

and Therapeutic Optimism

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ABSTRACT

Objectives

The aim of the current study was to investigate whether forensic nursing staff who worked with different patient groups (i.e. learning disability, mental illness, or personality disorder): made different causal attributions for an episode of aggressive challenging behaviour; drew on different causal models to explain the behaviour; reported different levels of optimism regarding the efficacy of therapeutic intervention for the behaviour; and reported different beliefs about the future risk of the behaviour.

Design and Method

A between- subjects design was employed. Eighty- eight nursing staff working within one of three Directorates in a high security hospital, read a vignette depicting an episode of aggressive challenging behaviour and completed a self- report questionnaire. Participants were required to make causal attributions along Weiner's (1980) dimensions of controllability, locus and stability and to provide causal explanations in accordance with five models of challenging behaviour (Hastings, 1997b). Participants also rated their therapeutic optimism and beliefs about future risk of the challenging behaviour occurring. Data were analysed using non-parametric tests of difference (Kruskal-Wallis test) and association (Spearman's Rank Order Correlation).

Results

Overall, the three participant groups did not make significantly different causal attributions, report different levels of therapeutic optimism, or different beliefs about future risk. Participants who worked with patients with a personality disorder were significantly more likely than participants who worked with patients with learning disabilities to consider an emotional causal model when seeking to explain the behaviour. All three participant groups held concurrent explanations for the behaviour. Participants cited psychological interventions as being useful in reducing the behaviour, but mainly referred to reactive physical strategies when commenting on their training.

Conclusion

Clinical implications of the current study are explored and suggestions made concerning the role of forensic nursing staff and clinical psychologists in addressing aggressive challenging behaviour. Directions for future research are suggested.

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1. INTRODUCTION

1.1 Secure psychiatric services and the high security hospital

Over the past fifty years mental health services have become characterised by 'less restrictive patterns of care' (Snowden, 1985), with greater significance placed on care and rehabilitation within the community (Kennedy, Wilson and Cope, 1995; Hudson, 1999). Consequently, the majority of the large general psychiatric hospitals have been closed and in-patient numbers have steadily declined (Department of Health & Home Office, 1992). However, a small population of patients for whom community disposal is less likely remains, namely those individuals who, in addition to having a diagnosed mental health problem, have engaged in criminal or dangerous behaviours (McGann, 1998). Such individuals (often called mentally disordered offenders) may find themselves cared for under conditions of security within Forensic Mental Health Care Services. Currently a spectrum of Forensic Care provision exists, ranging from community based services through to prison healthcare, conditions of medium security, and high security psychiatric hospitals (Department of Health & Home Office, 1992; Prins, 1995). Currently there are three National Health Service high security hospitals in the England, providing care for patients who require treatment under conditions of high security owing to their dangerous, violent or criminal behaviour (Department of Health, 2000; Ness & Collins, 2003).

The National Health Service employs a wide range of mental health professionals to provide care and treatment for patients within high secure psychiatric services. These include: consultant forensic psychiatrists; clinical and forensic psychologists; occupational therapists; and social workers (Ness & Collins, 2003). However, as with other psychiatric

institutions, nursing staff (both qualified psychiatric nurses and healthcare assistants) constitute the largest professional group within a high security hospital (Mason, 2002)

1.2 The patient population within high security hospitals

To be admitted to a high security hospital for assessment and/ or treatment, patients must fulfil two criteria (Kitchiner, 1999):

1. Individuals must be detainable under the Mental Health Act (MHA) (1983) under one of the following classifications: i) Mental Illness; ii) Mental Impairment; iii) Severe Mental Impairment; and iv) Psychopathic Disorder (Department of Health & Home Office, 1992). However, some individuals are ‘dual classified’, in that they are detained under a combination of the above classifications (such as ‘Mental Illness and Psychopathic Disorder’) (Dolan & Powell, 2001)

i) Mental Illness

This classification includes individuals deemed to be suffering from a range of mental illnesses including psychotic illnesses (e.g. schizophrenia) and depressive disorders. This classification is not further defined in the MHA as it is recognised as being a term which is in general medical use (Bluglass, 1983).

ii) and iii) Mental Impairment and Severe Mental Impairment

Classifications of Mental Impairment and Severe Mental Impairment refer to ‘a state of arrested or incomplete development of mind which includes significant/ severe impairment of intelligence and social functioning’ (Dolan & Powell, 2001).

In relation to high secure hospital patients, use of either of these classifications would denote that the individual had a learning disability, and the classification used would depend on the severity of that individual's learning disability.

iv) Psychopathic Disorder

Psychopathic disorder, as determined by the MHA 1983 is a purely legal concept that describes an individual as having 'a persistent disorder or disability of mind' (Dolan & Powell, 2001). However, from a clinical perspective, the standard classificatory work of psychiatry, the American Diagnostic and Statistical manual (DSM-IV) (American Psychiatric Association, 1994) does not use the term psychopathy. The nearest equivalent in the DSM-IV would be 'Antisocial Personality Disorder'. Furthermore, the term 'psychopathy' also describes a psychological construct with a distinctive pattern of affective, interpersonal and behavioural symptoms. This psychological definition of 'psychopathy', as conceptualised by Hare (1991), is derived from a psychometric measure of psychopathy (Psychopathy Checklist- Revised (PCL-R), Hare, 1991). In light of these different definitions, high secure hospital patients detained under the legal classification of 'psychopathic disorder' would have a psychiatric diagnosis of one (or more) of the eleven personality disorders classified by the DSM-IV and/ or be defined as 'psychopathic' using Hare's (1991) conceptualisation.

2. Individuals must be considered to pose a 'grave and immediate danger' to the public through their continued criminal and/ or dangerous and difficult behaviours (Cope & Ward, 1993; Ness & Collins, 2003).

Several surveys and reviews of high security hospital patients have been undertaken (Maden, Curle, Meux, Burrow & Gunn, 1993; Taylor, Maden & Jones, 1996; Taylor, Leese, Williams, Butwell, Daly *et al*, 1998; Williams, Badger, Nursten & Woodward, 1999; Department of Health, 2000), providing a general picture of the characteristics and demographics of this population.

