arousal (Felce, 1993). This theory has mainly been applied to stereotypical behaviour, but also on occasion to self-injury.

2.3.3 Operant Factors.

Operant conditioning is based on the assertion that the consequences of behaviour can affect learning and performance. The basic premise is that a response is emitted freely; the consequences that follow predict the future likelihood of its recurrence. Thorndike (1911) reported that behaviour that is followed by satisfying consequences will tend to be repeated (ie. reinforced) and behaviour which is followed by unpleasant consequences will occur less frequently (ie. punished); this phenomenon became known as the Law of Effect. There are two forms of reinforcement; **positive reinforcement** (presentation of rewards) and **negative reinforcement** (removal of aversive stimuli), both of which increase the likelihood of the behaviour's recurrence.

It has been acknowledged for many years that challenging behaviour can be learnt (Murphy, 1994), and operant theory has been particularly influential in accounting for its aetiology and maintenance (eg. Carr, 1977). Derby *et al* (1992) in a review of 79 cases examining the functions of challenging behaviour found 72% of these to be sensitive to socially mediated sources of reinforcement. Events considered to be positively reinforcing include social attention (Oliver, 1991), obtaining tangibles (Jones, 1987), perceptual reinforcement (Lovaas *et al*, 1987) and intrinsic reinforcement (Hastings and Remington, 1994b). The most cited examples of negative reinforcement are escape from demands and escape from social attention (Carr *et al*, 1980).

The above outlines the importance of the social environment to the development and maintenance of challenging behaviour. It follows then that staff behaviour may also be under the influence of reinforcement contingencies, thus maintaining the cycle of reinforcement. For example, if the function of the person with learning disabilities self-injury is positive reinforcement in the form of social interaction from staff, and the member of staff finds self-injury aversive, he/she will likely respond in a way to the self-injury that quickly terminates it, most likely by interacting with the person. Thus, staff behaviour is both negatively reinforced by the termination of, and provides positive reinforcement to the self-injury.

Supporting this, experimental studies have shown that staff often behave in ways associated with low rates of challenging behaviour, namely interacting less and avoiding hard tasks when working with people with learning disabilities whose behaviour served the function of escape from demands (Carr *et al.*, 1991), and attending more to those whose behaviour served an attention-seeking function (Taylor and Carr, 1992). Similarly, Taylor and Romanczyk (1994) found that they could generate accurate hypotheses about the functions of challenging behaviour by observing the amount of attention given to people with learning disabilities.

Not all challenging behaviours are shaped by reinforcement derived from social and/or environmental consequences, but are maintained by consequences internal to the person. This process is called *automatic reinforcement* (Lovaas *et al.*, 1987), and includes such events as self-stimulation. However, behaviours developed initially through a process of automatic reinforcement may also come to be maintained by a process of positive and/or negative social reinforcement.

Certain stimuli may come to trigger certain behaviours. These stimuli, termed *antecedent or discriminative stimuli*, develop if behaviours in the past have been consistently reinforced in the presence of these stimuli. Antecedent stimuli thus distinguish between situations in which reinforcement is more or less likely (eg. Emerson, 1998).

Whether a particular stimulus or event is reinforcing or punishing on any given occasion depends on its context (eg. Emerson, 1998). For example, food may serve as a positive reinforcer if a person is hungry or is denied access to it, but may serve as a punisher if he/she dislikes what is on offer or has just eaten. Conditions that increase or decrease the probability of a specific response occurring at a specific time to a specific stimulus, but do not differentially affect reinforcer probability are called *Setting Events* (eg. Wahler and Fox, 1981). These may be complex, antecedent conditions, events and stimulus-response interactions that overlap with or entirely precede subsequent behaviours that they affect. Setting events may “include organic factors such as state of deprivation or satiation (food, sex, sleep and other needs), drugs and state of physical fitness; environmental factors such as presence or absence of certain

people or objects, setting, noise level, availability of activities, instructions, demands of the setting” (Woods and Blewitt, 1993).

2.3.4 Communication Theory.

Challenging behaviour has been described as a socially unacceptable form of early communication. Supporting this, studies (eg. Duker and Remington, 1991) have demonstrated a correlation between poor communication skills and challenging behaviour in people with learning disabilities. Further support comes from studies which have shown that challenging behaviour can be dramatically reduced when taught alternative ways to communicate their need to receive the same consequences that their challenging behaviour was producing (eg. Carr and Durand, 1985). To some (eg. Felce, 1993) this theory is regarded as a subset of operant theory, such that the function of the challenging behaviour can be understood in terms of its antecedents and consequences.

2.3.5 Psychiatric Disorders.

The extent of the overlap between challenging behaviour and psychiatric disorders is uncertain (Murphy, 1994; Murphy and Holland, 1993). The reasons for this are twofold. Firstly, diagnosing psychiatric disorders in people with learning disabilities is extremely difficult (Caine and Hatton, 1998), because of the difficulties in applying ICD-10 or DSM-IV criteria to this population due to their communication problems (Moss, 1995; Sturmey *et al*, 1991) and their behavioural presentation possibly being different (Moss, 1995). Secondly, challenging behaviour may be incorrectly viewed as indicative of a psychiatric disorder (Murphy, 1994; Murphy and Holland, 1993).

These difficulties have resulted in considerable variation between studies as to the association between challenging behaviour and psychiatric disorder (Murphy, 1994; Murphy and Holland, 1993). For example, Qureshi *et al* (1994) found that only 15% of adults with challenging behaviour had a definite diagnosis of mental illness. Thus, it appears that although there are times when challenging behaviour and psychiatric disorder coexist and are causally related,

there are other times when the two show no association (Holland and Murphy, 1990).

2.3.6 Emotional Factors.

People with learning disabilities may show challenging behaviour as a means of coping with stress, anger and frustration (Menolascino, 1977). This may be a reflection of their difficulties dealing with interpersonal relationships and situations (Grossman, 1983). Facial expressions are an important component of interpersonal interaction as they provide a nonverbal means for expressing and communicating emotion (Ekman *et al*, 1983). Studies have shown that people with learning disabilities show deficits in recognising (McAlpine *et al*, 1992), encoding, regulating and expressing facial expressions depicting emotions (McAlpine *et al*, 1991), in particular strong emotions such as anger and fear (Gray *et al*, 1983). Bates (1992) observed that people with learning disabilities have difficulties distinguishing different emotions, a limited emotional vocabulary and set of feelings, and difficulties expressing negative emotions appropriately.

People with learning disabilities are also reported to show deficits in self-regulation (Whitman, 1990). These deficits mean that they are unable to transfer learning from one situation to another, such that any skills taught are unlikely to generalise outwith training sessions. Abstract thought and the ability to problem-solve are frequently impoverished. These abilities are important for initiating and maintaining relationships.

2.3.7 Environmental Factors.

Section 2.3.3 highlights the importance of environmental factors to the aetiology and maintenance of challenging behaviour. Their importance is well recognised within research literature and clinical practice, with many assessments of the functions of challenging behaviour including an ecological (environmental) analysis (eg. LaVigna and Donnellan, 1986; O'Neill *et al*, 1990). The range of environmental factors influencing challenging behaviour are immense, varying between and within individuals. Studies have shown that

certain aspects of the physical environment such as noise and room temperature (Kennedy, 1994), crowding (McAfee, 1987), time of awakening (Kennedy and Itkonen, 1993) and the amount of noncontingent reinforcement available (Vollmer *et al*, 1993) can serve as a setting event for challenging behaviour. Certain interactions can also occasion challenging behaviour, for example, critical comments (Gardner *et al*, 1986) and levels of demands and positive comments from staff (Kennedy, 1994). Challenging behaviour may also be influenced by characteristics of the teaching/instructional environment, such as student preference (Foster-Johnson *et al*, 1994) and choice over activities (Dyer *et al*, 1990). In all of these studies, the results of the assessments were confirmed by reductions in challenging behaviour following manipulation of the relevant environmental variables.

2.3.8 An Integrated View.

The above review has indicated that there are a number of factors influencing causality of challenging behaviour. These views need not be incompatible with each other (Murphy, 1994). For example, Bull and LaVecchio (1978) demonstrated that self-injury in people with Lesch-Nyhan Syndrome could be reduced through the application of behavioural treatments, and Oliver *et al* (1993) reported that challenging behaviour believed to be of organic aetiology such as Rett's Syndrome may acquire and be maintained by social and stimulus control factors.

Rarely, in cases of challenging behaviour is the cause attributable to one factor. Often challenging behaviour is the product of a complexity of interactions between a range of factors, with some factors being more important than others in each individual case (Emerson *et al*, 1994a). Murphy (1994) considered that developing an integrated view of how the various factors interacted was the most difficult task. She commented that seldom did certain factors, such as biological factors arise first and then other factors such as operant factors follow, and felt that it was appropriate to view the interactions between factors as "dynamic rather than static, such that interactions between factors may be bidirectional, continuous and progressive" (page 56).

2.4 Assessment and Treatment for Challenging Behaviour.

2.4.1 Pharmacological Approaches.

Anticonvulsants, such as Carbamazepine and Sodium Valproate are often prescribed to treat epilepsy. Tranquilisers, such as Chlorpromazine, Thioridazine, Haloperidol, Droperidol and Flupenthixol frequently are prescribed to calm and reduce tension, agitation and anxiety. Indeed, it has been estimated that between 40-50% of people with learning disabilities who show self-injurious behaviour or aggression receive tranquilisers (Altmeyer *et al*, 1987; Stone *et al*, 1989), and that they are more likely than other learning disabled clients' who do not display these behaviours to be maintained on it for some considerable time (Chadsey-Rusch and Sprague, 1989). To counteract the unwanted side-effects of disorders of movement and muscle caused by the major tranquilisers, antispasmodics such as Procyclidine Hydrochloride may be prescribed. In cases where a diagnosis of depression is given or suspected, antidepressants such as Amitriptyline, Imipramine and Flupenthixol may be prescribed. Lithium Carbonate may be given to reduce mood fluctuation associated with affective illness, and Benperidol to control deviant and antisocial sexual behaviour (Altmeyer *et al*, 1987).

Whilst there can be doubt as to the benefits such medication can offer towards improving the quality of life of people with learning disability and challenging behaviour, there have been concerns over its use, in particular the major tranquilisers. Gadow and Poling (1988) believed that there was no sound evidence that they actually resulted in reductions in challenging behaviour, and that they caused a number of serious side-effects, such as disorders of movement and muscle, sedation, grandmal seizures and dizziness. In some cases, their use has been found to be inappropriate (Bates *et al*, 1986) and in others too excessive, as indicated by substantial reductions in their use with no increases in challenging behaviour (Findholt and Emmett, 1990).

2.4.2 Behavioural Approaches.

During the 1960's and 1970's, considerable research was conducted that demonstrated that challenging behaviours as well as being learnt, could also be unlearnt. In other words, operant principles could be used to reduce challenging behaviours by applying techniques such as stimulus control, extinction, differential reinforcement of other behaviour, differential reinforcement of alternative behaviour, time-out from positive reinforcement and other punishment techniques, such as overcorrection (Murphy and Oliver, 1987). This set of procedures for reducing challenging behaviour was known as Behaviour Modification, and represented the main treatment approach of it's era. Currently, behaviour modification is criticised for failing to acknowledge and take into account the reasons for / causes of the individual's challenging behaviour when designing treatment programmes, and it's focus on reducing challenging behaviour rather than building skills (Axelrod, 1987). These criticisms have come in light of the following assessment, treatment and service developments.

Since the mid 1970's, there have been concerns regarding the ethics of behaviour modification, in particular the use of punishment procedures as a means of reducing challenging behaviour (Chadwick and Stenfert-Kroese, 1993). Research studies had repeatedly shown these procedures to be clinically effective, however in clinical settings they were open to abuse. Staff were trained in basic behaviour principles, and in some instances were taught that these procedures could reduce behaviour. This often led to programmes being developed which focused on controlling behaviour, without considering adaptive behaviour development (Kiernan, 1991). The development of more nonaversive, constructional procedures (eg. Goldiamond, 1974; LaVigna and Donnellan, 1986) during the 1980's, which outlined that additional outcomes from treatment should be increases in adaptive behaviour and valued lifestyles, generalisation and maintenance of any therapeutic gains, and few if any side-effects of treatment, further called into question the ethics of using these techniques (Chadwick and Stenfert-Kroese, 1993).

Since the early 1980's, there has been increased interest in functional assessment (a technology for identifying the variables controlling challenging behaviour), partly as a result of the increased understanding of the possible roles of various social, tangible and sensory stimuli as reinforcers of challenging behaviour, and partly as a result of an increasing awareness that making an incorrect assumption about the reinforcers maintaining a behaviour could lead to unsuccessful treatment (Murphy and Oliver, 1987). For example, a programme incorporating verbal time-out contingent on challenging behaviour and social interaction contingent on appropriate behaviour procedures would be expected to reduce challenging behaviour maintained by positive social reinforcement, but may increase the frequency of challenging behaviour maintained by escape from demands, particularly so escape from social interaction. It is now widely accepted that hypotheses drawn regarding the functions of the challenging behaviour should be assessed prior to intervention, that this assessment should form the basis for choosing and designing treatments (Carr, 1994) and it's widespread endorsement should be encouraged (Axelrod, 1987).

Over the past decade, services have been increasingly adopting nonaversive behavioural frameworks as their main approach to treatment. There are a number of frameworks developed, one example of which is that described by Willis *et al* (1993). This approach still adopts behavioural principles, but combines the traditional behavioural approach with constructional principles (Goldiamond, 1974) and strongly emphasises the importance of perceived control, real choice and the opportunity for expression of one's needs. The above authors advocate conducting a functional assessment (which not only incorporates an antecedent and consequence analysis but also an analysis of the individual's environment) prior to designing treatment. They describe four components to their treatment plan : Positive Programming (teaching skills to help them cope more effectively with their environment), Environmental Strategies (altering various aspects of the person's environment known to occasion challenging behaviour), Direct Treatment Strategies (traditional behaviour modification techniques such as differential reinforcement) and Reactive Management Strategies, all of which should be built into each treatment plan.

2.4.3 Cognitive-Behaviour Therapies.

Over the past decade, there has been a growing interest in the application of cognitive-behaviour therapies with people with mild and borderline learning disabilities (Stenfert-Kroese, 1997). Cognitive-behaviour therapy is widely used within the normal adult population to treat a number of problems such as anger, depression and anxiety (Hawton *et al*, 1989). The assumption behind Cognitive-Behaviour Therapy is that certain ways of thinking about events affect behaviour as well as emotions. Dysfunctional thought patterns are ways of thinking that give rise to negative affect (eg. depressed mood) and maladaptive behaviour (eg. social withdrawal), and are believed to arise as a result of maladaptive life experiences. By encouraging people with learning disabilities to identify and question their dysfunctional thought patterns and behaviour and substitute alternative and more positive ways of viewing events, changes in behaviour and affect can result. Sometimes to facilitate the substitution of thoughts they may need to alter their behaviour, for example approach previously avoided situations (eg. Beck, 1976).

There is now increasing evidence that animal-based principles of behaviour modification are not necessarily applicable to adult humans (eg. Lowe *et al*, 1978a; Lowe *et al*, 1978b), and that the presence of language is the main determining factor accounting for these differences (Jones *et al*, 1993). The development of language allows inner speech and the development of rule-governed behaviour. This is when the individual has learnt to describe the reinforcement contingencies operating in the environment, and this may exert more control over the behaviour than environmental contingencies (Jones *et al*, 1997). The development of the ability to use language to describe and control one's own behaviour represents one of the most important of all skills (Williams and Jones, 1997).

Whitman (1990) stated that many people with learning disabilities showed deficits in self-regulation (see Section 2.3.6). These deficits would suggest that they would benefit greatly from learning and deploying the skills taught in

cognitive-behaviour therapy, to enable them to effect change in their own lives (Williams and Jones, 1997).

To date, there has been limited research on the application of cognitive-behaviour therapies to the learning disabled population. One reason for this may be that many believe that they would not understand it's concepts (Jones *et al*, 1997; Stenfert-Kroese, 1997). Current research is suggesting that people with learning disabilities can understand and apply the principles of cognitive-behaviour therapy provided certain aspects are adapted (Dagnan and Chadwick, 1997; Stenfert-Kroese, 1997), for example, self-reporting on emotional states (Lindsay *et al*, 1994b) and challenging negative cognitions (Lindsay and Kasprowicz, 1987).

Research has shown that people with learning disabilities can benefit from cognitive-behaviour therapy for a variety of difficulties, such as depression (Reed, 1997), anxiety (Lindsay *et al*, 1997) and anger (Black *et al*, 1997). However, many researchers (eg. Dagnan and Chadwick, 1997; Reed, 1997) have commented on the paucity of research in this area, with much of it confined to single-case studies. There is a need for more outcome-controlled studies (eg. Black *et al*, 1997), as well as more research examining people with learning disabilities abilities and difficulties with this approach, in order that treatment approaches can be refined.

The above review has summarized the main interventions for challenging behaviour. Staffs' selection of interventions may depend on the level of severity of their client's learning disability. For example, staff may be more likely to consider cognitive-behaviour therapies such as anger management with people with mild than severe learning disabilities.

2.5 Influences on Staff Responses to Challenging Behaviour.

This study has focused on examining the influence of staff attributions and their emotional responses on their behavioural responses to challenging behaviour. However, there are a number of factors influencing staff performance and responses to challenging behaviour and it is worth briefly reviewing some of these potential influences. Hastings and Remington (1994a) considered that staff responses to challenging behaviour could be both contingency-shaped and rule-governed.

2.5.1 Staff behaviour as Contingency-shaped.

Here, staff responses to challenging behaviour may be directly related to the challenging behaviour. For example, staff responses to the behaviour may be those that avoid prolonged contact with the behaviour, such as providing attention to those whose behaviour serves an attention-seeking function (eg. Taylor and Carr, 1992) and less attention to those whose behaviour serves to escape or avoid interaction (eg. Carr *et al*, 1991). It is believed that staff respond in this way as they find the challenging aversive because it elicits negative emotions such as anger and fear in them (eg. Hastings, 1999).