The prevalence rate of patients in the English high security hospitals is about 3.4 people per 100 000 population (Williams *et al*, 1999) and, at the beginning of the year 2000, there were 1292 patients living within one of the three high security hospitals in England (Department of Health, 2000). As with other forensic services, the majority of patients are male (84.9%) (Department of Health, 2000). Furthermore, black and minority ethnic people are overrepresented, with 19% of men and 10% of women patients being non-white (Taylor *et al*, 1998). In a survey undertaken in the early 1990's, the mean age of high security hospital patients was demonstrated to be 38 years (range 17-88 years) (Taylor *et al*, 1996), perhaps reflecting the long-term nature of treatment and detention which has been reported to be on average between 8-10 years (Maden *et al*, 1993; Taylor, 1997).

At the beginning of the year 2000, the majority of high secure hospital patients were classified as having a Mental Illness (N= 849, 65.7%). Just under a third of patients (N=375, 29%) were classified as having Psychopathic Disorder. Patients detained under the classification Mental Impairment and Severe Mental Impairment comprised the smallest group with a total of 68 (5.3%). One hundred and sixty-six patients (12.8%) were classified as having more than one mental disorder (Department of Health, 2000).

It is difficult to establish a full analysis of patients' offending histories (Department of Health, 2000). The most commonly reported data relates to the 'index offence' (the most serious offence that led to admission) (Williams *et al*, 1999). The Department of Health review of (2000) reports that the majority (63%) of patients' index offences concern violent offences (such as murder, attempted murder, wounding, and GBH). The remaining 37% of patients' index offences include property offences (12%), sexual offences (9%), and other non- specified offences (7%). Nine percent of patients had no recorded index offence.

The majority of the patient population (91%) come from the Criminal Justice System (e.g. transferred from Court or Prison). Other sources include transfers from other secure hospitals (Department of Health, 2000). A small proportion of patients arrive from general psychiatric services and it likely that many of these individuals, not being admitted as a direct result of a conviction, make up much of the 9% of the population who have no recorded index offence.

As can be seen, the patient population cared for by forensic nursing staff are heterogeneous, spanning a range of mental health problems and a spectrum of criminal offences.

1.3 The role of the forensic nurse

Given the characteristics of the patients they care for, it has been suggested that forensic nursing staff fulfil a unique role, that of providing security and containment alongside therapeutic care (Burrow, 1991; Burnard, 1992). This assertion has led some commentators

to propose that forensic psychiatric nursing is a specialist area, with its own unique body of knowledge, skills and expertise (Burrow, 1993; Robinson & Kettles, 1998). However, this view is refuted by others, who argue that forensic psychiatric nursing is grounded in general psychiatric nursing (Whyte, 1997; Martin, 2001), and remains, at present, a specialist area only in name (Mason, 2002).

Essentially, a review of the literature suggests that forensic nurses have two roles: i) like their generic cousins, their central role appears to be one of providing assessment of and treatment for the mental health problems, physical needs, and cognitive and social deficits of their patients (Scott & Philip, 1985; Burrow, 1998; Martin, 2001), particularly through the establishment of the therapeutic relationship (Burrow, 1991); ii) additionally, they have a responsibility for the maintenance of security both in terms of the physical security of the ward environment, and the assessment and management of risk (dangerous) behaviours (Carton, 1998; Department of Health, 2000; Ness & Collins, 2003).

This dual role is also central to the working practice of all mental health practitioners within forensic settings (Mason, 2002). However, as discussed below, it is arguably the role of forensic nursing staff which impacts most on the work of clinical psychologists in this setting.

1.3.1 Assessment and treatment

Arguably, it is the role of forensic nursing staff in the assessment and treatment of patients that is the most pertinent to clinical psychology practice. Clinical psychologists draw on psychological knowledge and theory to develop a formulation of a patient's difficulties,

and use this formulation to inform an appropriate intervention (Emerson, Hatton, Bromley & Caine, 1998). However, often much of this work relies on forensic nursing staff who carry out assessments (e.g. observation, recording behaviour) and implement psychologically based interventions on the ward (Gresswell, 1988; Martin, 2001; Whittington & Balsamo, 2001). Therefore, as will be discussed later, it is important that clinical psychologists recognise how the attitudes and beliefs of nursing staff may impact on the successful implementation of psychological interventions (Fenwick, 1995). The success of treatment interventions implemented by forensic nursing staff may also be influenced by a further aspect of their role: the establishment of the therapeutic relationship (Kitchiner & Topping-Morris, 1992).

1.3.2 The therapeutic relationship

In mental health nursing a therapeutic relationship is defined as a relationship between two people based on trust (Newell, 2000) affecting every aspect of the nursing process (MacInnes, MacDonald & Morrisey, 2001; Martin, 2001). Authors within forensic nursing also consider this relationship as crucial (Burrow, 1991; Topping-Morris, 1992). However, the establishment of such a relationship within the forensic setting is fraught with difficulty (Mason, 2002).

In general psychiatric nursing it has been established that patients whose difficulties are characterised by impaired social and interpersonal functioning can create reactions in the staff who care for them (Hinshelwood, 1999), and lead to difficulties engaging in a therapeutic relationship. In forensic nursing these difficulties can be magnified. For example, in addition to the perpetuation of difficult and dangerous behaviour, forensic

patients often have a history of committing serious and often dreadful offences, which forensic nurses, as members of the larger community which condemns such actions, may find difficult to reconcile (Burrow, 1991; Chaloner & Kinsella, 1999). Furthermore, patients enter the forensic psychiatric system with a dual label, that of an individual with a diagnosed psychiatric disorder as well as a dangerous offender. In relation to this, research suggests that specific diagnostic labels can influence the attitudes of mental health professionals (see Lewis & Appleby, 1988; Gallop, Lancee & Garfinkel, 1989; Mann & Lewis, 1989; Thompson & Brown, 1997; Markham & Trower, 2003). The influence of diagnostic labels will be discussed further later.

In addition to promoting good quality of care and the successful implementation of therapeutic interventions (Scott & Philip, 1985), the establishment of the therapeutic relationship also allows forensic nurses to perform what is arguably their other crucial role, that of assessing and managing risk behaviours (Carton, 1998; Woods, 2000).

1.3.3 Risk assessment and management

Risk assessment, in a clinical setting, entails constructing an understanding of a patient's potential for engaging in risky (dangerous) behaviours (Burrow, 1999). Woods (2000) has suggested that any risk assessment process should be concerned with three parts: i) the assessment of risk posed in the past; ii) the current risk; and iii) the probability of future risk. Furthermore, when assessing risk it is important to consider the dimensions of frequency and severity (MacInnes, 2000). The topography of risk behaviours varies, and a range of measures exist to assess these (see Webster, Douglas, Eaves & Hart, 1997; Quinsey, Harris, Rice & Cormier, 1998; Hanson & Thornton, 1999).

The assessment and management of risk, however, still relies heavily on clinical judgement (Chiswick, 1995; Reed, 1997; Woods, 2000), and whilst this on-going process is the responsibility of the multi-disciplinary care team (Burrow, 1991), the majority of the day-to-day elements of this work are undertaken by forensic nursing staff (Mason, 2002).

1.3.4 Nurse Training

Currently, no specific courses aimed solely at training a 'forensic' psychiatric nurse exist (Kent-Wilkinson, McKeown, Mercer, McCann & Mason, 2000). The basic qualification required in the UK is completion of a recognised pre-registration training for mental health nursing, leading to formal registration (e.g. Registered Mental Nurse (RMN)) (Mason, 2002). In recent years, concerns have been raised that pre-registration courses pay little attention to the needs of forensic service users and as such, offer little appropriate knowledge and skills to forensic nurses (Dale, Rae & Tarbuck, 1995; Carton, 1998; Kent-Wilkinson *et al*, 2000). Nevertheless, attempts are being made to redress this balance within the nursing curriculum (Kent- Wilkinson *et al*, 2000) and through the development of post registration training (Carton, 1998; Kent-Wilkinson *et al*, 2000). However, it seems that much of the forensic nurses' skills and knowledge is acquired from 'hands on' experiences on the wards (Minto & Morrow, 2000).

The principal researcher was unable to find any literature specifically pertaining to the training of unqualified nursing staff (Health Care Assistants) within forensic mental health services. However, it would seem that unqualified staff are eligible for much of the in-house training offered to qualified nursing staff (Ward, personal communication), and as

such their role within the hospital differs little from that of qualified staff (Scott & Philip, 1985).

Given that patients detained within high security hospitals 'pose a grave and immediate danger' it is perhaps unsurprising that forensic nursing staff are required to undertake 'Control and Restraint' training.

1.3.5 Control and Restraint training

Control and Restraint (C & R) was developed in the early 1980s, for use in penal services (Tarbuck, Eaton, McAuliffe, Ruane & Thorpe, 1999). This training was to allow prison staff to 'intervene safely and effectively in situations involving the risk of self injury or harm to others, or which might escalate, cause serious damage, or compromise security' (Wright, 2003, p32). The Ritchie Report (Ritchie, 1984, as cited in Tarbuck *et al*, 1999) recommended that C & R training be introduced in the high secure psychiatric hospitals. Furthermore, following a greater awareness of the high incidence of patient aggression against mental health staff, C & R has since been taken up by many mainstream NHS mental health services (Tarbuck *et al*, 1999).

In 1994, The Royal College of Nursing published a syllabus of training for potential C & R instructors (Royal College of Nursing, 1994). Nonetheless, currently no standardised national curriculum for training courses in C & R exists (Maughan, personal communication).

In addition to physical interventions, staff are taught verbal de-escalation skills (Tarbuck *et al*, 1999). Most courses also include some theoretical content concerning violence in mental health care settings. However, it is likely that the quantity and quality of these less 'direct' interventions will vary according to the orientation of the instructor delivering them (Maughan, personal communication). Furthermore, courses implemented by the different high security hospitals appear to differ in terms of content. This is further evidenced by the fact that some of these hospitals have adopted alternative names for the C & R training they practice (e.g. 'Care and Responsibility', and 'Management of Violence and Aggression').

In summary, the role of the forensic nurse shares some of its features with general psychiatric nursing; most noticeably the implementation of treatment interventions and the establishment of good therapeutic relationships with patients. However, forensic nurses are also required to maintain a high level of security within the hospital environment, primarily through the daily assessment and management of risk behaviours.

In relation to risk behaviours, given that patients detained in conditions of high security are deemed to pose a 'grave and immediate danger' it is perhaps unsurprising that difficult and/ or dangerous behaviour should often continue to manifest in the ward environment (Kitchiner, 1999). Within the context of mental health services such behaviours are often referred to as 'challenging behaviours'.

1.4 Challenging Behaviour

The majority of research concerning challenging behaviour has been conducted in the field of learning disabilities (Hastings, 1997a). Therefore, it is from this body of literature that most definitions of what constitutes challenging behaviour have been generated. One of the most frequently used is that of Emerson (1995, as cited in Emerson *et al*, 1998) and defines challenging behaviour as:

“culturally abnormal behaviour of such intensity, frequency or duration that the physical safety of the person or others is likely to be placed in serious jeopardy, or behaviour which is likely to seriously limit use of, or result in the person being denied access to, ordinary community facilities”.

(Emerson, 1995, as cited in Emerson *et al*, 1998, p127).

Using this definition, Emerson outlined three important aspects of challenging behaviour:

i) That challenging behaviours are defined by their effect; ii) challenging behaviours have personal and social consequences for the individual, the people they live with, and the person(s) who care for them; and that iii) challenging behaviour is socially defined, in that whether a particular behaviour is called challenging is based on the meaning observers give to the behaviour.

However, as Fenwick (1997) pointed out, this definition, whilst addressing the severity of the behaviour, does not make judgments as to the form challenging behaviour might take. Fenwick goes on to suggest that it is not possible to gain an exact and objective definition of which type of behaviours are likely to be regarded as challenging, because by definition

challenging behaviours are a social construction and as such, the experience of what is challenging will vary.

Nevertheless, researchers within the field of learning disability and general psychiatric services have attempted to investigate how care staff define challenging behaviour, and thereby gain an insight into its topography. For example, in an interview study, Hastings (1995) asked nineteen care staff working in a residential challenging behaviour unit how they would define challenging behaviour. Almost half (53%) defined challenging behaviours as those that are 'difficult or challenging' for staff to deal with. A further forty two percent said that they were behaviours that were either 'abnormal or unacceptable'. When asked about the topography of such behaviours, the most quoted behaviour was aggression (74%), followed by self- injury (58%), and destructive behaviours (47%).