2.5.2 Staff Behaviour as Rule-Governed.

Rules are verbal formulations of contingencies and describe relationships between environmental events and behaviour that typically are learnt through direct experience. Catania *et al* (1989) considered that human nonverbal behaviour was usually rule-governed rather than contingency-shaped. Zettle and Hayes (1982) described two main types of rule-governed behaviour; *pliance* and *tracking*. Pliance is rule-governed behaviour primarily under the control of consequences mediated by the speaker, and tracking is rule-governed behaviour under the control of the apparent correspondence between the rule and the subject of the rule, rather than by speaker-mediated consequences. Zettle (1990) considered that the speaker and the listener could be one and the same person, such that a person may construct their own rules to govern their behaviour and he called these rules *self-rules*.

Hastings and Remington (1994a) considered that rules for staff working within learning disability and challenging behaviour services fell into two groups : those instructing / advising staff as to how to work with challenging behaviour and those relating to the functions of challenging behaviour. They considered that the rules could be externally or internally supplied.

(a) Externally-supplied rules.

Formal Aspects of the Service Culture.

One such factor is the philosophy and organization of the service. Societal attitudes and service values influence service philosophy and practice. This in turn has implications for services perceptions of the social worth of people with learning disabilities, their interpretation of and appropriate responses to their disability (Emerson *et al*, 1994b). For example, the philosophy of Normalisation initially described by Wolfensberger (1972) has had a profound impact on the way services have developed (Blunden and Allen, 1987; Emerson *et al*, 1994a). This took as it's starting point that people with learning disabilities have the same value as everyone else, and should be entitled to the same human rights. This philosophy further called into question the acceptability of hospital care, which had up to then represented the main model of care. Models of community care began to be developed, with an emphasis on small homes in the community, increased staffing levels and changes in staff roles to emphasise social care, enabling and support, rather than medical care (eg. Blunden and Allen, 1987).

Many services possess service guidelines, mission statements and operational policies. These typically outline the philosophy of the service, it's aims and what staff should do to meet these aims. These may vary between services and even within services. For example, the philosophy for hospital based services may be to provide a comprehensive assessment and treatment package for the patient using behavioural and medical treatments, whereas the philosophy for community based services may be to assist with social inclusion and improve their service user's quality of life. These differences may contribute to very

different ways of responding to challenging behaviour. Services often have formal contingencies that should impact on staffs' appropriate and inappropriate behaviour, such as promotion and disciplinary procedures (Hastings, 1995; Hastings and Remington, 1994a).

Another aspect believed to influence staff performance are staff training experiences (Hastings, 1995). The development of staff skills and knowledge is essential towards providing a high quality service for people with learning disabilities (eg. McGill and Bliss, 1993; Lally, 1993). Indeed, a common reason for staff not adhering to behavioural programmes is a lack of skills and knowledge (Hastings and Remington, 1993). Lacking skills and knowledge may lead to staff learning skills from their peers (who may or may not have received formal training) or intervening according to societal or personal values (these may or may not be compatible with service values).

Hogg and Mittler (1987) commented that the majority of staff employed by local authorities were unqualified. With the increase in community provision for people with learning disabilities, it follows that local authorities are perhaps the greatest employer. McGill and Bliss (1993) reported that there was a clear need for staff training for staff working within community developments, as there was the expectation that staff would be heavily involved with training their clients and work mainly in isolation without the support from a large pool of staff as employed in learning disability hospitals.

The importance of staff training in assessment and intervention strategies has been long acknowledged. Allen (1999) reported that since the late 1950's there has been the view that direct-care staff should be trained in behavioural principles, so that they could design and implement behavioural programmes. This approach was not without it's problems. Evans (1990) commented that staff had difficulties generalizing what they had learnt to real-life situations, some had had little or no prior training and did not fully understand the approach, and often any skills learnt were not maintained particularly when the supervisor was no longer present.

Various models of staff training (eg. Reid, 1989; Cullen, 1992) have been proposed. Unfortunately evaluation of these has been limited, often focusing on increase in staff knowledge rather than changes in staff performance. However, it is widely acknowledged that didactic teaching, the most common approach to staff training has very little impact on what staff actually do in their work (Cullen, 1992). One reason for this is that traditional teaching has been rather limited in its breadth of topics, largely focusing on contingency management to the relative exclusion of antecedent analysis and environmental change (Allen, 1999). Other training methods less frequently adopted are modeling and role-playing. A positive feature of these methods is that they typically provide practicum training within work settings. Unfortunately, these methods have been infrequently evaluated, and there are concerns regarding how long any skills are maintained once the model and/or external consultants leave the setting (Cullen, 1992).

Another training method is pyramidal training and this involves training a few staff to work as future trainers (Anderson *et al*, 1993). Positive elements of this approach are that on a practical level staff can be more comprehensively trained with an emphasis on academic as well as practical skills and these trainers can then return to their work setting where they can pass their skills onto others (Page *et al*, 1982). Page *et al* (1982) and Demchak and Browder (1990) showed that these methods produced variable levels of improvement in client behaviour. Demchak and Browder (1990) found that training was most effective for the trainers and less so for those being trained by the trainers. Anderson *et al* (1993) considered that trainers required coaching in order to transfer and apply the skills they learnt into their work environments.

The above review of training methods has suggested that although staff may gain skills, applying and utilizing these skills in their everyday practice is often more difficult to establish. This issue raises the importance of good staff management in order to ensure that any training is integrated into work practices. The importance of good management and support is well acknowledged, with many believing that in order to achieve a high quality service equal attention needs to be given to staff training and management (eg. Clements, 1993; Cullen, 1992; Lally, 1993; McGill and Bliss, 1993).

Lally (1993) commented that effective management was essential before and after training in order to ensure that staff were motivated to work according to the content of their training. Unfortunately many services lack clear systems to support and motivate staff, with many staff in immediate supervisory or management positions lacking the skills or not being readily available for the direct-care staff (Clements, 1993). Emerson *et al* (1994b) commented that frequently staff had little idea of what they were expected to do, were rarely monitored or given effective or constructive feedback. These elements are essential for effective staff management (McGill and Bliss, 1993).

Emerson *et al* (1994b) considered that in the absence of effective formal systems, a range of informal aspects would frequently exert a powerful influence over staff performance.

Informal Aspects of the Service Culture.

Inexperienced staff often receive advice from more experienced staff as to appropriate ways of responding to challenging behaviour. These “unwritten” guidelines will likely be maintained by powerful contingencies of reinforcement (Hastings and Remington, 1994a), such as peer disapproval or withdrawal of support for not adhering to these practices and acceptance within the group and assistance in difficult situations for following the group rules.

The consequences for staff following informal rules are likely to be more salient than those formal rules enforced and mediated by managers. Staff typically spend long shifts together, which makes compliance with group rules easier to detect, consequences for their behaviour delivered more quickly and the contingencies for their actions can be maintained consistently over longer time periods (Hastings and Remington, 1994a).

Hastings (1995) found that over half the staff he interviewed said that they had had no formal training on challenging behaviour and had learnt on the job and from others, and considered that perhaps the informal staff culture had more of an influence on their performance than the formal staff culture. Hastings (1999)

considered that there was very little understanding of the informal aspects of the staff culture and felt that given its likely strong influence on staffing performance that research in this area was an urgent priority.

(b) Internally supplied rules.

Hastings and Remington (1995) considered that staff may develop their own rules regarding causality and appropriate responses to challenging behaviour based on societal values, their own experiences and culture. They further suggested that staff beliefs may be inappropriate if they were “derived from different experiences or rule structures” than those currently recommended for people with learning disabilities and challenging behaviour. Following these self-rules will likely be repeated if they find that it leads to beneficial consequences (Zettle and Hayes, 1982) such as termination of challenging behaviour in the short-term or reinforcement by others. Unfortunately, there is very little research on the influence of staffs’ own attitudes and rules on their responses to challenging behaviour and it is an important area of further study.

The above review has highlighted a number of potential influences on staff responses to challenging behaviour. These include the emotional responses evoked by the challenging behaviour itself, the philosophy of the service, formal management procedures, training experiences (both formal and informal) and their own views as to causality and appropriate ways of responding. These influences likely interact in a complex manner. Since examination of all of these influences would be extremely complex and cumbersome, this study shall only examine the influence of emotional responses towards challenging behaviour and staff attributions on staff’s behavioural responses to challenging behaviour. However, it is worth noting that staff attributions are likely to be influenced by any one of the above factors, therefore although the results will show the attributions the group of staff have it will not be possible to isolate which of the above factors influence attributions and in what way.

2.6 Applications of Attribution Theory to Staff working with people with Learning Disabilities and Challenging Behaviour.

Attribution theory states that a person's perceptions of the causes of another's negative behaviour influences the emotions experienced (Weiner, 1985), and accordingly their behavioural responses. Furthermore, a person's willingness to provide help to the person displaying the behaviour is influenced by their optimism towards them changing their behaviour. This optimism is influenced by their emotional reactions to the behaviour, which are determined by the attributions of causality, specifically the attributions of controllability and stability (Sharrock *et al*, 1990; Weiner, 1980).

Applying this model to staff working with people with learning disabilities who show challenging behaviour, staff perceptions of the causes of challenging behaviour will influence their emotional and behavioural responses to such behaviour (Hastings and Remington, 1994a), their optimism towards the person with learning disabilities changing as a result of intervention, and their willingness to provide extra help to that person (Dagnan *et al*, 1998).

Based on this model, an examination of the following factors is important for understanding staff responses to challenging behaviour:-

1. Staff definitions of challenging behaviour.
2. Staff views on the causation of challenging behaviour.
3. Staff reports on their emotional reactions to challenging behaviour.
4. Staff views on appropriate interventions for challenging behaviour.
5. Staff optimism towards change as a result of intervention and their willingness to provide extra help.

2.6.1 Staff Definitions of Challenging Behaviour.

Examining staff views of definitions of 'challenging behaviour' is important to the study of staff attitudes to challenging behaviour, because if a behaviour is considered "not challenging", it will likely be responded to differently than behaviours considered "challenging". For example, it may not be seen worthy of assessment for treatment, or even if a treatment is proposed staff may not be

motivated to ensure it's implementation if they do not see it as a problem requiring intervention (Hastings, 1995, 1997).

The factors reported to influence staff views of 'challenging' are the behaviour's degree of disruptiveness (Lowe and Felce, 1995) and it's lack of acceptability within society (Hastings, 1995). Behaviours considered to pose a significant management difficulty to staff and to have a direct impact on others are considered more severely challenging (Hastings, 1995; Lowe and Felce, 1995). Lowe and Felce (1995) reported that staff considered aggression, wandering, making noises and temper tantrums to be more challenging than self-injury, except when self-injury was extreme. Hastings (1995) found that staff considered aggression, self-injury, destructiveness and other 'inappropriate' behaviours to be 'challenging' but not stereotypy, despite it's frequent inclusion as a challenging behaviour in the research literature. This highlights a disparity between staff views and current models of challenging behaviour.

The finding that staff regard a behaviour as "challenging" when it impacts directly on them, when it is seen as difficult to manage or when it is seen as unacceptable within society would suggest that the term "challenging behaviour" is a "socially constructed category open to subjective interpretation" (Lowe and Felce, 1995, page 118), such that what one person considers to be challenging behaviour another person may not. Certain, as yet undetermined characteristics of staff (eg. experience, coping ability), service environments (eg. staffing levels, place of residence) and clients (eg. gender, level of disability) may influence staff views of which behaviours they consider challenging (Hastings, 1997).

2.6.2 Staff views on the Causation of Challenging Behaviour.

In accordance with attribution theory, staff responses to challenging behaviour should be mediated by their views about the causality of such behaviour. Studies have shown that staff beliefs regarding causality generally match current models of challenging behaviour (Hastings *et al.* 1995b; Bromley and

Emerson, 1995; Hastings, 1995), although all the above studies noted omissions and misinterpretations in staff knowledge.

Hastings *et al* (1995b) asked staff to rate the likely causes of a fictional client's challenging behaviour. Twenty-five possible causal hypotheses, derived from previous research (eg. Hastings, 1995) were provided, and staff had to rate how likely each was a cause of the challenging behaviour, using a 7-point likert scale. The results were then subjected to factor analysis, from which seven broad categories were identified : client needs (eg. wants something), attempts to communicate, stimulation, personal and environmental factors, social factors, biological factors, environmental elicitation (eg. noise, overcrowding) and natural factors (eg. a natural thing to do).

Bromley and Emerson (1995) found the most cited causes of challenging behaviour to be general internal psychological states (eg. anxiety, depression, anger) and aspects of current and past environments (eg. abuse, noise). These were more frequently cited than the communication hypothesis or behavioural explanations. Hastings (1995) in contrast found the majority of the staff he interviewed mentioned the communication hypothesis. Their interpretation of this however, was a means of expression of need or inner feelings rather than the control of socially mediated consequences. He also felt that staff lacked understanding of behaviour principles. None described the role of discriminative stimuli in occasioning challenging behaviour. Some mentioned causes which could be classified as setting events, but their interpretation of these was that they triggered or elicited challenging behaviour, rather than their true function of "altering the effectiveness of some object or event as reinforcement" by simultaneously altering "the momentary frequency of the behaviour that has been followed by that reinforcement" (Michael, 1982; Wahler and Fox, 1981). Oliver *et al* (1996) and Morgan and Hastings (1998) also found that many staff lacked knowledge of behaviour principles, with relatively few mentioning the correct behavioural explanation in response to scenarios describing people engaging in challenging behaviour.

Experience has been shown to influence the causal explanations given by staff. Oliver *et al* (1996) in a study examining various staff groups' causal attributions

for self-injury, found that experienced staff were more likely than inexperienced staff to select the correct behavioural explanation. Hastings *et al* (1995b) found that experienced nurses (ie. qualified and unqualified staff working in a hospital for people with learning disabilities) had a more thorough understanding of behavioural models, psychiatric illnesses and the communicative hypothesis than inexperienced student nurses. The students were more likely to attribute challenging behaviour to general psychological states (eg. anxiety, depression, anger) and broad aspects of current and past environments (eg. abuse, noise). They suggested that as the experienced group had the more comprehensive knowledge base, training and experience may contribute to the development of appropriate beliefs about challenging behaviour.

Berryman *et al* (1994) examined the effects of training on attributions of causality and found that staff who received traditional behaviour modification training were more likely to mention intrinsic reinforcement and less likely to mention low self-esteem as causes of challenging behaviour. The group who received training in nonaversive approaches (eg. LaVigna and Donnellan, 1986) were more likely to mention tangible reinforcement and escape / avoidance and less likely to mention emotions and low self-esteem as causes of challenging behaviour. The above studies (ie. Berryman *et al*, 1994; Hastings *et al*, 1995; Oliver *et al*, 1996) have implied that experience influences staff attributions, however as Hastings (1997) pointed out in his review of this literature, it is currently unclear which aspects of experience (eg. behaviour knowledge, cumulative experience in field, daily contact, training) are the crucial variables.

Applying attribution theory to the causes staff proposed, it would suggest that staff tend to see challenging behaviour as being internal (eg. general psychological state) to the person with learning disabilities, either controllable (eg. communication) or uncontrollable (eg. neuropsychiatric condition) by the person, and external to staff. Indeed, Cottle *et al* (1995) in a study examining staff attributions towards actual people with learning disabilities found that staff held the above attributions.

The finding that staff tend to view challenging behaviour as being external to themselves may reflect past institutional practices, where their role was to care

for clients, and treatment mainly comprised medication and behaviour modification. Equally, these views may reflect the attributional errors we make in everyday life to explain negative events, whereby to preserve our self-esteem we typically attribute the cause (and therefore the blame) to the other party. This may represent a coping mechanism for dealing with the situation, and would imply that challenging behaviour has an emotional impact on staff.

2.6.3 Emotional Responses to Challenging Behaviour.

Studies have demonstrated that staff claim they experience a range of negative emotions, such as anger, annoyance, sadness, despair and fear, when witnessing challenging behaviour (Bromley and Emerson, 1995; Hastings and Remington, 1995), with many staff considering that these emotions influenced their responses to the behaviour (Hastings, 1995).

One would expect that if challenging behaviour elicits negative emotions from staff, in order to cope more effectively in time staff would develop ways of reducing the behaviour's emotional impact. Providing support for this, Cottle *et al* (1995) found that following a violent incident, staff anxiety levels towards the person with learning disabilities increased over the first week, but decreased significantly over the next month. This decrease coincided with a shift in staff attributions towards that person. Staff were more likely to attribute the incident as being internal to the person, with the person possibly seen as more to blame. Staff also became increasingly critical of the person.

This shift in attributions by staff means that they remove themselves from all responsibility of blame for the incident, which according to attribution theory preserves their self-esteem and probably allows them to cope with remaining in that setting, where potentially they remain at risk (Cottle *et al*, 1995). Although this helps staff cope, it appears to have negative repercussions for the person with learning disabilities.

Studies have found that experience (ie. time in the job) influences emotional responses to challenging behaviour, with staff responses becoming increasingly adaptive with time. Hastings and Remington (1995) found that experienced staff

were less likely than inexperienced staff to rate that they would feel disturbed and frightened upon witnessing challenging behaviour, suggesting that with experience staff become 'desensitised' to challenging behaviour. In agreement with Cottle *et al* (1995), Fallon *et al* (1983) found that staff emotional reactions to self-injury changed over several months of working, from feelings of empathy, curiosity, optimism and fear to feelings of anger, frustration, guilt and detachment. Hastings (1995) reported that over half of staff he interviewed considered that they become detached as a means of coping with challenging behaviour.