Cushion and Edwards (1994) conducted a survey regarding individuals known to a community psychiatric rehabilitation service who displayed challenging behaviour. Cushion and Edwards provided the carers of these individuals with a definition of challenging behaviour (not unlike Emerson's definition) where challenging behaviour was described as 'the existence of (socially unacceptable and/ or violent) behaviours which may make community placements problematic through being intolerable to co-respondents, staff or members of the community at large'. As with Hastings's (1995) findings, the researchers found that carers' most common expressions of challenging behaviour were physical and verbal aggression and anti-social behaviour. Other types of behaviour regarded as challenging by carers included self- harm, lack of self care, and disinhibited behaviour.

These two studies demonstrate several things; that challenging behaviour is very much about what is challenging for care staff and services, and as such constitute a management problem (Hastings, 1995; Fenwick, 1997), and that challenging behaviours most often constitute actions deemed as socially unacceptable (Cushion & Edwards, 1994). As such, it is possible to identify commonalities in the types of behaviour regarded as challenging, with the most common being aggression. It should be noted, however, that Hastings's study involved a relatively small number of participants working in a 'challenging behaviour' unit, whilst Cushion and Edwards provided a potentially 'leading' definition of challenging behaviour, and this may have resulted in participants' over-citing aggression and violence. Nevertheless, a perusal of the learning disability literature suggests that aggression is one of the most common forms of challenging behaviour experienced by care staff (Allen & Tynan, 2000). As a consequence, many studies utilise aggressive behaviour as a topographical construct (see Mitchell & Hastings, 1998; Allen & Tynan, 2000; Tynan & Allen, 2002).

1.5 Challenging behaviour in the forensic setting

The principal researcher could find no studies which specifically investigated the topography of behaviour considered 'challenging' by forensic nurses. However, an examination of the research investigating behaviour displayed by patients detained in conditions of security gives an indication of what these might be. For example, the majority of studies concern themselves with aggressive and violent behaviours (see Aiken, 1984; Larkin, Murtaugh & Jones, 1988; Rix & Seymour, 1988; Torpy & Hall, 1993).

1.5.1 Prevalence and nature of aggressive behaviour in forensic settings

Rix and Seymour (1988) investigated violent incidents in a regional secure unit retrospectively over a 12 month period. Recorded violent incidents included verbal and physical threats as well as acts. A total of 447 incidents were reported during the time period under study. Rix and Seymour reported that threats occurred more frequently than actual physical assaults, with nursing staff more likely being the recipients. Overall, 59% of patients demonstrated violent behaviour of some kind. However, Rix and Seymour noted that just two patients were responsible for almost half of all recorded incidents.

Many of these findings were echoed in a study by Torpy and Hall (1993). In a prospective study, they examined all aggressive incidents in a 30-bedded regional secure unit over a three year period. Recorded acts of violence and aggression included both verbal and physical acts; verbal acts were defined as verbal threats causing apprehension and anxiety, whereas physical acts, in addition to assaultive behaviour, included the perpetrator 'showing' the intended victim the action they may carry out. As with Rix and Seymour's study, a high level of aggressive incidents were recorded during the course of the study (N=820). Furthermore, three quarters of patients displayed some aggressive behaviour during their in-patient stay, with the majority of incidents being directed toward nursing staff (62%). However, unlike the previous study, Torpy and Hall found that the majority of incidents involved physical aggression (69%).

Larkin *et al* (1988) conducted a 6-month prospective study of violent incidents in a high secure hospital accommodating 602 patients (448 male and 154 female). The definition of violent behaviour used was that which could 'physically damage others, self, or property'.

Larkin and his colleagues did not include verbal threats as these were considered to be subjective and as such more difficult to measure than physical acts.

During the study, 1144 incidents were recorded. As with Rix and Seymour (1988), the researchers found that a small proportion of the hospital inpatients (4%) were responsible for a large proportion of all recorded incidents (60%), and that nurses were three times more likely to be assaulted than other patients. Extrapolating from their findings, Larkin and his colleagues (1988) concluded that the annual number of incidents would number approximately 3500, with a rate of 10 incidents per day throughout the institution.

Studies such as these suggest a high level of displayed aggression (both verbal and physical) by forensic patients. However, as Rix and Seymour (1988) pointed out, methodological differences between studies investigating the nature and prevalence of violence and aggression (both in forensic and the general psychiatric literature) make comparisons difficult. Even between the few studies outlined here, differences can be seen. For example, the definition of what constitutes a violent or aggressive act varied. Torpy and Hall (1993) reported a larger proportion of physical acts when compared to verbal acts/ threats than Rix and Seymour (1988). However, Torpy and Hall (1993) interpreted the perpetrator 'showing' the intended victim the potential aggressive act as a physical act, whereas Rix and Seymour (1988) would have considered this a threat. Larkin *et al* (1988) recognised the subjective nature of interpreting threats of violence and only considered more easily measurable physical acts. Nevertheless, Larkin's findings, alongside that of Rix and Seymour and Torpy and Hall, would suggest some consistent phenomena. Whilst a small number of patients are responsible for a large proportion of aggressive acts, the majority of forensic inpatients are likely to engage in some form of aggressive act during

their inpatient stay. Furthermore, the recipients of these aggressive acts are likely to be nursing staff.

A further consideration is that reported prevalence rates for aggressive behaviour in forensic settings are likely to be underestimates (Whittington & Balsamo, 1998). Incidents where staff have successfully intervened to manage a potentially aggressive incident may not be recorded (as in Larkin *et al*'s (1988) study). Furthermore, research into violence and aggression within general psychiatric services has highlighted that nursing staff have a tendency to under-report incidents (Lion, Snyder & Merrill, 1981). Reasons cited include: the effort that is required to complete incident/ recording forms; or that psychiatric nursing staff may become habituated to violence or see it as 'part of the job' (Lion *et al*, 1981; Adams & Whittington, 1995). It is likely that this trend continues in reporting rates by forensic nurses (Larkin *et al*, 1988). Therefore, it is probable that the incidence of violence and aggression experienced by forensic nurses is greater than has been previously reported.

This suggests that violence and aggression, both threatened and actual, are part of the everyday experience for forensic nurses. Furthermore, it would seem that acts of aggression within the high secure environment would correspond with the definition of challenging behaviour given by Emerson (1995, cited in Emerson *et al*, 1998). For example, aggressive acts are likely to place the physical safety of others in jeopardy, and as such have personal and social consequences for all concerned (such as physical injury, impairment of therapeutic relations), and result in the patient being denied access to ordinary community facilities (such as restricted access within the hospital, use of C & R, and ultimately continued detention). It is likely then, having already been defined as

'abnormal' by society, that the aggressive act within the high secure setting would be defined by forensic nurses as challenging.

As previously noted, the majority of research concerning challenging behaviour has been conducted in the field of learning disabilities. Increasingly, studies have been concerned with exploring care staff beliefs about the causes (i.e. their causal attributions) of challenging behaviour displayed by clients (Hastings, 1997a). There are two main reasons for this focus: first, staff causal attributions have been identified as sources of influence when seeking to explain staff responses to challenging behaviour (e.g. see, Hastings and Remington, 1994; Oliver, Hall, Hales & Head, 1996; Tynan & Allen, 2002) and second, current intervention and treatment for challenging behaviour is informed by hypotheses about its causes (Emerson, 1995). These issues and their implications will be discussed further later.

In seeking to understand the influence of staff causal beliefs, several researchers have adopted Attribution Theory as a useful psychological framework (Sharrock, Day, Qazi & Brewin, 1990; Dagnan, Trower & Smith, 1998; Stanley & Standen, 2000; Tynan & Allen, 2002; Markham & Trower, 2003).

1.6 Attribution Theory

Originally formulated by Heider (1958), proponents of attribution theory argue that, as actors and observers, people seek to explain events that occur around them. This tendency to seek explanations for events has been termed 'causal reasoning' and that by arriving at an explanation people are making an 'attribution'. Attribution theorists posit that people

are motivated to make attributions in an attempt to gain control over their environment and to anticipate future outcomes (Hewstone, 1989).

Heider (1958) proposed that when making an attribution people explain their own and others behaviours in terms of the locus of causality for that behaviour. Such a locus might reside in the person (internal locus reflecting dispositional factors such as ability) or in the environment (external locus such as difficulty of task) (Fiske & Taylor, 1991). For example, a member of nursing staff might infer that a client behaved aggressively because they were angry (internal attribution) or because their room was too hot (external attribution).

A further consideration is that biases in the attribution process have been identified. For example, Ross (1977, as cited in Hewstone, 1989) talks of the 'fundamental attribution error', whereby observers of an event tend to overestimate the influence of dispositional (internal) factors at the expense of environmental (external) factors when making an attribution. Associated with this is what Jones And Nisbet (1972), as cited in Fiske & Taylor, 1991) refer to as 'actor- observer bias'. Here an individual is inclined to make an external attribution for their own behaviour, but tend to make internal attributions when others perform the same behaviour. These biases would suggest that a member of nursing staff would be more likely to attribute the aggressive challenging behaviour of their patients to dispositional (internal) factors and be less likely to consider external factors, such as the environment or their own behaviour.

Since Heider's original work, several attribution theories have been developed (e.g. see Jones & Davis, 1965; Kelley, 1967) which attempt to explain the processes behind how certain attributions are arrived at. However, comparison between attribution theories is difficult as they each have some validity in different circumstances (Fiske & Taylor, 1991). Consequently, there is no 'one' true theory of attribution.

1.7 Attributional theory

A further aspect of attribution formation is the influence that the causal attributions have on our subsequent behaviour (Fiske & Taylor, 1991), and several 'attributional theories' have been developed in an attempt to explain this link (e.g. see Schachter, 1959, as cited in Fiske & Taylor, 1991; Bem, 1972). However, a review of all attributional theories is beyond the scope of this study. Therefore, the remainder of this section focuses on those which are utilised by several studies of staff causal attributions of challenging behaviour, Weiner's models of achievement motivation (1974; 1985) and helping behaviour (1980; 1986).

Weiner (1974; 1980) expanded on Heider's (1958) work by suggesting that there are in fact three dimensions of causality in attribution formation: locus; stability; and controllability.

1. Locus (Internal versus External): locus relates to Heider's distinction and is concerned with the location of cause (e.g. whether it is attributed to the person (internal) or the environment (external)).

2. **Stability (Stable versus Unstable):** Stability refers to the extent to which the cause of the event (behaviour) is perceived to change over time or remain the same.
3. **Controllability (Controllable versus Uncontrollable):** Controllability is concerned with the extent to which an individual is perceived to have control over the cause of an event (behaviour).

Weiner (1974; 1986) has argued that it is this underlying structure that determines an individual's emotional response to an event, which in turn influences their behaviour. Using this approach, he proposed attributional theories of achievement motivation (1974; 1985) and helping behaviour (1980; 1986). In relation to carer attribution and challenging behaviour, several studies have focused on Weiner's model of helping behaviour (Sharrock *et al*, 1990; Dagnan *et al*, 1998; Stanley & Standen, 2000; Tynan & Allen, 2002).

Put simply, in relation to Weiner's three dimensions of causality, Weiner's (1980; 1986) cognitive-emotional model of helping behaviour comprise two main premises: i) helping behaviour is seen as being caused by an observer's emotional reaction to an event (primarily sympathy or anger) which may increase or reduce the observer's tendency to engage in help giving behaviour respectively; and ii) attributions of controllability seen as the primary determinants of the observer's emotional reaction to the event. For example, in relation to challenging behaviour, Weiner's attributional theory of helping behaviour, predicts that a carer would be more likely to feel sympathy (and in turn engage in help giving behaviour) if the cause of a patient's behaviour were perceived as being outside their control (e.g. caused by psychotic phenomena), whereas behaviour perceived as being

within a patient's control (e.g. 'manipulative' behaviour) would elicit feelings of anger and reduce any propensity to engage in help giving behaviour.