This 'detachment' may be symptomatic of Burnout. Burnout has been described as the final stage of stress (Pines, 1982). Symptoms of burnout include emotional exhaustion, helplessness, depersonalisation, disenchantment, physical exhaustion, accident proneness, increased susceptibility to illness, lowered job satisfaction, negativism, inflexibility and powerlessness (Caton *et al*, 1988). Burnout is believed to be caused through working with people in emotionally draining situations (Maslach and Jackson, 1981). Staff may avoid decisions and resist changes at work, feel discouraged about their jobs, show a loss of concern for their clients and distance themselves from their clients and work (Firth and Myers, 1985). There appears to be no clear relationship between stress and burnout, such that although stress appears to be a necessary condition for burnout to occur, many staff experience stress but do not burn out (Lazarus and Cohen, 1978). Caton *et al* (1988) examined the relationship between job stress and burnout and found that although they were separate constructs one burnout factor, emotional exhaustion loaded onto a stress factor, underutilization. They suggested that organizations should attempt to make jobs more meaningful to employees so as to reduce some of the conditions contributing to burnout such as underutilization and lack of personal accomplishment.

2.6.4 Staff Responses to Challenging Behaviour.

Attribution theory states that how people attribute causality to another's negative behaviour influences their emotional and behavioural responses to that behaviour (Weiner, 1985). Having reviewed how staff view causality and their

emotional responses to challenging behaviour, we can apply attribution theory to make predictions about how staff may respond to challenging behaviour.

Section 2.6.2 reported that staff tended to see challenging behaviour as internal to the person with learning disabilities and external to themselves. One implication of this is that since staff perceive the incident as being attributable to this person and nothing to do with themselves, interventions may focus on bringing change to the person's behaviour rather than to their own. Staff frequently viewed challenging behaviour as controllable by the person with learning disabilities. Viewing challenging behaviour in this way implies that this person is behaving in this way intentionally and therefore is to blame for his actions. This may evoke punishment procedures from staff, especially if they view challenging behaviour as extreme forms of normal behaviour or actions that need to be controlled (Hastings, 1995).

Staff negative emotions may operate as "setting events" (Wahler and Fox, 1981) and set the scene for staff to avoid the person with learning disabilities or situations that elicit challenging behaviour (Bromley and Emerson, 1995). Thus staff may avoid the antecedents that typically elicit challenging behaviour, for example avoiding making demands on people clients' whose challenging behaviour serves the function of escape from demands or providing plenty in the way of interaction to those whose challenging behaviour serves the function of initiating staff interaction. Supporting this, observational studies have shown that staff attend more to people whose challenging behaviour serves an attention seeking function (Taylor and Carr, 1992) and less to those whose challenging behaviour serves the function of escape from demands (Carr *et al*, 1991). Staff may also respond to challenging behaviour in ways that quickly terminates it by providing the reinforcer maintaining the behaviour, such as withdrawing demands or providing interaction. The person with learning disabilities thus depending on the function of their behaviour receives positive or negative reinforcement contingent on his/her behaviour. Likewise, staff receive negative reinforcement contingent on their responses to challenging behaviour.

Section 2.6.3 reported that with experience, emotional responses to challenging behaviour diminished. This 'emotional numbness' may decrease staff

motivation to provide or seek help, if they view the behaviour as 'not challenging' and therefore not requiring treatment. This may mean that only severe forms of challenging behaviour are responded to, thus differentially reinforcing the more extreme forms (Hastings and Remington, 1995). On a positive note, being emotionally numbed may also mean that they can cope with behavioural programmes, such as those incorporating an Extinction element (Evans *et al*, 1990).

Having made these hypotheses about staff responses to challenging behaviour, we need evidence to support these. Ideally, this should be done through observation of staff responses. Unfortunately, there is very little research in this area, but it is nevertheless worth reviewing. Warren and Mondy (1971) found that staff only responded to approximately one-quarter of incidences of challenging behaviour. Of these incidents, between 4 and 9% were responded to an 'encouraging' way, and between 11 and 25% in a 'discouraging' way. Felce *et al* (1987) replicated this study, and obtained similar results. Both these above studies unfortunately do not include information about the nature of responses in sufficient detail, so it is difficult to reach any firm conclusions. For example, a high percentage of incidents were not responded to. It is possible therefore that the milder forms of challenging behaviour were not responded to and the more severe forms were attended to (Hastings and Remington, 1994b), thus differentially reinforcing the more severely challenging behaviours. One can also make no firm conclusions about the responses to challenging behaviour. Although the responses to challenging behaviour were categorised as either 'encouraging' or 'discouraging', one cannot say whether these responses were reinforcing or punishing without knowing the behaviour's function (Hastings and Remington, 1994b).

Wilson *et al* (1995) conducted a detailed observational study of staff responses to challenging behaviour. They found that of the 80% of incidences which staff responded to, verbal responses were used either in isolation or along with other responses. On 38% of occasions more than one strategy was used. Typically, staff tried one approach, usually verbal, and then immediately followed it with another in an attempt to terminate the behaviour. Usually the latter strategies

were those which, although immediately reduced or terminated the behaviour, also contributed to its long-term maintenance.

The remainder of research on staff responses to challenging behaviour has relied on staff reports of their responses to challenging behaviour. These accounts are assumed to reflect their intervention beliefs, but these may not necessarily be related to actual staff behaviour (Hastings, 1997). For example, with all self-report studies, staff rarely said that they would not respond to challenging behaviour. This contrasts with observational research studies (eg. Warren and Mondy, 1971) which reported that on the majority of occasions staff did not respond to challenging behaviour. Hastings and Remington (1994b) considered that by asking staff how they usually respond, it may bias them to only look at situations when they did respond.

Self-report studies (eg. Hastings, 1996; Hill and Bruininks, 1984; Maurice and Trudel, 1982) have shown that the most common responses staff claim they use are verbal responses, distraction, removing the person from the situation, trying to calm/ communicate with the person and physical responses such as restraint. Maurice and Trudel (1982) further found that particular hypotheses about the causes of behaviour were associated with certain types of intervention. For example, staff were more likely to use isolation if they thought people were engaging in self-injury because they were angry.

These responses depending on the behaviour's function are likely to maintain the challenging behaviour in the long-term (Hastings, 1996), and are contrary to those responses recommended in behavioural programmes. One explanation to account for why staff respond in this way is that their emotions are influencing their responding, such that because challenging behaviour elicits negative emotion in staff, they then respond in ways which reduces or avoids these emotions. However, when staff were asked why they responded the way they did, none mentioned this as an explanation (Hastings, 1996). Staff explanations instead focused on the prevention of harm, dealing with the behaviour quickly and creating a positive atmosphere. Emerson *et al* (1994b) considered this reflected their caring or protective role, whereby their emphasis is on the protection of the person and others. Behavioural programmes however are

concerned with the implications of responding for the long-term maintenance of the challenging behaviour (Hastings, 1996).

When staff were asked for their choice of strategies for intervening with the behaviour in the long-term, these tended to identify more closely with those recommended in behavioural programmes (Hastings, 1996). Staff emphasised the importance of conducting a functional analysis prior to intervention, developing effective management strategies based on behavioural principles, calling in appropriate professionals, involving clients in more meaningful activities and generally improving their quality of life. Their explanations for selecting these interventions differed from those they gave for their immediate intervention strategies, their emphasis being on finding the causes of challenging behaviour, intervening using the best strategy and improving quality of life. Hastings (1996) considered that since their choice of long-term interventions closely matched those of psychological models, their knowledge of appropriate responses was not lacking. He felt that further training on the principles of psychological interventions was unlikely to make a significant impact on staff behaviour, and training should instead focus on teaching staff practical skills for coping with the emotional impact of challenging behaviour.

2.6.5 Optimism towards change following Intervention.

According to Weiner's (1980) theory of help-giving behaviour, not only should staff attributions towards challenging behaviour influence their emotions and behavioural responses, but also their optimism towards the person changing as a result of intervention. This optimism then influences their willingness to give extra help to the person.

As reviewed in Section 2.1.1, Sharrock *et al* (1990) found partial support for Weiner's (1980) theory. Supporting Weiner, they found that helping behaviour was strongly related to staff optimism, and that the stability and controllability dimensions were negatively correlated with staff optimism. However, they found no support for Weiner's main hypothesis of emotional responses influencing optimism. Applying this theory to staff working with people with learning disabilities, Dagnan *et al* (1998) found that the attribution of

controllability to the cause of the challenging behaviour was associated with negative emotion. Contrary to Sharrock's *et al* (1990) study, they found that negative emotion was negatively correlated with staff optimism, which was positively correlated with willingness to help. Stanley and Standen (2000) however, did not find a mediational effect of optimism, but found that helping behaviour was best predicted by positive affect.

2.7 Further Research.

Section 2.6 reported that staff attributions towards challenging behaviour are influenced by experience (eg. Hastings *et al*, 1995). There may be a number of other variables influencing attributions, such as certain characteristics of the person with learning disabilities, like level of severity of learning disability, age, gender and behaviour topography, severity and frequency of challenging behaviour, and certain staff characteristics such as place of work and gender (Dagnan *et al*, 1998). The impact of these variables and others is an important area of study. Knowledge of how these variables influence staff attributions may provide psychologists and other professionals involved with the development of behavioural programmes with further insight into what programmes are more likely to be implemented by staff, and assist professionals in targeting staff training to meet staff needs.

This study aims to examine the influence of two characteristics of people with learning disabilities, namely the topography of challenging behaviour and level of severity of learning disability. Before doing so, it is worth reviewing the literature outlining the importance of examining these variables.

2.7.1 The Effect of Behaviour Topography on Staff Attributions.

As reviewed in Section 2.1, the topography of challenging behaviour can influence attributions (Johnston *et al*, 1992). Supporting this, Hastings *et al* (1995b) found that experienced staff showed different attributions of causality to different topographies of challenging behaviour. Stereotypy was more likely than aggression or self-injury to be seen as self-stimulatory and less likely to be attributed to 'client needs' or 'biological factors'. Hastings *et al* (1997) found

that 'enjoyment' and 'feeling better' were more likely to be identified as causes for stereotypy than for aggression or self-injury. 'Boredom' was more likely to be identified as a cause for stereotypy than for self-injury. Aggression and self-injury were considered more likely than stereotypy to be caused by 'other people's provocation'. Aggression was considered more likely than stereotypy to be a means of 'gaining attention'. Self-injury was rated as more likely than stereotypy to be due to the person displaying the behaviour being 'in a bad mood'. These findings would suggest that staff view stereotypy as being more likely than aggression or self-injury to be self-stimulatory in nature and less likely to be socially mediated. Taken together these studies would imply that behaviour topography is an important influence on staff attributions, influencing causality, which may then in turn influence staffs' emotional and behavioural responses. Reflecting these differences in staff attributions towards different topographies of challenging behaviour, Stanley and Standen (2000) found that staff were more likely to view aggression as controllable than self-injury.

Emotions experienced are also influenced by behaviour topography. Stanley and Standen (2000) found that staff were more likely to experience positive emotions and less likely to experience negative emotions towards self-injury than aggression. Hastings and Remington (1995) reported that staff were less likely to feel disturbed witnessing stereotypy than aggression and self-injury, and less likely to feel disturbed witnessing aggression than self-injury. They were also more likely to feel sad witnessing self-injury than stereotypy, and less likely to feel afraid when dealing with stereotypy than with aggression or self-injury. Bromley and Emerson (1995) found that aggression tended to elicit annoyance and sadness, and self-injury and destructiveness sadness and despair.

Hastings (1996) found that the choice of both immediate and long-term intervention strategies was influenced by behaviour topography. On rating self-injury, staff were more likely to mention that they would restrain or stop the person. With aggression, staff were more likely to report that their immediate intervention strategy would be to make the environment safe, and in the long-term were less likely to engage the person in activities and more likely to recommend conducting a functional analysis. Staff rating stereotypy were less likely to suggest making the environment safe or use physical restraint as

immediate intervention strategies, and more likely to report that they would use distraction. They were also less likely to mention prevention of harm as their reason for selecting their immediate intervention strategies. In the long-term, they were more likely to recommend engaging the client in activities and less likely to advocate conducting a functional analysis.

Stanley and Standen (2000) found that when controlling for the effect of the person's level of severity of learning disability, aggression was considered more controllable and less likely to be a stable feature of the person than self-injury. They further found that when rating people with mild learning disabilities that aggression was more likely than self-injury to elicit negative emotions and to be associated with lower levels of optimism and less propensity to help. When rating people with severe learning disabilities, aggression was found to be more likely than self-injury to elicit negative emotions and to be associated with greater levels of optimism and greater propensity to help.

These findings imply that staffs' ascription of causality to challenging behaviour and their selection of interventions is influenced by the topography of behaviour they are witnessing. If these views and not the results of a functional analysis guide their actions, the interventions implemented may prove unsuccessful. Staff training may then be required to highlight the importance of conducting a functional analysis prior to intervention. Further research is thus needed to establish any differences in staff attributions towards different topographies of challenging behaviour.

2.7.2 The Effect of Level of Severity of Learning Disability on Staff Attributions.

As outlined in Section 2.1.2, Correspondence Inference Theory (Jones and Davis, 1965) states that a person will view another person's negative behaviour as controllable if they consider that the person knew the consequences of his/her behaviour, possessed the ability to deliberately execute the behaviour, and was not influenced by external controls. Believing another's negative behaviour to be controllable is considered to elicit anger and disgust (Weiner, 1985), which reduces willingness to offer assistance (Weiner, 1980).

Dix *et al* (1986) provided support for Correspondence Inference Theory (Jones and Davis, 1965) by showing that parent's ascriptions of controllability to children's behaviour was influenced by the child's age. Older children's negative behaviour was viewed as more controllable than younger children's negative behaviour, and it was believed that this was because older children possessed greater knowledge and ability. Fincham and Roberts (1985) found that mentally disturbed children and adults were seen as having less control over their behaviour and therefore as less responsible for their actions, presumably because it was felt that they did not possess the knowledge or ability to know what they were doing was wrong.

Since people view another's behaviour as controllable if they feel that the person possesses the ability to know that their behaviour is wrong, it follows that staff may view people with severe learning disabilities as having less control over their challenging behaviour than those with mild learning disabilities (Fenwick, 1995). Thus, staff may be more likely to view causality in an individual with severe learning disabilities as being due to organic factors (eg. epilepsy) or factors beyond their control such as an inability to cope with certain aspects of the environment or lack of skills/knowledge (eg. communication). Staff may therefore feel less anger towards and be more willing to help people with severe learning disabilities than with mild learning disabilities (Fenwick, 1995).

Stanley and Standen (2000) found that staff attributions and their effect on helping behaviour were influenced by the controllability and stability dimensions, which were in turn influenced by behaviour topography and level of dependency (or severity of learning disability). Challenging behaviour by people with low dependency needs (ie. mild learning disabilities) was considered more controllable and less likely to be a stable feature of the person than challenging behaviour by people with high dependency needs (ie. severe learning disabilities).

Stanley and Standen (2000) found that with aggression staff were more likely to report feeling greater negative emotions and lower levels of optimism and less

propensity to help towards people with mild learning disabilities than with severe learning disabilities. This was presumably because staff viewed aggression in people with mild learning disabilities as controllable and therefore likely that the person does not want to change. With self-injury, staff were more likely to report greater negative emotions and lower levels of optimism and less propensity to help towards people with severe learning disabilities than with mild learning disabilities. This was presumably because self-injury in people with severe learning disabilities was seen as more of a stable feature than in people with mild learning disabilities and therefore less amenable to change.

The results of the above study suggest that level of severity of learning disability (level of dependency) influences staff attributions and help-giving behaviour. The topography of challenging behaviour was found to interact with the person's level of dependency (disability), which highlights the need to consider both variables in future studies. Further research is also needed to determine how staff view causality and appropriate interventions for different levels of severity of learning disability.

3. THE PRESENT STUDY.

This study aims to examine the influence of the following factors on staff attributions and emotional responses towards challenging behaviour shown by adults' with learning disabilities:-

- (a) Different topographies of challenging behaviour (ie. aggression, self-injury, stereotypy).
- (b) The person's level of severity of learning disability (ie. mild, severe learning disability).

Attributions were elicited via a questionnaire distributed to staff who worked with adults' with learning disabilities and severe challenging behaviour. The questionnaire described six adults with learning disabilities engaging in challenging behaviour. Three had mild learning disabilities and engaged in aggression, self-injury and stereotypy respectively. The other three had severe learning disabilities and engaged in each of the above three topographies of challenging behaviour described.

Following each description of the person with learning disabilities, staff were asked for their opinion as to their probable emotional reactions upon witnessing such behaviour, their beliefs regarding the possible causes of the behaviour and suitable interventions and their optimism towards the intervention being successful.

This study has expanded on previous studies by it's examination of another variable (i.e. level of severity of challenging behaviour) which may influence staffs' views of and responses towards challenging behaviour, and the use of a within subjects (or repeated measures) design. Previous studies examining the effect of behaviour topography have utilised a between subjects design. The within subjects design means that matching subjects (done to control the influence of extraneous variables) is not required. To control for possible practice effects from being exposed to different conditions, the experimental conditions were counterbalanced.

Hypotheses.

1. Topographies of Challenging Behaviour.

The hypotheses were that:-

- (a) Stereotypy would be more likely to be viewed as self-stimulatory in nature (Hastings *et al.*, 1995) and less likely to be attributable to biological causes (Hastings *et al.*, 1995), socially mediated or attributable to emotional factors (Hastings *et al.*, 1997) than aggression or self-injury, and more likely to be attributable to boredom than self-injury (Hastings *et al.*, 1997).
- (b) Stereotypy would be regarded as less disturbing to witness than physical aggression or self-injury. Self-injury would be regarded as more disturbing for staff to witness than physical aggression (Hastings and Remington, 1995).
- (c) Aggression would be more likely to elicit negative emotions from staff than self-injury (Stanley and Standen, 2000). Furthermore, as stereotypy is generally less likely to be considered a challenging behaviour (Lowe and Felce, 1995), it was hypothesised that stereotypy would be less likely to elicit negative emotions than aggression or self-injury.
- (d) Staff would be more likely to recommend distraction as an appropriate short-term intervention strategy and engaging in structured activities as an appropriate long-term intervention strategy for stereotypy than for aggression or self-injury. They would also be less likely to suggest intervening to prevent harm or to make the environment safe and to want to find the causes of the behaviour with stereotypy than aggression or self-injury (Hastings, 1996).
- (e) When rating people with mild learning disabilities, staff would be more optimistic regarding change as a result of intervention with self-injury than aggression. When rating people with severe learning disabilities, staff would be more optimistic regarding change as a result of intervention with aggression than self-injury (Stanley and Standen, 2000).
- (f) It is unclear whether staff would be more or less optimistic regarding change as a result of intervention with stereotypy than they would with aggression or self-injury. Given that stereotypy is hypothesised as less likely to elicit negative emotions, it follows that staff may be more optimistic of change.