Several methods of measuring causal attributions exist including open and closed questions and self-rating scales. Several research studies have used a modified version of Peterson, Semmel, Von Baeyer, Abramson, Matalsky *et al*'s (1982) Attributional Style Questionnaire (ASQ) (e.g. see Sharrock *et al*, 1990; Dagnan *et al*, 1998). Initially developed as a tool for use with depression, here participants are presented with a hypothetical situation and asked to generate a cause, they are then asked to rate this cause on several attributional dimensional scales

More recently research studies have used items reflecting Weiner's three dimensions of causality (locus, stability, and control) (e.g. see Fenwick, 1997; Stanley & Standen, 2000; Tynan & Allen, 2002), using a single Likert rating style item to assess each dimension. Using items such as these allow for simple correlational analysis between attributions of causality and other variables (e.g. measures of optimism). Additionally, the brevity of these items reduce the likelihood of participants failing to complete lengthy questionnaire, whilst still allowing research hypotheses to be explored.

Researchers seeking to elicit staff attributions about challenging behaviour have also used a variety of methods when presenting stimuli to participants. Methods adopted have included case study descriptions (Stanley & Standen, 2000), patients known to participants (Sharrock *et al*, 1990), and the use of video data (Noone, Jones & Hastings, 2003). However, one of the most commonly used methods is the written vignette (e.g. see

Hastings, 1997b; Hastings, Reed & Watts, 1997; Dagnan *et al*, 1998; Tynan & Allen, 2002; Markham & Trower, 2003). Recently, concerns have been raised that vignettes lack ecological validity when used in attributional research (Grey, McClean & Barnes-Holmes, 2002). That is, that the causal attributions elicited by a written fictional vignette may differ from those elicited in a 'real life' situation. However, nursing research suggests that the advantages of using this method means that vignettes are currently the best way of presenting information to a target population. These advantages being: the degree of experimental control, with participants being exposed to the same information; that vignettes can be given to large numbers of participants, therefore generating more data in a shorter time; and finally, that written vignettes can maintain ethical integrity when an investigation of attributions towards a vulnerable population is to be conducted (Hughes & Huby, 2002).

In a test of Weiner's model of helping behaviour, Sharrock, *et al* (1990) asked 34 nursing staff working in a medium secure unit to provide ratings about the challenging behaviour of a known patient. Staff were asked about their attributions, affect, optimism concerning potential for change, and likelihood of offering help. Sharrock *et al* reported that they found no support for Weiner's main hypothesis of a mediating effect for emotional response. However, they did find a mediating role for optimism, with attributions of control and, most notably stability, predicting optimism, which in turn predicted helping behaviour. Sharrock *et al* concluded that unstable causes are more likely to be perceived as changeable, and therefore associated with greater perceived benefits of helping.

Dagnan *et al* (1998) attempted to replicate the findings of Sharrock *et al* (1990). They presented 40 learning disability care staff with six examples of challenging behaviour. Participants were required to provide a probable cause for the behaviour, attributions, emotional response, optimism and willingness to offer help. A path analysis demonstrated that helping behaviour was best predicted by optimism, which was best predicted by negative emotion, this negative emotion was in turn best predicted by attributions of controllability. For example, care staff who believed that patients were in control of their challenging behaviour, experienced negative affect and had less optimism about changing the behaviour, consequently were less willing to offer help. Conversely, positive emotion was not significantly correlated with optimism or helping. Nevertheless, Dagnan *et al* claimed that their findings provide partial confirmation for Weiner's cognitive- emotional model of helping behaviour.

Whilst providing some support for Weiner's model of helping behaviour, neither of the above studies confirms a mediational role for positive affect, an important component of Weiner's theory (Stanley & Standen, 2000). Instead, Stanley and Standen (2000) suggest that the demonstration of a mediational role for optimism might be better explained by Weiner's (1974) theory of achievement motivation. Within this theory, that attempts to predict an individual's response to the success or failure of a task, it is the perceived stability of the behaviour (as opposed to controllability) that is felt to be of primary importance. For example, failure that is attributed to a stable cause (e.g. level of cognitive impairment) will decrease expectations of future successes. In relation to challenging behaviour, staff who attribute behaviour to a stable cause would be less optimistic about

being able to manage that behaviour in the future, and as a result be less likely to offer help (Stanley & Standen, 2000).

In their 2000 study, Stanley and Standen claimed that a factorial approach to behaviour topography is essential if an adequate test of Weiner's theory of helping behaviour is to be conducted. They argued that staff make attributions based on the information that is most available to them, in the case of an episode of challenging behaviour it's topography (Hastings *et al* 1997). Unlike Sharrock *et al* (1990) (who elicited attributions about 14 'negative institutionally relevant behaviours'), and Dagnan *et al* (1998) (where attributional ratings were summed across six types of behaviours), Stanley and Standen were more explicit about the type of challenging behaviours under study (aggression, self-injury, and destructiveness). Furthermore, two levels of stability were utilised (low and high dependency clients). The purpose of this study was to test the applicability of Weiner's (1986) model of helping behaviour and compare this model with the 'optimism' models of Sharrock *et al* (1990) and Dagnan *et al* (1998). Findings from this study showed that there was a significant relationship between affect (most notably positive) and helping. Unlike the findings of Sharrock *et al* (1990) and Dagnan *et al* (1998) optimism was not significantly correlated with helping. These findings provide evidence for the application of Weiner's (1986) model of helping behaviour. However, Stanley and Standen did report that optimism becomes important when it is linked to a perceived stable cause, where carers become more pessimistic about the likelihood of helping behaviour eliciting change. More recently, studies of carer attributions for challenging behaviour have attempted to apply Weiner's theory of helping behaviour with differing success (e.g. see Fenwick, 1997; Wanless & Jahoda, 2002; Jones & Hastings, 2003).

The findings of studies, such as those cited above, suggest that care staff attributions of causality for a challenging behaviour can influence their responses, most notably in relation to affect, optimism, and helping behaviour. It has further been suggested that care staff make attributions in light of what they know about an event (behaviour). For example, in relation to challenging behaviour, attributions seem to vary as a function of topography (Hastings, 1997a; Stanley and Standen, 2000). However, people do not always have enough information to make causal explanations for an event or behaviour, and in such 'ambiguous situations', they tend to make attributions that are consistent with their beliefs or prejudices (Aronson, 1995). Adshead (1998) commented that explanations for the behaviour of mentally disordered offender patients are likely to reflect social, professional, and cultural prejudices. In relation to this, research within the field of learning disabilities and general and forensic psychiatry suggest a further source of influence on staff causal attributions for challenging behaviour, these being the characteristics of the patients themselves.