However, as stereotypy may not be viewed by staff as a challenging behaviour, staff may not be optimistic towards change if they do not see it as a behaviour requiring treatment. As stereotypy may be viewed as more likely to be environmental or self-stimulatory in nature, staff may view it as either outwith the person's control (eg. due to extraneous variables) or within the person's control (eg. the person's means of controlling their environment), thus either respectively increasing or decreasing staffs' optimism for change.

2. Level of Severity of Learning Disability.

The main hypotheses were that:-

- (a) Staff would view challenging behaviour in a person with severe learning disabilities as more likely than in a person with mild learning disabilities to be attributable to biological or psychiatric causes or an inability to communicate their needs (Fenwick, 1995).
- (b) Staff would be more likely to experience negative emotions towards aggression in people with mild learning disabilities than with severe learning disabilities (Stanley and Standen, 2000).
- (c) Staff would be more likely to experience negative emotions towards self-injury in people with severe learning disabilities than with mild learning disabilities (Stanley and Standen, 2000).
- (d) People with mild learning disabilities would be viewed as having more control over their behaviour than people with severe learning disabilities (Fenwick, 1995; Stanley and Standen, 2000) and therefore staff may be more likely to recommend behaviour reduction strategies and less likely to recommend medical / psychiatric assessment and/or treatment with people with mild learning disabilities than with severe learning disabilities. Also, since people with mild learning disabilities are believed to have greater knowledge and ability than people with severe learning disabilities, staff may be more likely to recommend for people with mild learning disabilities the teaching of skills.

- (e) With aggression, staff would be more optimistic regarding change as a result of intervention with people with severe learning disabilities than with mild learning disabilities. With self-injury, staff would be more optimistic regarding change as a result of intervention with people with mild learning disabilities than with severe learning disabilities (Stanley and Standen, 2000).

4. METHOD.

4.1 Experimental Design.

This study utilised a questionnaire form design, whereby staff working with adults with learning disabilities and challenging behaviour were asked to complete a questionnaire (see Appendix 1). Their responses to this were then subjected to analysis as outlined in Section 4.4.

This study adopted a mixed factorial design with two repeated measures. The two independent variables were :-

1. Behaviour topography (ie. aggression, self-injury, stereotypy).
2. Level of severity of learning disability (ie. mild, severe).

The four dependent variables were :-

1. Staff beliefs as to the causes of the person's challenging behaviour.
2. Staff ratings of emotional responses to the person's challenging behaviour.
3. Staff views as to appropriate interventions for the person's challenging behaviour.
4. Staff optimism towards challenging behaviour responding to intervention.

To allow for an examination of the effect of behaviour topography and level of severity of learning disability on the above dependent variables six adults with learning disabilities were described. Two engaged in aggression, one had a mild and the other a severe learning disability. Two engaged in self-injury, and as above had either a mild or a severe learning disability. The final two engaged in stereotypy, and as above had either a mild or a severe learning disability.

This design meant that the above variables could be analysed within a single analysis and therefore their independent contribution could be assessed.

4.2 Subjects.

Sixty staff who worked with adults' with learning disabilities and severe challenging behaviour participated in this study. The criteria for selection of staff was that they either worked within one of two hospital wards specifically for adults' with learning disabilities and severe challenging behaviour, or one of three community homes where at least one of their residents attended the local day centre for adults' with learning disabilities and severe challenging behaviour. Participation was on a voluntary basis. Table 1 shows the demographic information of the staff.

Table 1 : Staffs' job titles and years of experience working with adults with learning disabilities.

Job Title	No of staff	Years of Experience	No of staff
Charge Nurse	2	< 1 year	0
Staff Nurse	21	1 - 5 years	17
Enrolled Nurse	6	6 - 10 years	16
Nursing Assistant	9	11 - 20 years	22
Senior Social Care Officer	4	+ 20 years	5
Social Care Officer	18		

4.2.1 Level of Training.

The staff nurses received some behavioural training during their nursing training. All nursing staff, including untrained staff received inhouse inservice training periodically. Although not formally examined in this study, it was known that the social care officers came from a range of professional backgrounds, such as social work and education. A few possessed social science degrees. Other staff had no formal training or qualifications. All community staff received inservice training periodically.

4.2.2 Location of staff.

The hospital staff had had experience of working in a range of wards or community facilities, prior to taking up their current posts in one of two wards for adults' with learning disabilities who display severe challenging behaviour. On one ward resided thirteen adults (8 males and 5 females) with borderline to moderate learning disabilities, presenting with forensic issues (ie. severe aggression and/or sexual offending behaviour) or mental illness. On the other ward were nine adults (5 males and 4 females) with severe to profound learning disabilities, who displayed a range of challenging behaviours such as physical aggression towards themselves or others.

The community staff worked in one of three community homes for adults' with learning disabilities. One home was ran and staffed by the Social Work Department and was home to three adults with learning disabilities. One male with severe learning disabilities with autistic features attended the local day centre for adults' with learning disabilities and challenging behaviour. Another house was funded by the Social Work Department with their staffing complement consisting of staff employed by social services and learning disability nurses seconded from the hospital. It was home to eight adults (seven males and one female) with severe to profound learning disabilities, all of whom attended the aforementioned day centre. The last house was funded by the NHS, with it's staffing complement consisting of four trained nurses and two nursing assistants. It was home to four adults (two males and two females) with severe to moderate learning disabilities, two of whom attended the aforementioned day centre.

4.3 Procedure.

4.3.1 Questionnaire Structure.

This consisted of six vignettes. Each vignette gave a brief description of an adult with learning disabilities engaging in one of three forms (ie. aggression, self-injury or stereotypy) of challenging behaviour. The vignettes were :-

(a) *Physical Aggression.*

“ _____ has a _____ learning disability. Sometimes, _____ is aggressive towards the other people who live and work with him. He kicks and punches them. He has presented with this type of behaviour for several years now”.

(b) *Self-injury.*

“ _____ has a _____ learning disability. Sometimes, _____ repeatedly hits his head with his fists. This often leads to bruising and even bleeding. He has presented with this behaviour for several years now”.

© *Stereotypy.*

“ _____ has a _____ learning disability. Frequently he sits in a chair and rocks his upper body backwards and forwards repeatedly. He has presented with this behaviour for several years now”.

These vignettes were taken from studies by Hastings & Remington (1995), Hastings *et al* (1995) and Hastings (1996). This allowed a comparison between the results of this study with the results of the above studies. The three forms of challenging behaviour are commonly cited in the learning disabilities literature. The topographical definitions used in these vignettes were based on this literature (Hastings, 1996). By using a questionnaire format already adopted in previous studies, meant that for the purposes of this study no pilot study was conducted.

Each of the three above vignettes were presented twice; the first stating that the person had a **mild** learning disability and the second stating that he had a **severe** learning disability. To avoid the effect of gender differences influencing staffs' views, all people described were male. By keeping the description of the vignettes the same except the level of severity of learning disability and topography of challenging behaviour, it meant that differences between the two likely pertained to staffs' differing attributions towards mild and severe learning disabilities and topographies of challenging behaviour rather than the differing operational definitions.

As this was a repeated measures design, in order to minimise any influence the order of presentation of the vignettes may have, their order was alternated according to one of three formats. One such format is shown in Appendix 1. The three formats of the questionnaire were distributed randomly to subjects. However, as response rates in this study were fairly poor, equal numbers of each format were not obtained.

In the vignettes no reference was made as to possible functions of challenging behaviour. This was intentional for three main reasons. Firstly, it was structured in this way so as to avoid biasing staff who were to be later asked to consider the possible functions of the behaviour. Secondly, referrals for assessment and treatment are often made on the basis of topography. Thirdly, staff often have to deal with incidents of challenging behaviour without knowing the function of the behaviour on that given occasion (Hastings, 1996). Thus, staff often have to intervene knowing only the behaviour's topography.

For each vignette, staff were asked to think about the behaviour described by forming a picture of the person's behaviour and keep it mind when answering the questions that followed. The questions were the same for all six vignettes.

1. Emotional Responses to Challenging Behaviour.

For each vignette, staff were asked to rate how likely on witnessing the described behaviour, they felt staff within their place of work would experience each of the following emotions - anger, sadness, despair, nothing, guilt and fear. A 5-point Likert scale, with data points ranging from 1 ('not at all likely') to 5 ('extremely likely') was used for rating purposes. Staff were also asked to rate using a 5-point Likert scale ranging from 1 ('not at all disturbing') to 5 ('extremely disturbing'), how disturbed they felt staff within their place of work would find witnessing this behaviour.

Staff were asked to report on others' emotional responses rather than their own, as it was considered that they may find it less threatening than to admit their own feelings. The disadvantage of asking staff to report on others' feelings rather than their own is that it is difficult for people to report on others' internal

states, and depending on the staff culture staff may not discuss with each other the emotional impact challenging behaviour has on them.

2. Causes of Challenging Behaviour and Interventions.

For each vignette, staff were asked to generate as many possible hypotheses as to the function of the person's challenging behaviour. Staff were then asked for each function they stated to say how they would intervene if the behaviour served this particular function, and were requested to keep their explanations of causality and interventions as brief as possible. They were also encouraged to express their own views, and to facilitate this were told that there were no right or wrong answers.

Staff were asked to generate their own functions of challenging behaviour rather than selecting from a list, so as to gain an insight into their unbiased views regarding causality of the different topographies of challenging behaviour and towards the different levels of severity of learning disability. It was acknowledged that given the full range of factors that could possibly influence challenging behaviour, it would be virtually impossible for staff to state all these factors. It was felt that the ones they would mention would be the hypotheses they would normally consider, or that they would base their replies on an actual person who presented with this form of challenging behaviour whose function was known or inferred. Similarly, the range of possible interventions were immense and staff could not be realistically expected to list them all. It was felt that staffs' suggestions would be representative of the strategies they typically use when faced with that particular behaviour in a person with a similar severity of learning disability.

3. Optimism towards change.

In this section, five statements derived from the Optimism - Pessimism scale (Sharrock *et al*, 1990; Dagnan *et al*, 1998) were presented. These statements were felt to reflect staffs' expectations of the person's accomplishments and the extent to which they felt the person could benefit from appropriate intervention. Sharrock *et al* (1990) found this scale had acceptable reliability (Cronbach's Alpha = 0.76). Staff were asked to rate each statement according to whether

they felt staff in general would agree or disagree with it. A 5-point Likert scale was used for rating purposes, with data points ranging from 1 ('strongly agree') to 5 ('strongly disagree').

4.3.2 Questionnaire Distribution.

Distribution of the questionnaire to the participating places was conducted by the author in the course of visiting the various units conducting clinical work. The questionnaires were handed to the member of staff in charge, who was asked to distribute them to their staff. A covering letter (see Appendix 2) was enclosed with the questionnaires, giving a brief outline of the study's aims. Participation was voluntary.

Reminders were given verbally by the author during routine clinical visits. Completed questionnaires were gathered by one senior staff member from each place of work, and either sent directly to the author, or the author collected them during routine visits. The response rate was fairly low at 57%.

4.4 Statistical Analysis.

4.4.1 Causes of and Interventions for Challenging Behaviour.

The qualitative data derived from staffs' written responses regarding causes of and intervention strategies for challenging behaviour was subjected to Content Analysis (Dey, 1993). This procedure involved gathering similar responses together to create categories. The category system is outlined in Appendix 3. Staff responses were then coded in terms of whether or not they provided a cause or strategy that related to a particular category. No measures were taken as to the number of times a staff member mentioned a cause or intervention associated with each category.

As coding using this system was subjective in nature, reliability checks were conducted with 20 (33%) questionnaires. These were conducted by a psychologist not involved in the research. Training on the categorisation system

was provided by the author. The Percentage Agreement Index was used to calculate agreement. This index indicates the percentage of times two observers agree that the behaviour of interest occurred or agree that it did not occur. It is computed using the formula $(\text{Number of agreements} / (\text{Number of agreements} + \text{number of disagreements})) \times 100\%$. Percentage agreement was found to be 94.09% for causes of challenging behaviour, 80.85% for short-term interventions and 73.95% for long-term interventions. Any disagreements were then discussed between the author and the second rater, who then agreed upon it's final coding. The results presented are based on the coded results after this procedure.

To examine for the effect of level of severity of learning disability a series of McNemar Chi-square tests were conducted. To examine for the effect of topography of challenging behaviour Cochran Q tests were conducted, with any significant overall effect being followed up with a series of McNemar Chi-square tests.

4.4.2 Emotional Responses to Challenging Behaviour.

For analysis purposes, each rater's scores for the emotions anger, sadness, despair, fear and guilt were summed and averaged to form a category 'negative emotions'. The remaining emotional responses 'feeling nothing' and 'feeling disturbed' comprised two separate categories.

To examine for any differences between the three emotional response categories (ie. 'negative emotions', 'feeling nothing' and 'feeling disturbed') and for the effect of behaviour topography on staffs' emotional responses, a series of Friedman Analysis of Variance tests were conducted, with any significant overall effects being followed up with a series of Wilcoxon tests. To examine for the effect of level of severity of learning disability a series of Wilcoxon tests were conducted.

4.4.3 Optimism towards Change.

For analysis purposes, each rater's scores on the optimism statements were totaled to give a maximum score of 25. To examine for the effect of topography of challenging behaviour Friedman Analysis of Variance tests were conducted with any significant overall effect being followed up with a series of Wilcoxon tests. To examine for the effect of level of severity of learning disability a series of Wilcoxon tests were conducted.

5. RESULTS.

This study examined the influence of two independent variables – topography of challenging behaviour and severity of learning disability – on staff attributions towards challenging behaviour. One questionnaire (see Appendix 1) completed by all participating staff was used to simultaneously assess the effects of the above two variables.

5.1 Causes of Challenging Behaviour.

This was examined by asking staff to state for each person described as many causes of their challenging behaviour as they could think of. These responses were coded using content analysis and the results expressed as a percentage using the formula : number of staff mentioning it as a cause divided by the number of staff participating (ie. 60) multiplied by 100. The results are shown in Table 2.

Table 2 : Staffs' ratings of Causes of Challenging Behaviour.

	Percentage of Staff (%)					
	Mild learning disabilities			Severe learning disabilities		
	Aggression	Self-injury	Stereotypy	Aggression	Self-injury	Stereotypy
Physiological	21.67	36.67	20.00	30.00	68.33	25.00
Emotional	80.00	66.67	38.33	75.00	60.00	25.00
Environmental	38.33	36.67	81.67	41.67	35.00	63.33
Communication	15.00	21.67	5.00	33.33	30.00	13.33
Socially mediated	28.33	41.67	23.33	31.67	36.67	15.00
Self-stimulation	0.00	16.67	46.67	1.67	23.33	48.33
Skills deficit	1.67	0.00	3.33	6.67	0.00	1.67

(i) *Effect of Behaviour Topography on Staffs ratings of Causality of Challenging Behaviour.*

A series of Cochran Q tests were conducted to ascertain whether there were any differences between staffs' ratings for the three topographies of challenging behaviour. The results of these analyses are presented in Table 3. Analyses were not conducted on the category 'Skills Deficit' because of the small percentage of staff mentioning it as a cause.

Table 3 : Q values for the comparison between behaviour topographies for staff ratings of challenging behaviour.

	Mild learning disabilities	Severe learning disabilities
Physiological	7.00	25.36
Emotional	26.43	44.77
Environmental	23.86	15.80
Communication	12.67	9.54
Socially mediated	7.46	6.94
Self-stimulation	37.75	40.16

(where shaded boxes denote significance at the 0.05 level).

The results show significant differences in staff ratings between the three behaviour topographies for each cause of challenging behaviour. This suggests that staff view the different behaviour topographies as caused by different factors. A series of McNemar Chi-square tests were conducted to follow up any significant overall effects and the results are shown in Table 4. Again analyses were not conducted on the category 'Skills Deficit' because of the small percentage of staff mentioning it as a cause. Some analyses were not possible because at least one row of the contingency table contained a zero value, and these are indicated by N / A in the results table.

The results show that as hypothesised staff rated stereotypy more likely than self-injury and aggression to be self-stimulatory in nature and attributable to

Table 4 : Chi-square values for the comparison between behaviour topographies amongst staff rating causes of challenging behaviour.

	Mild learning disabilities			Severe learning disabilities		
	Aggression – Self-injury	Aggression – Stereotypy	Self-injury – Stereotypy	Aggression – Self-injury	Aggression – Stereotypy	Self-injury – Stereotypy
Physiological	$\chi^2 = 4.267; p = 0.0389$	$\chi^2 = 0.00; p = 1.00$	$\chi^2 = 3.682; p = 0.055$	$\chi^2 = 17.926; p < 0.0001$	$\chi^2 = 0.174; p = 0.677$	$\chi^2 = 19.531; p < 0.0001$
Emotional	$\chi^2 = 3.063; p = 0.080$	$\chi^2 = 19.862; p < 0.0001$	$\chi^2 = 8.828; p = 0.0003$	$\chi^2 = 3.765; p = 0.052$	$\chi^2 = 28.27; p < 0.0001$	$\chi^2 = 18.893; p < 0.0001$
Environmental	$\chi^2 = 0.00; p = 1.00$	$\chi^2 = 22.321; p < 0.0001$	$\chi^2 = 23.310; p < 0.0001$	$\chi^2 = 0.562; p = 0.453$	$\chi^2 = 6.261; p = 0.012$	$\chi^2 = 12.190; p = 0.0005$
Communication	$\chi^2 = 1.500; p = 0.221$	$\chi^2 = 2.286; p = 0.131$	$\chi^2 = 6.750; p = 0.009$	$\chi^2 = 0.056; p = 0.814$	$\chi^2 = 7.563; p = 0.006$	$\chi^2 = 4.500; p = 0.034$
Socially mediated	$\chi^2 = 2.450; p = 0.118$	$\chi^2 = 0.308; p = 0.579$	$\chi^2 = 5.263; p = 0.022$	$\chi^2 = 0.267; p = 0.606$	$\chi^2 = 8.471; p = 0.004$	$\chi^2 = 5.063; p = 0.024$
Self-stimulation	N / A	N / A	$\chi^2 = 11.115; p = 0.0009$	$\chi^2 = 8.643; p = 0.003$	$\chi^2 = 23.31; p < 0.0001$	$\chi^2 = 7.840; p = 0.005$

(where shaded boxes denote significance at the 0.05 level).

environmental factors, and less likely to be attributable to emotional factors. Staff also considered self-injury more likely than aggression to be self-stimulatory in nature. As hypothesised, staff when rating people with severe learning disabilities were more likely to consider aggression and self-injury than stereotypy to be socially mediated or a means of communication. However, when rating people with mild learning disabilities they did not consider aggression more likely than stereotypy to be socially mediated or a means of communication. One further significant finding was that staff considered self-injury more likely than aggression to be physiological in nature and when rating people with severe learning disabilities considered self-injury more likely than stereotypy to be physiological in nature.

(ii) *Effect of Level of Severity of Learning Disability on Staffs' ratings of Causality of Challenging Behaviour.*

A series of McNemar Chi-square tests were conducted to ascertain whether there were any differences between staffs' ratings of causes of challenging behaviour for the two levels of severity of learning disability. The results of these analyses are shown in Table 5.

Table 5 : Chi-square values for the comparison between level of severity of learning disability on staff ratings of causality.

	Aggression	Self-injury	Stereotypy
Physiological	$\chi^2 = 1.46; p = 0.228$	$\chi^2 = 14.08; p = 0.0002$	$\chi^2 = 0.308; p = 0.579$
Emotional	$\chi^2 = 0.363; p = 0.547$	$\chi^2 = 0.375; p = 0.540$	$\chi^2 = 5.882; p = 0.015$
Environmental	$\chi^2 = 0.05; p = 0.823$	$\chi^2 = 0.00; p = 1.00$	$\chi^2 = 7.692; p = 0.005$
Communication	$\chi^2 = 7.692; p = 0.005$	$\chi^2 = 1.231; p = 0.267$	$\chi^2 = 0.250; p = 0.617$
Socially mediated	$\chi^2 = 0.055; p = 0.814$	$\chi^2 = 0.267; p = 0.606$	$\chi^2 = 2.286; p = 0.131$
Self-stimulation	N / A	$\chi^2 = 0.900; p = 0.343$	$\chi^2 = 0.00; p = 1.00$

(where shaded boxes denote significance at the 0.05 level).

Only limited support was found for the hypothesis that staff would rate challenging behaviour shown by people with severe learning disabilities more likely to be physiological in nature and / or attributable to communication deficits than challenging behaviour shown by people with mild learning disabilities. The only support was that staff were more likely to consider self-injury to be physiological in nature and aggression to be attributable to communication deficits with people with severe learning disabilities than with mild learning disabilities. Other significant findings were that staff were less likely to view stereotypy as being due to emotional and environmental factors in people with severe learning disabilities than with mild learning disabilities.

5.2 Emotional Responses to Challenging Behaviour.

This was examined by asking staff to rate along a likert scale with data points ranging from ‘not at all likely’(1) to ‘extremely likely’(5) the likelihood that staff in general would feel disturbed and experience a range of emotional responses (ie. anger, sadness, despair, guilt, fear, nothing) For analysis purposes, responses to the first five emotions were averaged and formed a category ‘negative emotions’. Table 6 shows staffs’ mean ratings and standard deviations.

Table 6 : Staff mean ratings (and standard deviations) of emotional responses to Challenging Behaviour.

	Mild learning disabilities			Severe learning disabilities		
	Aggression	Self-injury	Stereotypy	Aggression	Self-injury	Stereotypy
Negative emotions	2.71 (0.64)	2.46 (0.56)	1.93 (0.45)	2.86 (0.56)	2.86 (0.62)	2.03 (0.60)
Feeling disturbed	4.05 (1.03)	3.72 (0.99)	1.92 (0.81)	4.02 (1.02)	3.98 (0.85)	2.47 (0.97)
Feeling nothing	1.27 (0.48)	1.33 (0.63)	1.92 (1.22)	1.32 (0.70)	1.42 (0.74)	1.5 (0.87)

(where standard deviations are shown in parentheses).

(i) *Effect of Behaviour Topography on staff attributions.*

As the above means were not normally distributed, a series of Friedman Two-way Analysis of Variance by ranks were conducted to determine the differences between staffs' emotional responses for the three behaviour topographies. The results of these analyses are shown in Table 7.

Table 7 : Results of the Influence of Behaviour Topography on Staffs' Emotional Responses.

	Mild learning disabilities	Severe learning disabilities
Negative emotions	Fr = 65.279; p < 0.0001	Fr = 65.117; p < 0.0001
Feeling disturbed	Fr = 84.095; p < 0.0001	Fr = 63.266; p < 0.0001
Feeling nothing	Fr = 27.583; p < 0.0001	Fr = 5.633; p = 0.0598

(where shaded boxes denote significance at the 0.05 level).

The results in Table 7 show that with the exception of staff ratings of "feeling nothing" when witnessing challenging behaviour in people with learning disabilities, staff described differences in their emotional responses to the different behaviour topographies.

A series of Wilcoxon tests were conducted to follow up any significant overall effects and the results are shown in Table 8.

Table 8 : P-values for the Influence of Behaviour Topography on staff ratings of emotional responses.

	Mild learning disabilities			Severe learning disabilities		
	Aggression-self-injury	Aggression-stereotypy	Self-injury-stereotypy	Aggression-self-injury	Aggression-stereotypy	Self-injury-stereotypy
Negative emotions	0.002	<0.001	<0.001	0.881	<0.001	<0.001
Feeling disturbed	0.028	<0.001	<0.001	0.867	<0.001	<0.001
Feeling nothing	0.375	0.0003	<0.001	0.376	0.135	0.389

(where shaded boxes denote significance at the 0.05 level)

The results in Table 8 show that as hypothesised staff rated stereotypy as less disturbing to witness than aggression and self-injury. Staff were also less likely to report experiencing negative emotions towards stereotypy than towards aggression and self-injury. Contrary to the study's hypothesis that self-injury would be considered more disturbing to witness than aggression, staff when rating people with mild learning disabilities found aggression more disturbing than self-injury to witness, whilst when rating people with severe learning disabilities no differences in their ratings for the two behaviour topographies were found. Similarly, staff when rating people with mild learning disabilities reported that they were more likely to experience negative emotions with aggression than with self-injury, whereas when rating people with severe learning disabilities no differences in staff ratings between the two behaviour topographies were found. When rating people with mild learning disabilities, staff reported that they were more likely to feel nothing towards stereotypy than towards aggression or self-injury. When rating people with severe learning disabilities no differences between staff ratings of feeling 'nothing' towards the three behaviour topographies were found.

(ii) *Effect of Level of Severity of Learning Disability on Staff Attributions.*

As the above means were not normally distributed nonparametric tests were considered appropriate so a series of Wilcoxon tests were conducted to determine the differences between staff ratings for the different levels of severity of learning disability. The results are shown in Table 9.

Table 9 : P-values for the Influence of severity of learning disability on Staffs' Emotional Responses.

	Aggression	Self-injury	Stereotypy
Negative emotions	0.029	<0.0001	0.116
Feeling disturbed	0.868	0.028	0.0002
Feeling nothing	0.831	0.081	0.002

(where shaded boxes denote significance at the 0.05 level).

Table 9 shows that staff were more likely to report negative emotions towards aggression or self-injury and to feel disturbed witnessing self-injury or stereotypy in people with severe learning disabilities than with mild learning disabilities. The results also show that staff were more likely to feel nothing towards stereotypy shown by people with mild learning disabilities than with severe learning disabilities.

5.3 Interventions for Challenging Behaviour.

This was examined by asking staff to state for each person described as many appropriate interventions for their challenging behaviour as they could think of. Their responses were coded using content analysis and were categorised as either short-term or long-term interventions. The results of this analysis were expressed as a percentage using the formula : number of staff mentioning it as an intervention divided by the total number of staff (ie. 60) multiplied by 100. The results are shown in Tables 10 and 11.

Table 10 : Staffs' ratings of short-term interventions for challenging behaviour.

	Percentage of Staff (%)					
	Mild learning disabilities			Severe learning disabilities		
	Aggression	Self-injury	Stereotypy	Aggression	Self-injury	Stereotypy
Calm/communicate	36.67	33.33	26.67	40.00	46.67	28.33
Find out why	18.33	11.67	11.67	20.00	16.67	6.67
Diversion	30.00	33.33	70.00	25.00	43.33	58.33
Safe environment	8.33	8.33	1.67	13.33	10.00	1.67
Medical intervention	6.67	21.67	3.33	10.00	36.67	6.67
Restraint	8.33	10.00	0	8.33	5.00	0
Stop	0	3.33	3.33	0	3.33	3.33
Leave/give space	6.67	16.67	8.33	3.33	10.00	6.67

Table 11 : Staffs' ratings of long-term interventions for challenging behaviour.

	Percentage of staff (%)					
	Mild learning disabilities			Severe learning disabilities		
	Aggression	Self-injury	Stereotypy	Aggression	Self-injury	Stereotypy
Find causes	21.67	13.33	10.00	26.67	20.00	11.67
Structure day	25.00	26.67	56.67	21.67	25.00	56.67
Management strategy	31.67	35.00	26.67	31.67	23.33	21.67
Teach skills	45.00	23.33	11.67	21.67	11.67	5.00
Improve communication	21.67	30.00	10.00	33.33	35.00	15.00
Medical investigations	11.67	20.00	8.33	16.67	35.00	6.67
Normalise lifestyle	6.67	5.00	1.67	10.00	5.00	3.33

(i) *Effect of Behaviour Topography on Staffs' ratings of Interventions for Challenging Behaviour.*

A series of Cochran Q tests were conducted to ascertain whether there were any differences between staffs' ratings for the three topographies of challenging behaviour. The results of these analyses are shown in Tables 12 and 13. Analyses were not conducted on the categories 'Restraint', 'Stop', 'Leave/give space' and

'Normalise Lifestyle' because of the small percentage of staff mentioning them as interventions.

Table 12 : Q values for the Influence of Behaviour Topography on Staffs' selection of Short-term Interventions.

	Mild learning disabilities	Severe learning disabilities
Calm/communicate	2.48	7.29
Find out why	1.88	6.93
Diversion	35.47	18.24
Safe environment	4.00	7.80
Medical intervention	13.73	27.81

(where shaded boxes denote significance at the 0.05 level).

Table 13 : Q values for the Influence of Behaviour Topography on Staffs' selection of Long-term Interventions.

	Mild learning disabilities	Severe learning disabilities
Find causes	5.57	6.10
Structure Day	24.17	23.94
Management strategy	1.58	2.70
Teach skills	29.87	12.67
Improve communication	11.47	11.08
Medical investigation	6.00	19.39

(where shaded boxes denote significance at the 0.05 level).

The results in Tables 12 and 13 show differences between the three behaviour topographies in staff ratings for the short-term interventions, diversion and medical intervention and for the long-term interventions, structured day, teaching skills and improving communication. When rating the long-term intervention medical investigations, differences between the three behaviour topographies were seen with people with severe learning disabilities. To follow up any significant overall effects, a series of McNemar Chi-square tests were conducted and the results are shown in Tables 14 and 15. Again analyses were not conducted

Table 14 : Chi-square values for the comparison between behaviour topographies amongst staff rating appropriate short-term interventions.

	Mild learning disabilities			Severe learning disabilities		
	Aggression – Self-injury	Aggression – Stereotypy	Self-injury – Stereotypy	Aggression – Self-injury	Aggression – Stereotypy	Self-injury – Stereotypy
Calm/communicate	$\chi^2 = 0.00; p = 1.00$	$\chi^2 = 1.389; p = 0.238$	$\chi^2 = 0.941; p = 0.332$	$\chi^2 = 0.308; p = 0.579$	$\chi^2 = 1.895; p = 0.169$	$\chi^2 = 5.063; p = 0.024$
Find out why	$\chi^2 = 0.900; p = 0.343$	$\chi^2 = 0.643; p = 0.422$	$\chi^2 = 0.100; p = 0.752$	$\chi^2 = 0.125; p = 0.724$	$\chi^2 = 4.083; p = 0.043$	$\chi^2 = 2.500; p = 0.114$
Diversion	$\chi^2 = 0.083; p = 0.773$	$\chi^2 = 20.346; p < 0.0001$	$\chi^2 = 17.39; p < 0.001$	$\chi^2 = 5.263; p = 0.022$	$\chi^2 = 12.190; p = 0.0005$	$\chi^2 = 2.783; p = 0.095$
Safe environment	$\chi^2 = 0.25; p = 0.617$	N / A	N / A	$\chi^2 = 0.167; p = 0.683$	$\chi^2 = 3.125; p = 0.077$	N / A
Medical intervention	$\chi^2 = 4.900; p = 0.027$	$\chi^2 = 0.167; p = 0.683$	$\chi^2 = 6.667; p = 0.0001$	$\chi^2 = 12.500; p = 0.0004$	$\chi^2 = 0.167; p = 0.683$	$\chi^2 = 13.474; p = 0.0002$

(where shaded boxes denote significance at the 0.05 level).

Table 15 : Chi-square values for the comparison between behaviour topographies amongst staff rating appropriate long-term interventions.

	Mild learning disabilities				Severe learning disabilities			
	Aggression – Self-injury	Aggression – Stereotypy	Self-injury – Stereotypy	Aggression – Self-injury	Aggression – Stereotypy	Self-injury – Stereotypy	Aggression – Stereotypy	Self-injury – Stereotypy
Find causes	$\chi^2 = 1.778; p = 0.182$	$\chi^2 = 3.273; p = 0.070$	$\chi^2 = 0.125; p = 0.724$	$\chi^2 = 0.900; p = 0.343$	$\chi^2 = 4.923; p = 0.027$	$\chi^2 = 2.286; p = 0.131$		
Structure Day	$\chi^2 = 0.00; p = 1.00$	$\chi^2 = 14.087; p = 0.0002$	$\chi^2 = 11.115; p = 0.0009$	$\chi^2 = 0.063; p = 0.803$	$\chi^2 = 12.960; p = 0.0003$	$\chi^2 = 17.391; p < 0.0001$		
Management strategy	$\chi^2 = 0.063; p = 0.803$	$\chi^2 = 0.267; p = 0.606$	$\chi^2 = 0.941; p = 0.332$	$\chi^2 = 0.941; p = 0.332$	$\chi^2 = 1.389; p = 0.239$	$\chi^2 = 0.00; p = 1.00$		
Teach skills	$\chi^2 = 8.471; p = 0.004$	$\chi^2 = 15.429; p < 0.0001$	$\chi^2 = 4.000; p = 0.046$	$\chi^2 = 3.125; p = 0.077$	$\chi^2 = 5.818; p = 0.016$	$\chi^2 = 1.500; p = 0.221$		
Improve communication	$\chi^2 = 1.455; p = 0.228$	$\chi^2 = 3.273; p = 0.070$	$\chi^2 = 7.563; p = 0.006$	$\chi^2 = 0.00; p = 1.00$	$\chi^2 = 5.263; p = 0.022$	$\chi^2 = 6.722; p = 0.0001$		
Medical investigations	$\chi^2 = 2.286; p = 0.131$	$\chi^2 = 0.125; p = 0.724$	$\chi^2 = 3.273; p = 0.070$	$\chi^2 = 5.263; p = 0.022$	$\chi^2 = 2.500; p = 0.114$	$\chi^2 = 12.500; p = 0.0004$		

(where shaded boxes denote significance at the 0.05 level).

on the categories 'Restraint', 'Stop', 'Leave/give space' and 'Normalise lifestyle' because of the small percentage of staff mentioning them as interventions.

The results in Tables 14 and 15 provide support for the hypothesis that staff would be more likely to recommend diversion as a short-term intervention and structuring the person's day as a long-term intervention with stereotypy than with aggression or self-injury. The only exception was when rating people with severe learning disabilities, staff were as likely to recommend diversion for self-injury as for stereotypy.

In accordance with staff considering self-injury more likely than aggression and stereotypy to be physiological in nature, they also considered that they would be more likely to recommend medical interventions as a short-term intervention for self-injury than for aggression or stereotypy. When rating people with severe learning disabilities, staff were more likely to recommend medical investigations as a long-term intervention for self-injury than aggression or stereotypy, but were no more likely to recommend it for any particular behaviour topography when rating people with mild learning disabilities.

Although staff were no more likely to recommend communication strategies as a short-term intervention for any particular behaviour topography, they were more likely to recommend improving communication as a long-term intervention with self-injury than with stereotypy. When rating people with severe learning disabilities they were also more likely to recommend improving communication with aggression than stereotypy.

Only partial support was found for the hypothesis that staff would be more likely to recommend finding the causes of the person's challenging behaviour with aggression or self-injury than stereotypy. The only significant finding was that staff when rating people with severe learning disabilities were more likely to recommend finding out why as a short-term intervention and conducting a functional analysis as a long-term intervention with aggression than with stereotypy.

When rating people with mild learning disabilities, staff were more likely to recommend as a long-term intervention teaching skills with aggression than with self-injury or stereotypy and more likely to recommend teaching skills with self-injury than with stereotypy. The only other significant finding was that staff when rating people with severe learning disabilities were more likely to recommend calming or communicating with the person as a short-term intervention with self-injury than with stereotypy.

(ii) *Effect of Level of Severity of Learning Disability on Staffs' ratings of Interventions for Challenging Behaviour.*

A series of McNemar Chi-square tests were conducted to ascertain where the differences between the two levels of severity of learning disability and the results are shown in Tables 16 and 17.

Table 16 : Chi-square values for the Influence of level of severity of learning disability on staffs' selection of short-term interventions.