Studies investigating the effect of patient characteristics on the attitudes of members of the public and care staff have included characteristics such as race (e.g. Lipsedge, 1994; Boast & Chesterman, 1995), and gender (e.g. Allen, 1987; Cormack & Furnham, 1998; Leggett & Silvester, 2003). However, in relation to high security patients who must fulfil two criteria for admission, it is arguable that two other factors play a significant role in shaping staff attributions: index offence and diagnostic label (mental health classification).

Accordingly, there have been many studies within the forensic literature investigating the influence of index offence on both staff and patients' attributions, attitudes, and beliefs (see Henderson & Hewston, 1984; Quinsey & Cyr, 1986; Gresswell, 1988; Reid &

Millard, 1997; Richman, Mercer & Mason, 1998). However, less attention has been paid to the influence of diagnostic label. Nevertheless, an abundance of research regarding diagnosis and its influence on care and nursing staff exists in the general psychiatric and learning disability literature.

1.8 The influence of patient diagnostic label on staff attitudes and beliefs

Studies investigating the influence of diagnostic labels such as Mental Illness have an extensive history (Rabkin, 1984) and have demonstrated that the use of labels (most notably schizophrenia) can have a negative effect on peoples' attitudes (Markham & Trower, 2003). For example, the public perception of mentally ill individuals being more violent than non-mentally ill individuals (Levey & Howells, 1995; Cooke, 1999).

Increasingly, research investigating the influence of a personality disorder diagnosis (e.g. see, Lewis & Appleby, 1988; Gallop *et al*, 1989; Fraser & Gallop, 1993; Markham & Trower, 2003) and learning disability have been undertaken (e.g. see Lyall, Holland & Collins, 1995; McNulty, Kissi-Deborah & Newson-Davies 1995; Tynan & Allen, 2002).

A perusal of this literature suggests that diagnostic labels can have an influence across several issues. In relation to the present investigation, the pertinent issues seem to be: notions of illness versus non-illness; optimism for change; and the establishment of the therapeutic relationship.

1.8.1 Illness versus non-illness

The concept of mental illness is based within an implicit medical model of disease (Berrios, 1993) and as such, individuals diagnosed with a mental illness are likely to be

viewed as suffering from a disease (Lewis and Appleby, 1988; Fraser & Gallop, 1993; Gunn, 2000). Gunn (2000) argued that the label 'ill' relates to a specific social role that allows an individual to be relieved of social obligation, and to enjoy degrees of tolerance not normally afforded to others. Consequently, allowances are often made for mentally ill individuals, with them being perceived as less responsible for their behaviour than non-mentally ill individuals (Howells, 1984). Therefore, it would seem that the diagnostic label of mental illness can exert an influence on an observer's attributions of control (responsibility) for another's behaviour, and several studies would appear to support this contention. Watson, Corrigan and Ottari (2004) in a study of police officers' attitudes towards offenders with a diagnosis of mental illness reported that officers viewed people with schizophrenia as being less responsible for their situation and more worthy of help. This finding has been replicated with community care staff (Meddings & Levey, 2000), and psychiatric nursing staff (Crichton, 1997; Coyne, 2002; Markham & Trower, 2003). Furthermore, basing mental illness within a medical model of disease infers that the symptoms of the illness have causes 'outside' of the individual (Berrios, 1993), and would suggest that a diagnosis of mental illness would also influence attributions of locus, with observers attributing behaviours to external factors rather than dispositional (internal) ones.

In contrast, the term personality disorder (with its emphasis on traits and behaviours) does not fit so readily into a medical model of disease (Blackburn, 1988), and as such, individuals with a personality disorder are often not considered to be suffering from a 'formal' mental illness or afforded the advantages of the 'sick' role (such as being more deserving of care) (Mann & Lewis, 1989; Gunn, 2000; Haddock, Snowden, Dolan, Parker & Rees, 2001; Pilgrim, 2001). Consequently, such individuals might be perceived as being

more 'responsible' for and in control of their behaviours than mentally ill individuals (Lewis & Appleby, 1988; Gunn, 2000), and studies investigating the attitudes and beliefs of care and nursing staff support this (Gallop *et al*, 1989; Crichton, 1997; Crichton, 2003; Markham & Trower, 2003). For example, Crichton (1997) showed nursing staff (N=574) who worked in conditions of low, medium, and, high security a video of fictional disturbed behaviour. Crichton reported that patients who were not regarded as ill by staff (those with a personality disorder) were perceived as being more in control, of and therefore responsible for their behaviour.

Unlike mental illness, the distinction between the individual and the personality disorder (characterised by traits and behaviours, as opposed to 'symptoms') is less well defined, implying that there is something inherently disordered about the individual (Markham & Trower, 2003). This would suggest that, in addition to making attributions of controllability for a behaviour, observers would be more inclined to attribute behaviours to internal factors, as opposed to external (e.g. illness) factors.

The principal researcher could find no studies which directly compared beliefs and attitudes about individuals with a diagnosis of mental illness or personality disorder with individuals with a diagnosis of learning disability. However, some conclusions regarding attributions of controllability and locus can be drawn from studies which focus solely on individuals with learning disabilities and their offending or aggressive challenging behaviour (McNulty *et al*, 1995; Clare & Murphy, 1998; Tynan & Allen, 2002). For example, Lyall *et al* (1995) investigated the extent of a cohort of individuals with learning disabilities involvement with the Criminal Justice System. This cohort were living in

community residential accommodation and had previously been identified as having offended. Over a 12-month period just seven individuals from a cohort of three hundred and fifty eight came into contact with the criminal justice system and, although the offences were regarded as serious, none were subsequently prosecuted. Indeed, Lyall *et al* reported that they observed a high level of tolerance to behaviour which might be construed as an offence (e.g. assault). Studies such as these suggest that such behaviours are often minimised by staff (Thompson & Brown, 1997). This implies that allowances are made for the aggressive behaviour (as with individuals with a diagnosis of mental illness), further suggesting that individuals with learning disabilities are perceived as less responsible (and therefore less in control) for their behaviours, than individuals without learning disabilities. Furthermore, in relation to attributions of locus, Tynan & Allen (2002) argued that the presence of a learning disability is enough to suggest to staff that an aggressive behaviour was not intentional, and therefore would not attribute it to dispositional (internal) factors.