	Aggression	Self-injury	Stereotypy
Calm/communicate	$\chi^2 = 0.063; p = 0.803$	$\chi^2 = 1.136; p = 0.286$	$\chi^2 = 0.00; p = 1.00$
Find out why	$\chi^2 = 0.25; p = 0.617$	$\chi^2 = 0.571; p = 0.500$	$\chi^2 = 0.444; p = 0.505$
Diversion	$\chi^2 = 0.308; p = 0.579$	$\chi^2 = 1.389; p = 0.239$	$\chi^2 = 3.273; p = 0.070$
Safe environment	$\chi^2 = 0.167; p = 0.683$	$\chi^2 = 0.00; p = 1.00$	N / A
Medical intervention	$\chi^2 = 0.167; p = 0.683$	$\chi^2 = 4.267; p = 0.039$	$\chi^2 = 0.167; p = 0.683$

(where shaded boxes denote significance at the 0.05 level).

Table 17 : Chi-square values for the Influence of level of severity of learning disability on staffs' selection of long-term interventions.

	Aggression	Self-injury	Stereotypy
Find causes	$\chi^2 = 0.571; p = 0.500$	$\chi^2 = 0.900; p = 0.343$	$\chi^2 = 0.167; p = 0.683$
Structure Day	$\chi^2 = 0.063; p = 0.803$	$\chi^2 = 0.00; p = 1.00$	$\chi^2 = 0.100; p = 0.752$
Management strategy	$\chi^2 = 0.063; p = 0.803$	$\chi^2 = 2.118; p = 0.146$	$\chi^2 = 0.444; p = 0.505$
Teach skills	$\chi^2 = 7.682; p = 0.006$	$\chi^2 = 3.125; p = 0.077$	N / A
Improve communication	$\chi^2 = 3.273; p = 0.070$	$\chi^2 = 0.071; p = 0.789$	$\chi^2 = 0.571; p = 0.500$
Medical investigation	$\chi^2 = 0.571; p = 0.500$	$\chi^2 = 3.765; p = 0.052$	N / A

(where shaded boxes denote significance at the 0.05 level).

The results shown in Tables 16 and 17 provide essentially no support for the study's hypothesis that staff would be more likely to consider behaviour reduction strategies and skills teaching and less likely to consider medical treatment or investigations as appropriate interventions for people with mild learning disabilities than for people with severe learning disabilities. The only significant findings were that staff were more likely to consider medical interventions to be an appropriate short-term intervention for self-injury and less likely to consider teaching skills to be an appropriate long-term intervention for aggression with people with severe learning disabilities than people with mild learning disabilities.

5.4 Optimism towards change.

This was examined by asking staff to rate using a 5-point likert scale (with data points ranging from (1) 'totally agree' to (5) 'totally disagree'), the extent to which they agreed or disagreed with five statements. These statements related to staff optimism towards treatment being successful. Table 18 shows the mean ratings.

Table 18 : Mean ratings (and standard deviations) for the statements relating to Optimism towards Change.

	Mild learning disabilities	Severe learning disabilities
Aggression	20 (4.353)	19.82 (4.175)
Self-injury	20.38 (3.932)	19.37 (4.172)
Stereotypy	19.85 (4.119)	18.93 (4.473)

(where standard deviations are shown in parentheses).

(a) Effect of Behaviour Topography on staff ratings.

As the results were not normally distributed, nonparametric statistics were considered appropriate so Friedman Analysis of Variance tests were conducted to examine for the effect of behaviour topography on staff ratings of Optimism towards change. The results were that when rating people with mild learning disabilities, the Friedman Statistic (Fr) was 0.667 and the p-value 0.717. This difference was not significant indicating no differences in staff ratings of optimism towards change between the three behaviour topographies. When rating people with severe learning disabilities, the Friedman Statistic (Fr) was 6.229 and the p-value 0.044. This difference was statistically significant at the 0.05 level indicating differences between staff ratings of optimism towards change among the three behaviour topographies.

Wilcoxon tests were conducted to follow up any significant overall effects and the results are presented in Table 19.

Table 19 : P-values for the Influence of Behaviour Topography on staff ratings of Optimism towards change.

	Mild learning disabilities	Severe learning disabilities
Aggression-Self-injury	0.50	0.11
Aggression-Stereotypy	0.84	0.007
Self-injury-Stereotypy	0.27	0.13

(where shaded boxes denote significance at the 0.05 level).

The results in Table 19 show that upon rating people with severe learning disabilities, staff were more likely to feel optimistic regarding treatment being successful with aggression than with stereotypy.

(b) Effect of Level of Severity of learning disability on staff attributions.

Wilcoxon tests were conducted to ascertain the differences between staff ratings for the two levels of severity of learning disability and the results are shown in Table 20.

Table 20 : P-values for the Influence of Level of Severity of learning Disability on staff ratings of optimism towards change.

	P-value
Aggression	0.55
Self-injury	0.002
Stereotypy	0.004

(where shaded boxes denote significance at the 0.05 level).

The results in Table 20 show that staff were more likely to feel optimistic towards change following treatment when rating self-injury and stereotypy in people with mild learning disabilities than with severe learning disabilities.

6. DISCUSSION.

This study examined the influence of topography of challenging behaviour and level of severity of learning disability on staff attributions and emotional responses towards challenging behaviour shown by adults with learning disabilities. Before discussing the results pertaining to the two independent variables, it is worth firstly discussing the study's general findings.

As in previous research (eg. Hastings and Remington, 1995), staff in this study reported that they would experience a range of emotional responses towards challenging behaviour (see Table 6, page 62). A high percentage of staff stated that they would feel disturbed witnessing challenging behaviour, although this tended to depend on the behaviour topography; staff tended not to feel disturbed witnessing stereotypy.

Hospital and community staff reported on a range of causes of challenging behaviour (Table 2, page 58), which as commented on in previous research (Bromley and Emerson, 1995; Hastings, 1995; Hastings *et al.*, 1995) generally matched current models of challenging behaviour (see Section 2.3). Similar to the findings of Bromley and Emerson (1995), emotional factors comprised one of the most cited causes of challenging behaviour. Other frequently cited causes included physiological factors such as pain and epilepsy, self-stimulation, aspects of past and current environments, communication and socially-mediated behaviour. This indicates that staff have a fairly comprehensive knowledge of causes of challenging behaviour, and would suggest that any problems in staffing performance are unlikely to be due to deficits in this area. Knowledge of the range of causes of challenging behaviour does not necessarily mean skill in assessing causality in each instance, so it is possible that deficits in staffing performance may reflect difficulties with assessment.

Supporting the findings of Hastings (1996), staffs' range of long-term intervention strategies (Table 11, page 66) generally identified with those recommended in behavioural programmes. Some staff mentioned the importance of conducting a functional analysis prior to intervention, seeking professional

help, implementing planned interventions and improving their relationship and communications with their clients. It is also interesting to note that although medical interventions were mentioned, they were not amongst the most frequently cited interventions. This likely reflects a shift away from medical models of care to more social models. Although staff possessed some awareness of the various intervention strategies, it was not clear from the format of this study, staffs' knowledge and ability in implementing any of the interventions. Knowledge of terminology does not necessarily mean expertise in the application of techniques.

The short-term intervention strategies staff selected (Table 10, page 66) were similar to those reported by Hastings (1996). These responses, depending on the behaviour's function, are likely to maintain the challenging behaviour in the long-term (Hastings, 1996). Strategies emphasised distracting or diverting the person away from their challenging behaviour, communicating to find out what was wrong or meeting their needs, calming the person and depending on the topography of challenging behaviour, medical interventions. Less frequently mentioned were more punitive responses to challenging behaviour, such as restraint. Seclusion was not mentioned by any staff. This suggests that the strategies staff claim they use are those currently recommended as positive reactive strategies, and staff are aware of responding in a positive, constructional manner rather than in a punitive manner.

The results of this study showed that a high percentage of staff disagreed with the optimism towards change statements (see Table 18, page 73), indicating that generally staff considered treatment for challenging behaviour to have some success and that there was a point to investing in intervention strategies. Whether this finding generalises to real-life clients and situations remains to be seen. It may be easier to be positive about treatment being successful with a fictitious client. Staff may become disillusioned towards treatment for an actual client, if he/she continues to present with severe challenging behaviour despite repeated attempts at intervention.

6.1 Effect of Topography of Challenging Behaviour on Staff Attributions.

Topographical differences were found with staffs' ascription of causality to challenging behaviour (see Table 4, page 60). One significant finding from this study, not previously identified by related research, was that self-injury was considered more likely than aggression or stereotypy to be physiological in nature. The vast majority of staff assigning to the 'physiological' category, stated that pain was the reason for the person's self-injury. It is unclear from these responses whether staff considered that the person engaged in self-injury in order to experience pain or because he was in pain. As discussed in Section 2.3.1, during periods of stress or pain, endorphins are released which produce analgesic and euphoric effects, and these effects can lead to physical dependence (Sandman & Hetrick, 1996; Thompson *et al*, 1995). Thus, people may learn to self-injure in order to feel these effects. It is also possible that the person may be in pain because of previous injuries he has inflicted on himself, and by self-injuring endorphins are released producing natural analgesia.

As hypothesised, stereotypy was considered more likely than aggression or self-injury to be environmental or self-stimulatory in nature and less likely to be attributable to emotional factors. Self-injury was also considered more likely than aggression to be self-stimulatory in nature. This finding may reflect staffs' views that people with learning disabilities may self-injure in order to experience stimulation in the form of endorphins (see previous paragraph).

Only partial support was found for the hypothesis that staff would view aggression and self-injury as more likely than stereotypy to be socially mediated or a means of communication, such that these findings were only found amongst staff rating people with severe learning disabilities. When rating people with mild learning disabilities they considered self-injury but not aggression as being more likely than stereotypy to be socially mediated or a means of communication. The reasons why this should be the case are unclear.

This topographical differentiation of causality was reflected in some of the interventions staff selected (Tables 14 and 15, pages 68 and 69). Reflecting

staffs' views that stereotypy was more likely to be self-stimulatory and environmental in nature, staff were more likely to recommend distraction as a short-term intervention and structuring the client's day as a long-term intervention for stereotypy than for aggression or self-injury. One exception to this, when rating people with severe learning disabilities staff considered that they were as likely to recommend distraction for self-injury as for stereotypy. This may reflect staff views that self-injury can be a means of self-stimulation. Reflecting staffs' views regarding the physiological nature of self-injury, staff were also more likely to recommend medical intervention as an immediate intervention strategy and medical investigations as a long-term intervention strategy for self-injury than for aggression or stereotypy, the exception to this being that when rating people with mild learning disabilities no topographical differences were found for the category medical investigations. This may be because relatively fewer staff assigned self-injury to the category 'medical investigations'.

Reflecting staffs' views that with people with mild learning disabilities, self-injury was considered more likely than stereotypy to be communicative in nature and in the case of people with severe learning disabilities self-injury and aggression were considered more likely than stereotypy to be communicative in nature, this pattern of responding with respect to topography of challenging behaviour was also seen in their ratings of the long-term intervention strategy 'improving communication'. Interestingly, no topographical differences were seen in their rating of the immediate intervention strategy 'calm / communicate'. This may be because this category was fairly broad in terms of it not only encompassing communication strategies but other strategies such as facilitating relaxation.

However, many of the other hypotheses with respect to the topographical differences for staffs' selection of appropriate interventions were not supported. Generally, staff did not consider that they would be more likely to create a safe environment with aggression and use restraint with self-injury. Similarly, staff did not consider that they would be more likely to recommend conducting a functional analysis with aggression or self-injury than stereotypy. The one

exception to this being that when rating people with severe learning disabilities, staff were more likely to recommend a functional analysis with aggression than with stereotypy. One reason for the lack of significant results could be the relatively low numbers assigned to these categories.

One other significant finding was that staff when rating people with mild learning disabilities considered that they would be more likely to teach skills to people displaying aggression than displaying self-injury or stereotypy. Typical suggestions included anger management, relaxation and social skills training. This would suggest that staff consider that people with mild learning disabilities are more likely to benefit from being taught to control their aggression than their self-injury or stereotypy. This may reflect the academic teaching on the issue of aggression in people with mild learning disabilities, whereby often it is attributed to anger and one recommended treatment for anger not only for the learning disabled population but also for the general population is anger management training (which may encompass relaxation, assertiveness and social skills training).

When rating people with mild learning disabilities, staff considered that they were more likely to feel disturbed and to experience negative emotions towards aggression than towards self-injury. This finding is contrary to the study's hypothesis (and Hastings and Remington's (1995) findings) that self-injury would be more disturbing to witness than aggression. It is possible that staff find it more disturbing because aggression is more threatening to themselves than self-injury.

Upon rating emotional responses to challenging behaviour, staff considered that they were more likely to feel disturbed and negative emotions towards aggression or self-injury than towards stereotypy. This finding is perhaps not surprising when one considers that a high proportion of staff do not consider stereotypy to be a challenging behaviour (Hastings, 1995). This may be because it does not pose great management difficulties or cause injury to either the self or others: these are both factors staff consider important when determining whether or not a particular behaviour is challenging (Lowe and Felce, 1995).

When rating people with mild learning disabilities, staff were more likely to report experiencing 'nothing' towards stereotypy than towards aggression or self-injury. This may be because they do not view stereotypy as a challenging behaviour (Lowe and Felce, 1995) and they are less likely to feel disturbed or negative emotions towards stereotypy than towards aggression or self-injury. More surprisingly, no topographical differences were found between staff ratings of 'nothing' with people with severe learning disabilities. This may be due to the significantly lower ratings of 'nothing' towards stereotypy shown by people with severe learning disabilities than with mild learning disabilities (see Table 6, page 62). This suggests that stereotypy elicits different emotional responses and may to some extent depend on staffs' perceptions of the person's level of severity of learning disability (see Section 6.2 for further discussion).

It was hypothesised that upon rating people with mild learning disabilities staff would be more optimistic of change with self-injury than with aggression and that upon rating people with severe learning disabilities staff would be more optimistic of change with aggression than with self-injury. No support for this hypothesis was found, such that there were no differences between staff ratings for the two behaviour topographies. However, in general staffs' optimism ratings were high and this may be the reason why no significant differences were detected.

When rating people with severe learning disabilities, staff considered that they would be more optimistic of change with aggression than with stereotypy. It is possible here that stereotypy is viewed as more likely than aggression to be a stable feature of the person, especially so in people with severe learning disabilities. This illustrates that in this particular case lower negative emotions are not necessarily correlated with greater optimism towards change.

6.2 Effect of Severity of Learning Disability on Staff Attributions.

It was hypothesised that staff would consider people with mild learning disabilities to have more control over their challenging behaviour than people with severe learning disabilities, and that this would influence their emotional responses to the behaviour, views of causality and appropriate interventions and optimism towards treatment being successful.

If, according to Attribution Theory people with mild learning disabilities show more control over their challenging behaviour than people with severe learning disabilities, the assumption is that staff would consider challenging behaviour more likely to be socially mediated in people with mild learning disabilities, and more likely to be physiological in nature or attributable to a skills deficit in people with severe learning disabilities. Only very limited support was found for this hypothesis, namely that staff considered self-injury in people with severe learning disabilities more likely to be physiological in nature than self-injury in people with mild learning disabilities. Aggression in people with severe learning disabilities was also more likely to be viewed as communicative in nature than aggression in people with mild learning disabilities. Stereotypy in people with mild learning disabilities was considered more likely to be environmental and attributable to emotional factors than stereotypy in people with severe learning disabilities.

Similarly, very few significant differences were seen between the two levels of severity of learning disability in staff ratings of appropriate short-term and long-term interventions. The hypotheses were that staff would be more likely to recommend teaching skills and behaviour reduction techniques for people with mild learning disabilities and more likely to recommend medical interventions for people with severe learning disabilities. Very limited support was found for these hypotheses. Staff did report however that when rating aggression they would be more likely to recommend teaching skills with people with mild learning disabilities than with people with severe learning disabilities. Most of the replies assigned to this category for mild learning disabilities were for Anger Management Training. This would suggest that staff view people with mild

disabilities as showing aggression out of anger and having problems in managing their aggression. By view of staff recommending anger management training would suggest that staff feel that people with mild learning disabilities have the potential to learn to control their aggression.

As hypothesised, staff when rating self-injury considered that they would be more likely to recommend medical interventions as an appropriate short-term management strategy for people with severe learning disabilities than for people with mild learning disabilities. When rating self-injury, no differences between the two levels of severity of learning disability were found with staffs' ratings of the long-term management strategy 'Medical Investigations', however this was just out with statistical significance. Similarly, staff when rating people displaying aggression or stereotypy did not consider that they would be more likely to recommend either medical interventions (short-term strategy) or medical investigations (long-term strategy) for people with severe learning disabilities than for people with mild learning disabilities. This may be because the numbers of staff considering medical interventions to be appropriate interventions for these above two behaviours were too small to allow for any differences between them to be significant.

It was hypothesised that staff would be less likely to experience negative emotions and be more optimistic of change following intervention: with self-injury in people with mild learning disabilities than with severe learning disabilities. It was further hypothesised that staff would be more likely to experience negative emotions and be less optimistic of intervention being successful with aggression in people with mild learning disabilities than with severe learning disabilities. This hypothesis was only supported with respect to self-injury. No support for the above hypothesis was found with respect to staffs' ratings of aggression. Staff did not consider when rating aggression that they were more likely to feel negative emotions and to be less optimistic of intervention being successful with people with mild learning disabilities than with severe learning disabilities. Contrary to the study's hypothesis, staff considered that they were more likely to experience negative emotions towards aggression with people with severe learning disabilities than with mild learning disabilities.

The reasons why these hypotheses were not supported with respect to aggression are unclear.

With regard to stereotypy, staff considered that they would be more likely to feel disturbed, less likely to feel nothing and to be less optimistic of their intervention being successful with people with severe learning disabilities than with mild learning disabilities. It is possible here that since staff view stereotypy in people with severe learning disabilities as less likely to be environmental in nature or attributable to emotional factors, they may view the behaviour as more likely to be a stable, internal feature of the person and therefore more resistant to change. This evokes negative emotions in them and also makes them feel less optimistic of their interventions having any impact.

In summary, with respect to the above independent variable very little support was found for any of the study's hypotheses. The reasons for this are unclear. It is possible that staff do generally view people with different levels of severity of learning disability in the same way, after all during academic teaching often no distinction is made between differing levels of severity of learning disability. However, this study also had a number of methodological problems which may influence its results.

Staff experience of people with different levels of severity of learning disability may influence their attributions (Hastings, 1997). For example, if staff have only worked with people with mild learning disabilities, this may influence their interpretation of causes of / and interventions for challenging behaviour in people with severe learning disabilities. Their interpretations are likely to be based on either their work with people with mild learning disabilities or societal and/or personal values. In this study, it was known from the author's clinical experience of working within the community homes that a considerable amount of community staff had only had experience of working with people with severe learning disabilities. It is unclear how this would influence their interpretation of people with mild learning disabilities. In contrast, all of the hospital staff who participated had experience of direct work with both people with mild and severe learning disabilities.

This study also had a number of methodological difficulties with respect to its statistical analysis (see Section 6.4.3, page 88 for further details). These difficulties may have an influence on the results, in particular staffs' causal attributions and selection of appropriate interventions for challenging behaviour.

6.3 Factors influencing Staffs' Attributions and Emotional Responses.

Participating in this study were a very heterogeneous group of staff. Many of the differences between the staff were not controlled for in this study and may have influenced the study's findings. For example, staff varied immensely in their years of experience (range 1 year to 35 years) in this line of work. Previous research has shown that experience in the job can influence staff attributions (Hastings *et al.*, 1995) and emotional responses to challenging behaviour (eg. Fallon, 1983).

Previous studies (eg. Hastings, 1997; Dagnan *et al.*, 1998) have suggested that as well as cumulative years of experience, staff training (both formal and informal) contributes to experience. The type of training may influence staff attributions (Hastings, 1995; Hastings, 1997). For example, training in the use of control and restraint techniques may influence staff attributions in a different way than training in behaviour therapy would. This study did not control for any differences in training experiences, and it is likely that the staff have had different training experiences, both in terms of general training (eg. social work, nursing qualifications) and specific courses.

Staff attributions and emotional responses towards challenging behaviour may also be influenced by formal aspects of their workplace, such as the models adopted and the contingencies applied for following / not following these models, and informal aspects of their workplace such as learning and adopting the work practices of more senior colleagues (Emerson *et al.*, 1994). These are then encouraged by powerful social contingencies, for example acceptance within the staff group (Hastings and Remington, 1994b; Hastings *et al.*, 1997). This would suggest that staff attributions may be influenced by where they work and whom

they work with. In this study, the hospital staff worked within two wards and the community staff within three community houses. For the hospital staff, the wards adopted the same models of care, but contained different staff. It is unlikely that the three community homes adopted the same models of care, as staff from different professions were in each home. Similarly, none of the community staff were familiar with each other's ways of working. It is therefore possible that staff attributions between each home varied considerably.

Although all the staff in this study currently work with adults' with learning disabilities, it is likely that their experiences of challenging behaviour varied. The adults' within the hospital were all admitted there because of severe challenging behaviour. However, within the three community homes, not all of them showed challenging behaviour, with only one or two in each home exhibiting challenging behaviour to the same extent as those in the hospital wards. It is possible that staff attributions may be influenced by their experience of challenging behaviour. Dagnan *et al* (1998) stated that in their opinion, staff who work primarily with challenging behaviour were more likely than staff who had relatively little experience of challenging behaviour to view the person with learning disabilities favourably and more willing to help that person. Equally, it possible that since hospital staff may have had more exposure to challenging behaviour, they may report stronger emotional responses and be less optimistic of treatment being successful.

It is possible in this study that the hospital staff may have witnessed a larger number of people with learning disabilities displaying a wider diversity of challenging behaviours for a variety of reasons, than had the community staff. Hastings *et al* (1997) considered that staff who have witnessed challenging behaviour that served a narrow range of functions, may have a less comprehensive view of the range of causes of challenging behaviour than staff who have had considerable experience working with people with challenging behaviour.

6.4 Methodological Limitations.

6.4.1 Subject Response Rates.

As mentioned in Section 4.3.2, the response rate for return of questionnaires was 57%. Hastings (1996) considered that non-responders may influence the representativeness of the pattern of results. In previous studies, researchers have reported relatively low response rates ranging from 65% (Hastings *et al.*, 1995; Hastings, 1996) to 68% (Hastings *et al.*, 1997; Watts *et al.*, 1997). In these studies no information was available about the non-responders.

In this study, the non-responders amongst the hospital staff were more likely to be nursing assistants. The reasons why this group of staff were over-represented amongst the non-responders remains unclear. Possible reasons include firstly, their not seeing the value of participating in such research or even feeling threatened by it. This may reflect a lack of understanding of the importance of research. Secondly, they may be disillusioned or demotivated with their jobs, and not see research as being relevant. Previous experience of conducting surveys and/or research with this group of staff has highlighted that nursing assistants appear to be the more demotivated, with those being in service the longer more likely to be. The reasons for this remains unclear. Finally, as three nursing assistants commented during the course of the data collection, some nursing assistants may not feel confident completing questionnaires, having relatively little experience of this task in the context of their jobs in comparison to trained staff. This problem could be resolved through staff interviews, although this method in itself has its difficulties, such as staff feeling threatened and accordingly not saying what they believe.

Future research needs to address this problem of non-responders, as it is possible that non-responders may hold qualitatively different attributions from responders. If this is the case, the results of studies in this area may be skewed and not representative of staff views. This issue of eliciting attributions towards challenging behaviour is not easy to address, given that staff have declined to participate in such a study. Research clearly needs to address why current

methods for eliciting attributions from staff are discouraging some staff from participating, and accordingly improving it's format so as to encourage participation.

6.4.2 Problems with the Coding Procedure.

In this study, for analysis purposes each rater's scores for the emotions anger, sadness, fear, despair and guilt were summed and averaged to give an overall score to form the category 'negative emotions'. Combining different emotional responses under one category 'negative emotions' may provide different results than if the emotional responses had been analysed separately. Hastings and Remington (1995) reported that staff were more likely to feel sad witnessing self-injury than stereotypy, whilst Bromley and Emerson (1995) found that aggression tended to elicit annoyance and sadness, and self-injury sadness and despair. These findings may also have been replicated in this study, but due to combining emotional responses under one category, it was not possible to establish whether certain emotional responses were associated with certain behaviour topographies or level of severity of learning disability or indeed whether any of the significant differences were attributable to all of the emotional responses or just one or two of the emotional responses exerting an influence.

Great caution also needs to be taken in comparing the results of this study with those of Stanley and Standen (2000). In their study, staff were asked to rate along a 9-point likert scale, the extent to which they would experience 'negative affect', but were given no guidance as to what constituted 'negative affect'. In this study, various emotions were provided for staff to rate along a 5-point likert scale and their scores on this were then averaged to form the category 'negative emotions'. Raters' views of what constitutes 'negative affect' may differ from those emotions outlined in this study.

In this study, staff were asked an open-ended question about what they considered to be possible causes of challenging behaviour and appropriate interventions. These replies were subjected to Content Analysis (Dey, 1993). Other studies have adopted this method of analysis when rating causes of (Hastings, 1995) and

interventions for (Hastings, 1995; Hastings, 1996; Watts *et al*, 1997) challenging behaviour. However, there is no standard coding system devised for evaluating this type of data, hence in this study the categories derived as a result of content analysis differed to some extent from those derived in other studies. This makes it very difficult to compare the results of this study with that of others.

As the coding procedure can be considered subjective in nature, reliability checks were performed on 33% of all replies. Percentage agreement was calculated to be 94.09% for causes of challenging behaviour, 80.85% for short-term interventions and 73.95% for long-term interventions. Using a criteria of 85% as representing good agreement, it means that the reliability of raters' classifying short-term and long-term interventions falls below acceptable agreement levels. However, this value is comparable with previous studies that have cited agreement levels of between 76% (Hastings, 1996) and 90% (Hastings, 1995).

6.4.3 Statistical Analysis of Data.

Given that some of the data was ordinal (ie. emotional responses and optimism towards change) and much of the data was not normally distributed with equal variances, nonparametric tests were considered more appropriate to conduct than their corresponding parametric tests. However, nonparametric tests tend to be less powerful (ie. ability to detect a significant difference between two sets of scores), hence caution needs to be taken with the interpretation of this study's results.

In this study, statistical comparisons were conducted on a relatively large number of variables. For some of these comparisons, in particular those comparing causes of and interventions for challenging behaviour, relatively few statistical differences were found. This poses difficulties for interpretation, because one would expect 5% of the comparisons to reach statistical significance by chance. This coupled with the fact that nonparametric tests were used means that many of the findings have to be interpreted with caution.

6.5 Implications for Clinical Practice.

In this study, staff reported on a wide range of immediate intervention strategies, similar to those reported by Hastings (1996) and Watts *et al* (1997). These included distraction, administering medication, time-out, calming / comforting the person, communication, control / restraint, removing them from the situation, reprimanding, meeting their needs and finding out why. These responses, depending on the behaviour's function may reinforce it and maintain it in the long-term (Hastings, 1996). The strategies staff recommended as long-term interventions however were similar to those recommended by staff in both Hastings (1996) and Watts *et al* (1997) research, and tended to identify closely with those recommended in behavioural programmes and by professionals such as psychologists (Hastings, 1996).

Hastings (1996) stated that staff may adopt these short-term intervention strategies for two reasons. Firstly, staff may intervene in these ways because it quickly terminates the challenging behaviour, and this is in keeping with their philosophy of working, namely to prevent harm. Secondly, the strong emotional responses in staff may set the scene for staff to behave in ways which terminates the challenging behaviour as soon as possible, and also in ways which avoid the situations or conditions which elicit challenging behaviour (eg. Bromley & Emerson, 1995; Carr, 1991). Bromley & Emerson (1995) and Hastings (1996) considered that behavioural programmes needed to acknowledge the emotional impact of challenging behaviour.

Hastings *et al* (1995) found that staffs' understanding of the causality of challenging behaviour usually matched current models, but often this did not equate to appropriate responses to challenging behaviour. They considered that the issue may not be that staff lack understanding of the causality of challenging behaviour but rather the way that they translate their understanding of causality into performance-specifying rules. Often staff utilised a needs-based approach rather than a function-based approach when considering implementing interventions for challenging behaviour. Being asked to utilise a function-based intervention may run counter to their beliefs and attitudes.

Ideally, programmes need to allow for immediate intervention strategies that quickly terminate challenging behaviour and are needs-based rather than function-based. However, since such strategies may reinforce the behaviour in the long-term, the long-term intervention strategies should try to compensate for these difficulties, say by providing more reinforcement for behaving in a more socially acceptable way (DRO, eg. LaVigna *et al*, 1986), providing the client with an alternative means of requesting the reinforcement he desires or to get their needs met (Functional Communication Training, Carr & Durand, 1985) or teaching the client to gradually cope with the aversive situation without having to resort to challenging behaviour (eg. Delay Tolerance, Durand, 1990).

Willis *et al* (1993) adopted these principles into their treatment plans for challenging behaviour (see Section 2.4.2) and considered that one of the key elements of their multi-element treatment plans was that each element complemented each other. This combination of many elements may be complicated for staff to devise, especially as each individual differs in terms of the functions of their behaviour and their individual needs, and even if the treatment plan is devised by say a psychologist, staff may not necessarily understand it. This may lead to staff implementing only certain elements of it, and this may have no impact on the challenging behaviour or even worsen it, for example if staff apply only the reactive strategies in a consistent manner.

In this study, differences were seen in staffs' attributions towards different behaviour topographies and levels of severity of learning disability. These differences may have implications for staffs' clinical practice. For example, self-injury was seen as more likely than aggression or stereotypy to be physiological in nature, and staff were more likely to recommend medical interventions with self-injury than with aggression or stereotypy. Furthermore, staff viewed self-injury in a person with severe learning disabilities as more likely than in a person with mild learning disabilities to be physiological in nature and they were more likely to recommend medical interventions as treatment. Thus, in clinical practice when witnessing self-injury especially in people with severe learning disabilities, staff may be more likely to respond using a medical intervention.

It is unclear as to how these views towards different behaviour topographies and levels of severity of learning disability influences staffs' clinical practice. Their views may not necessarily be related to actual staff behaviour (Hastings, 1997). It is possible that staff may conduct a functional analysis to determine the behaviour's causality and intervene accordingly. The differences in views between different behaviour topographies and level of severity of learning disability may reflect their clinical experience of conducting functional analyses and the results they obtained from these.

However, given that staff report / interview is the most commonly used and most popular method of functional analysis (Desrochers *et al.*, 1998), and that in this study staff relatively infrequently recommended conducting a functional analysis as a long-term intervention strategy or finding out why as a short-term intervention strategy, it is possible that staff respond according to their stereotyped views of causality and appropriate interventions. If staff respond in this way, it could lead to inappropriate interventions (eg. medical interventions for self-injury maintained by negative reinforcement of task demands) which may have no impact on or even worsen challenging behaviour.

Alternatively, it is possible that psychologist's may conduct a formal functional assessment and base their interventions on this. The psychologist's views on causality may differ from those of the staff and accordingly their views of appropriate interventions may differ. This may lead to staff not following the recommended interventions or experiencing difficulties with their implementation. Also staff may be expected to implement these strategies in line with their code of practice or job responsibilities and this may lead to some conflict within themselves as to how they should be behaving.

This study found that although staff reported that they would generally experience negative emotions in response to challenging behaviour, they remained generally optimistic of their interventions being successful and typically recommended positive, constructional approaches as appropriate interventions rather than punitive ones. Their optimism and recommended interventions appear

to be incongruent with how they feel emotionally towards challenging behaviour. For example, if one feels angry towards an aggressive outburst, one's natural response may be to reprimand the person or to provide some negative contingency such as withdrawal of activities, rather than calming and comforting and structuring the person's day. Given that the interventions staff reported on generally matched those recommended by learning disabilities services, it could be implied that staff are mentioning these as appropriate interventions because it is how they are expected to respond in their jobs. It is possible therefore that in their everyday practice, their responses are not the same as those that they recommended and it highlights the importance of observational research into this area. It is equally possible that staff do follow the recommended interventions, but because this is counter to how they are feeling it can create a degree of psychological discomfort.

Difficulties may arise if staff are expected to carry out interventions incongruent with their beliefs and attitudes about appropriate interventions. Cognitive Dissonance Theory (Festinger, 1957) states that cognitive dissonance arises when individual's act in a way inconsistent with their attitudes and beliefs. If their attitudes are not very important to them, it creates little dissonance or psychological discomfort. One way of reducing this discomfort is to change one's attitude so that it corresponds more closely with the behaviour. For example, one could play down the attractiveness of the individual's former response (eg. contingencies for applying it such as reprimanding, education) and reinforcing the preferred alternative by providing support, education and appropriate modeling. This highlights the importance of and the need for effective support mechanisms, management and training systems in learning disability services as a means of reducing any potential cognitive dissonance.

In this study, staff reported experiencing a number of negative emotional responses to challenging behaviour. It is unclear as to how these negative emotions influence their behavioural responses to challenging behaviour and their general interactions with their clients. In a review of the literature on the effects of challenging behaviour on staffs' psychological well-being, Hastings (2002) concluded that there was some evidence to suggest that the negative emotions

experienced upon exposure to challenging behaviour influenced staffs' psychological well-being (eg. stress levels) and their subsequent interactions with their clients' (eg. less positive interactions and less likely to provide assistance), but stated that further research was required to clarify this association. This would suggest that staffs' negative emotional responses towards challenging behaviour may not be conducive for their implementing appropriate programmes that address challenging behaviour. Hastings (1995) considered that programme designers needed to consider the emotional impact of challenging behaviour in their programmes and incorporate strategies for helping staff cope with challenging behaviour, for example anger or anxiety management training or regular counseling.

6.6 Further Research.

This discussion has suggested that although staff may possess a reasonable knowledge of the range of long-term strategies for treating challenging behaviour, it is unclear as to their understanding of and ability to implement these. For example, Hastings (1995) found that staff interventions did not necessarily follow on from causality in an appropriate behavioural manner. As discussed in Section 2.5 some treatments require considerable training in their use, both in terms of implementing certain interventions and in combining interventions to comprise a comprehensive treatment programme. Even if these interventions have been developed by psychologists and written guidelines for their administration drawn up, staff may not understand these fully and this may lead to improper administration.

Hastings (1996) reported that staffs' rationale for their choice of appropriate short-term interventions was the prevention of harm and dealing with the behaviour quickly, and their rationale for selection of long-term interventions was improving quality of life, intervening using the best strategies and finding out the reasons behind the challenging behaviour. The rationale for selection of short-term interventions is much more concrete (ie. to stop the behaviour) than that of the long-term strategies, which are more open to one's own interpretation. This may lead to staff not implementing them (eg. if they cannot understand what they

should be doing), and / or staff having different views and therefore responding in different ways.

Implementing long-term interventions typically have resource implications. Staff may consider especially when faced with resource constraints that they are unable to implement long-term interventions at that point in time or only implement them at times when they have the resources. It is also possible that because often it is some considerable time before improvements in levels of challenging behaviour are seen with long-term interventions, staff may not possess the motivation to implement them on a long-term basis because they are not deriving any immediate reinforcement from doing so. Research clearly needs to address the extent to which staff are adopting long-term intervention strategies and any factors influencing their ability to do so.

Staffs' knowledge of causality of challenging behaviour was fairly comprehensive, but relatively few staff recommended that they would conduct a functional analysis prior to intervention. This raises the issue of what means staff use to assign causality to challenging behaviour in clinical practice, and it's correlation with the actual cause of the behaviour. This is particularly relevant when one considers that what staff view as the causality of challenging behaviour is influenced by behaviour topography and possibly other factors such as level of severity of severity of learning disability. Further research is needed on the means by which staff assign causality to challenging behaviour in clinical situations.

This study found that only with self-injury did staff show differences in their views of causality, emotional responses, choice of intervention and optimism towards change, when comparing people with mild and severe learning disabilities. The reasons why there was only an effect with self-injury and not with aggression or stereotypy, and why there were no differences in anger ratings with respect to the different severity's of learning disability remains unclear. Further research needs to be conducted with regard to this to establish whether level of severity of learning disability does influence staff attributions because this has obvious implications for staff treatment of challenging behaviour in different people.

Staff reported experiencing negative emotions upon witnessing challenging behaviour, and these emotions are believed to influence their behavioural responses to such behaviour. However, there has not been much research into whether and how negative emotions influence staffs' behavioural responses to challenging behaviour and the person in general (Hastings, 2000) and research into this area is clearly warranted.

This discussion highlighted that as well as staff behaviour being contingency-shaped (eg. emotional responses contributing to responding in ways that terminates the challenging behaviour quickly but at the same time reinforcing staffs' behavioural responses), there may be a number of rule-governed behaviour influences operating. Further research needs to address whether any of these possible influences do affect staffing performance.

Over the past decade, an increasing amount of research has been conducted examining staff attributions towards challenging behaviour and it's effect on their emotional and behavioural responses to such behaviour. All of this research to date has relied on staff reports as to how they feel and how they would respond. However, this may not be an accurate of their actual behaviour. Further research needs to concentrate on observational studies on staffs' interactions with their clients, to determine the extent to which the findings derived from the attributional research to date can be generalised to actual staffing performance.

7. REFERENCES.

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APPENDIX 1 - Staff Questionnaire.

Introduction to Study.

This study will ask you to read a series of short statements, each describing a person with learning disabilities displaying some form of challenging behaviour. Please read each carefully, form a picture of what the person is like, and especially think about the behaviours described. When answering the questions that follow, try to relate the person described to a person you care for, or cared for in the past. If the description is unlike anybody you have ever cared for, try to imagine what it would be like to observe somebody behaving in that way.

Throughout the questionnaire, you will be asked to rate how *staff* would respond in different situations. It is clear that staff often respond in different ways to different situations, so at times it may prove difficult for you to rate how others would respond. If this is the case, please note down how you feel staff *in general* would respond, say at your place of work.

Each person described will either have a *severe* or a *mild* learning disability. It is important that you note this distinction, and bear it in mind when answering the questions.

A person may show challenging behaviour for a number of reasons. Effective ways of responding to challenging behaviour are often based on what others perceive to be the reason behind the behaviour. You will therefore be asked to give possible reasons for the challenging behaviour, and for each reason an effective way of responding to the behaviour. The descriptions of behaviours you will be asked to rate are rather brief and vague, but still try to think as many causes as you can. *Please keep these brief* (e.g. cause - attention seeking; response - ignore). Bear in mind there are no right or wrong answers here - it is your views here that are important.

Please answer the questions on your own before you talk to other staff about it.

*It is important that you complete **all** of the questions.*

Job Title:-

Place of Work (circle applicable setting)

Community Home

Hospital

How many years have you worked with people with learning disabilities?

1. James has a **mild** learning disability. Frequently, he sits in a chair and rocks his upper body backwards and forwards repetitively. He has presented with this behaviour for several years now.

(a) How disturbing do you think staff would find this behaviour? (circle applicable number on the following scale).

not at all
disturbing

fairly
disturbing

extremely
disturbing

1

2

3

4

5

(b) How likely do you think it is, that staff would experience the following emotions upon seeing James behaving in this way? Rate **each** emotion according to the following scale:-

1 - not at all likely

2 - not very likely

3 - quite likely

4 - very likely

5 - extremely likely

Emotion	Rating (eg. 1)
Anger	
Sadness	
Despair	
Nothing	
Guilt	
Fear	

(c) James could be behaving in this way for a number of reasons. What do you think are possible reasons for his behaviour? For each reason could you briefly describe how staff could best deal with this behaviour.

Cause /Reason

Response.

(d) Please rate using the following scale, the extent to which you feel that staff would consider the following statements to apply to James.

- 1 - strongly agree
- 2 - agree
- 3 - neither agree nor disagree
- 4 - disagree
- 5 - strongly disagree

	Rating
There are no treatments appropriate for James. All one can do is look after his basic physical and emotional needs.	
James's behaviour problems are so ingrained that they are unresponsive to treatment.	
There is little point in arranging treatment for James, because he is behaving in this way deliberately.	
There is little point in arranging treatment for James, because he does not want to change.	
There is little point in arranging treatment for James, because he has no control over his behaviour.	

2. Paul has a **severe** learning disability. Sometimes Paul repeatedly hits his head with his fists. This often leads to bruising and even bleeding. He has presented with this behaviour for several years now.

(a) How disturbing do you think staff would find this behaviour? (circle applicable number on the following scale).

not at all disturbing		fairly disturbing		extremely disturbing
1	2	3	4	5

(b) How likely do you think it is, that staff would experience the following emotions upon seeing Paul behaving in this way? Rate **each** emotion according to the following scale:-

- 1 - not at all likely
- 2 - not very likely
- 3 - quite likely
- 4 - very likely
- 5 - extremely likely

Emotion	Rating (eg. 1)
Anger	
Sadness	
Despair	
Nothing	
Guilt	
Fear	

(c) Paul could be behaving in this way for a number of reasons. What do you think are possible reasons for his behaviour? For each reason could you briefly describe how staff could best deal with this behaviour.

Cause / Reason

Response.

(d) Please rate using the following scale, the extent to which you feel that staff would consider the following statements to apply to Paul.

- 1 - strongly agree
- 2 - agree
- 3 - neither agree nor disagree
- 4 - disagree
- 5 - strongly disagree

	Rating (eg. 1)
There are no treatments appropriate for Paul. All one can do is look after his basic physical and emotional needs.	
Paul's behaviour problems are so ingrained that they are unresponsive to treatment.	
There is little point in arranging treatment for Paul, because he is behaving in this way deliberately.	
There is little point in arranging treatment for Paul, because he does not want to change.	
There is little point in arranging treatment for Paul, because he has no control over his behaviour.	

3. Michael has a **severe** learning disability. Sometimes he is physically aggressive towards the other people who live and work with him. He kicks and punches them. He has presented with this type of behaviour for several years now.

(a) How disturbing do you think staff would find this behaviour? (circle applicable number on the following scale).

not at all disturbing		fairly disturbing		extremely disturbing
1	2	3	4	5

(b) How likely do you think it is, that staff would experience the following emotions upon seeing Michael behaving in this way? Rate **each** emotion according to the following scale:-

- 1 - not at all likely
- 2 - not very likely
- 3 - quite likely
- 4 - very likely
- 5 - extremely likely

Emotion	Rating (eg. 1)
Anger	
Sadness	
Despair	
Nothing	
Guilt	
Fear	

(c) Michael could be behaving in this way for a number of reasons. What do you think are possible reasons for his behaviour? For each reason could you briefly describe how staff could best deal with this behaviour.

Cause / Reason

Response.

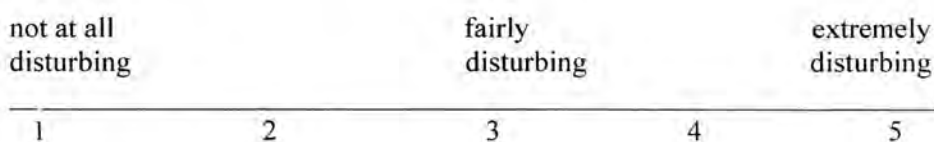
(d) Please rate using the following scale, the extent to which you feel that staff would consider the following statements to apply to Michael.

- 1 - strongly agree
- 2 - agree
- 3 - neither agree nor disagree
- 4 - disagree
- 5 - strongly disagree

	Rating (eg. 1)
There are no treatments appropriate for Michael. All one can do is look after his basic physical and emotional needs.	
Michael's behaviour problems are so ingrained that they are unresponsive to treatment.	
There is little point in arranging treatment for Michael, because he is behaving in this way deliberately.	
There is little point in arranging treatment for Michael, because he does not want to change.	
There is little point in arranging treatment for Michael, because he has no control over his behaviour.	

4. Peter has a **mild** learning disability. Sometimes, he repeatedly hits himself on the head with his fists. This often leads to bruising and even bleeding. He has presented with this type of behaviour for several years now.

(a) How disturbing do you think staff would find this behaviour? (circle applicable number on the following scale).



(b) How likely do you think it is, that staff would experience the following emotions upon seeing Peter behaving in this way? Rate **each** emotion according to the following scale:-

- 1 - not at all likely
- 2 - not very likely
- 3 - quite likely
- 4 - very likely
- 5 - extremely likely

Emotion	Rating (eg. 1)
Anger	
Sadness	
Despair	
Nothing	
Guilt	
Fear	

(c) Peter could be behaving in this way for a number of reasons. What do you think are possible reasons for his behaviour? For each reason could you briefly describe how staff could best deal with this behaviour.

Cause / Reason

Response.

(d) Please rate using the following scale, the extent to which you feel that staff would consider the following statements to apply to Peter.

- 1 - strongly agree
- 2 - agree
- 3 - neither agree nor disagree
- 4 - disagree
- 5 - strongly disagree

	Rating (eg. 1)
There are no treatments appropriate for Peter. All one can do is look after his basic physical and emotional needs.	
Peter's behaviour problems are so ingrained that they are unresponsive to treatment.	
There is little point in arranging treatment for Peter, because he is behaving in this way deliberately.	
There is little point in arranging treatment for Peter, because he does not want to change.	
There is little point in arranging treatment for Peter, because he has no control over his behaviour.	

5. Billy has a **severe** learning disability. Frequently he sits in a chair and rocks his upper body backwards and forwards repeatedly. He has presented with this type of behaviour for several years now.

(a) How disturbing do you think staff would find this behaviour? (circle applicable number on the following scale).

not at all disturbing		fairly disturbing		extremely disturbing
1	2	3	4	5

(b) How likely do you think it is, that staff would experience the following emotions upon seeing Billy behaving in this way? Rate **each** emotion according to the following scale:-

- 1 - not at all likely
- 2 - not very likely
- 3 - quite likely
- 4 - very likely
- 5 - extremely likely

Emotion	Rating (eg. 1)
Anger	
Sadness	
Despair	
Nothing	
Guilt	
Fear	

(c) Billy could be behaving in this way for a number of reasons. What do you think are possible reasons for his behaviour? For each reason could you briefly describe how staff could best deal with this behaviour.

Cause / Reason

Response.

(d) Please rate using the following scale, the extent to which you feel staff would consider the following statements to apply to Billy.

- 1 - strongly agree
- 2 - agree
- 3 - neither agree nor disagree
- 4 - disagree
- 5 - strongly disagree

	Rating (eg. 1)
There are no treatments appropriate for Billy. All one can do is look after his basic physical and emotional needs.	
Billy's behaviour problems are so ingrained that they are unresponsive to treatment.	
There is little point in arranging treatment for Billy, because he is behaving in this way deliberately.	
There is little point in arranging treatment for Billy, because he does not want to change.	
There is little point in arranging treatment for Billy, because he has no control over his behaviour.	

6. John has a **mild** learning disability. Sometimes, John is physically aggressive towards the other people that live and work with him. He kicks and punches them. He has presented with this type of behaviour for several years now.

(a) How disturbing do you think staff would find this behaviour? (circle applicable number on the following scale).

not at all disturbing		fairly disturbing		extremely disturbing
1	2	3	4	5

(b) How likely do you think it is, that staff would experience the following emotions upon seeing John behaving in this way? Rate each emotion according to the following scale:-

- 1 - not at all likely
- 2 - not very likely
- 3 - quite likely
- 4 - very likely
- 5 - extremely likely

Emotion	Rating (eg. 1)
Anger	
Sadness	
Despair	
Nothing	
Guilt	
Fear	

(c) John could be behaving in this way for a number of reasons. What do you think are possible reasons for his behaviour? For each reason could you briefly describe how staff could best deal with this behaviour.

Cause / Reason

Response.

(d) Please rate using the following scale, the extent to which you feel that staff would consider the following statements to apply to John.

- 1 - strongly agree
- 2 - agree
- 3 - neither agree nor disagree
- 4 - disagree
- 5 - strongly disagree

	Rating (eg. 1)
There are no treatments appropriate for John. All one can do is look after his basic physical and emotional needs.	
John's behaviour problems are so ingrained that they are unresponsive to treatment.	
There is little point in arranging treatment for John, because he is behaving in this way deliberately.	
There is little point in arranging treatment for John, because he does not want to change.	
There is little point in arranging treatment for John, because he has no control over his behaviour.	

APPENDIX 2.

Contents of letter distributed to staff to explain purpose of study.

Dear Participant

RESEARCH : STAFFS' RESPONSES TO CHALLENGING BEHAVIOUR IN ADULTS WITH LEARNING DISABILITIES.

I am currently conducting research into the above, and am looking for as many staff as possible (whatever your grade or position) to participate on a voluntary basis. Participation will involve you completing the attached questionnaire, which will take approximately 20 minutes of your time.

Until recently, there has been very little research into the psychological effects of challenging behaviour in staff, despite the fact that it has been long acknowledged that such a job can be stressful. It is natural for staff to experience some emotional responses (eg. sadness) on witnessing challenging behaviour. The type of emotional response experienced may then determine how people respond to particular incidents of challenging behaviour, and in the long-term their levels of stress.

This study aims to examine the above in more detail. It is hoped that the results will assist psychologist's and other professionals, with the provision of more effective staff training and support systems for staff, and in the design of more effective behaviour management and treatment programmes for people with learning disabilities.

I would be extremely grateful if you could complete this questionnaire, and return it to me at the above address. All replies will be treated in the strictest confidence, as no identification of name will be required. Similarly, only the results of the group as a whole will be published.

If you have any further questions or clarification about this study, please do not hesitate to contact me. Once this study has been completed, I shall be providing feedback on the groups' results to all participating places.

Thank you very much for your help.

Yours faithfully

Brigid Walker
Clinical Psychologist

APPENDIX 3 – Category Codes for Causes and Interventions for Challenging Behaviour.

Causes of Challenging Behaviour.

1. *Physiological* – mention of the person's learning disability as being a cause of their challenging behaviour; organic syndromes such as Retts and Cornelia de Lange; epilepsy; physiological factors such as pain and side-effects of medication; psychiatric conditions such as schizophrenia and depression.
2. *Emotional State* - anger, sadness, agitation, frustration, low self-esteem, excitement, guilt, anxiety, insecurity, fear, emotionally distressed, unhappy, bereavement reaction.
3. *Socially mediated* – mention of the behaviour as being learned and performed to elicit or reject interactions and/or responses from others. Examples include 'attention-seeking', expressing needs to others, escaping or avoiding interactions/activities initiated by others, manipulating others to obtain what he wants.
4. *Environmental* – mention of any aspect of the individual's past and/or current environment that does not meet the criteria for *socially mediated*. Examples include noise, overcrowding, understimulation or overstimulation, isolation, lack of choices, lack of control, abuse, change of routine, institutionalisation, reaction to change, staffing shortages, boredom, inconsistencies in management approach.
5. *Communication* – specific mention of the behaviour as being communicative in nature. Examples include communicating that he does not like someone or something or wants something, being unable to express himself verbally or has limited communication skills.
6. *Self-stimulation* – described as performing the behaviour in order to receive automatic reinforcement, because he enjoys the sensation, endorphine release, ritualistic behaviour or habitual.
7. *Skills Deficit* – described as exhibiting the behaviour because he does not possess the skills and/or knowledge to behave in a more socially appropriate manner. Examples include 'does not know any other means of behaving' and 'has not learnt how to interact'.

Interventions for Challenging Behaviour.

1. *Short-term Interventions* – interventions aimed towards responding to the challenging behaviour when it occurs.
2. *Long-term Interventions* – interventions aimed towards preventing the challenging behaviour in the long-term. These may include investigations and assessments, life-style changes, teaching of skills and behaviour reduction strategies such as differential reinforcement.

Short-term Interventions.

1. *Calm / Communicate* – response indicating that an attempt would be made to help/ encourage the person to relax, or an attempt is made to communicate with the person, either to find out what was wrong or to inform the person of what is happening.
2. *Find Why* – attempts are made to find out the reason behind the behaviour, but no mention of communicating with the person is made.
3. *Diversion/Distraction* – means of responding which involves diverting the person from engaging in challenging behaviour, for example by providing activities, redirecting onto something else.
4. *Safe Environment* – response aimed at making the environment safe, for example removing the person or others from the situation, or observing the person closely following the challenging behaviour in case the behaviour re-occurs.
5. *Restraint* – response indicating that physical handling was used to prevent harm to the person and/or others.
6. *Stop* – general response indicating that staff would try to stop the behaviour, but do not specify the means for doing so.
7. *Leave / give space* – response indicating that the member of staff would respond to the challenging behaviour as if it had not occurred, for example ignoring the person, continuing with what they were doing, distancing themselves, or a response whereby the client is encouraged to spend time away from the situation which elicited the challenging behaviour.
8. *Medical Intervention* – medication or other medical intervention administered immediately following or soon after the incident of challenging behaviour.

Long-term Interventions.

1. *Find Causes* – conducting an assessment to find out the factors that may be influencing the challenging behaviour.
2. *Medical Investigations* – medical interventions carried out that are more long-term than merely responding to the behaviour when it occurs. Examples include reviewing their medication, scans, other investigations, operations, seeking doctor's advice.
3. *Structure Day* – provide the person with more structure to his day. Examples include filling his day with activities, stimulation, interesting things to do and meaningful occupations.
4. *Management Strategy* – interventions that comprise part of the person's care plan. Examples may include behaviour reduction techniques, planned intervention.
5. *Normalise Lifestyle* – interventions that make the person's lifestyle more normal and conducive to their individual needs. Examples include environmental adaptations such as reducing noise levels and overcrowding, increasing levels of stimulation, finding new accommodation.
6. *Teach Skills* – includes teaching of general skills such as self-care, domestic and leisure skills, and skills aimed towards teaching more appropriate behaviour such as anger and anxiety management, assertiveness training, social skills training, choice making, counselling and improving self-esteem.
7. *Improve Communication* – teaching the person to communicate more effectively within his environment and / or for staff to learn to communicate more effectively with the person. Also includes responses such as establishing rapport and gentle teaching.