1.8.2 Optimism for change

It has been suggested that mental health professionals are less optimistic about effecting change in patients with a diagnosis of personality disorder (Linehan, 1993). In community settings they have higher early treatment termination rates (Wilberg & Karterud, 2001) and do not rapidly improve (Gunn, 2000), all of which could contribute toward a negative attitude toward the treatment of individuals with a personality disorder.

In relation to individuals with psychopathic disorder (as identified through administration of the Psychopathy Checklist- Revised (PCL-R), (Hare, 1991)) a programme of follow- up

studies of Canadian mentally disordered offenders, suggest that treatment outcome is even less optimistic (see Quinsey *et al*, 1998). Findings from these studies have suggested that a high score on the PCL-R functions as a predictor for both violent and sexual recidivism (Harris, Rice, & Quinsey, 1993; Quinsey, Rice, & Harris, 1995). Furthermore, it has been reported that therapeutic intervention may actually increase a psychopathic individual's risk for future violence (Rice, Harris, and Cormier, 1992).

Applying Wiener's dimensions of causality, Markham & Trower (2003) investigated the effect of the label 'borderline personality disorder' on mental health nursing staff attributions, when compared to a label of mental illness. Using a within- subjects questionnaire design, they asked qualified mental health nurses to rate their attributions and record their optimism for change about a described episode of challenging behaviour. In addition to the finding that an individual with a diagnosis of personality disorder was rated as being more in control, they were rated as being significantly higher in terms of stability of their negative behaviour, than an individual with a diagnosis of mental illness. Furthermore, staff reported that they were less optimistic about the possibility of change where a diagnosis of personality disorder was present. In a similar study, Markham (2003) also reported that nursing staff optimism for change was lower for individuals with a diagnosis of personality disorder compared to individuals with a diagnosis of mental illness.

A relationship between attributions of stability and optimism have also been reported with learning disability care staff (Fenwick, 1997; Dagnan *et al*, 1998; Stanley and Standen, 2000). This has led to the suggestion that levels of cognitive impairment and dependency

impact on these beliefs, with lower levels of cognitive impairment and higher levels of dependency being attributed to more stable causes, resulting in less optimism (Stanley and Standen, 2000). However, in their previously cited study, Tynan and Allen (2002) did not find that attributions of stability and optimism varied as a function of cognitive level. Nevertheless, they chose to interpret this as implying that the mere presence of a learning disability diagnosis (as with attributions of control) predisposed care staff to make less stable attributions about the challenging behaviour. Indeed, the treatment of challenging behaviour of individuals with learning disabilities (which views such behaviour functional) using behavioural programmes may suggest to staff that such behaviour is unstable, manifesting in some circumstances and not others.

Studies such as these show that the presence of a diagnostic label can influence staff attributions of stability of the behaviour, and consequently their optimism for change, particularly in relation to the diagnosis personality disorder. However, when considering mentally disordered offenders it is arguable that the clinical psychiatric diagnosis is further influenced by the mental health classification under which they are detained, and the expectancies of treatability which accompany these.

Mentally disordered offenders with a diagnosis of personality disorder are detained under the classification 'psychopathic disorder', described as 'a persistent disorder or disability of mind', possibly evoking a notion of a relatively intractable (and stable) cause and poor response to treatment. Indeed, the Mental Health Act of 1983 recognised the difficulty in treating psychopathic individuals and included a 'treatability clause' that made compulsory admission for treatment available only if it can be stated that treatment is likely to

'alleviate or prevent deterioration of a patient's condition (Grounds, 1987; Moran & Mason, 1996).

Grounds (1987) suggested that there was no effective treatment for psychopathically disordered offenders, and this disheartening view was reflected in Haddock *et al's* (2001) finding that almost half (46%) of the forensic psychiatrists they surveyed considered psychopathy as untreatable. Furthermore, in a study concerning high secure forensic nurses, Bowers, McFarlane, Kiyimba, Clark and Alexander (1999) reported that many nurses considered psychopathic disorder difficult to manage and were pessimistic about efficacy of treatment. However, aside from recognising the difficulties inherent in treating psychopaths, the presence of a 'treatability clause' in the Mental Health Act also allows for therapeutic optimism to persist, and this may be reflected in Cope's (1993) finding that just 10 percent of forensic psychiatrists were entirely dismissive of the efficacy of treatment. Furthermore, new treatment interventions (such as Dialectical Behaviour Therapy) offer evidence that individuals with a personality disorder can benefit from treatment (Linehan, 1993).

1.8.3 Attributions, psychiatric diagnosis, and risk

Attributions of stability, and therapeutic optimism might also impact on the assessment and management of risk. It is perhaps common sense to suppose that the intractability of a patient's condition will prolong their risk or 'dangerousness' to others. For example, using attribution theory, Quinsey and Cyr (1986) investigated the decisions made by a cohort of clinicians and laypersons regarding the dangerousness (risk) and treatability of fictitious offenders. They reported that ratings of internal locus was related to higher ratings of

dangerousness, whilst the perceived treatability of the offender patient was negatively related to perceived dangerousness and risk. Reid and Millard (1997) investigated the causal attributions made by staff about the index offence of twenty patients admitted to a high security hospital. As predicted, the patient was perceived as less treatable when the offence was attributed to highly stable causes. A caveat is that these studies were concerned with the offending behaviour (primarily index offence) of the individuals under study as opposed to current challenging behaviour. Nevertheless, it is arguable that these findings suggest a role for stability and patient diagnosis when assessing risk. For example, given that previous research has shown that the diagnosis personality disorder may influence attributions of stability and optimism, it is arguable that forensic nursing staff who work with patients with a personality disorder would be more likely to consider their patients a greater risk for longer. Finally, it would seem that the psychiatric diagnosis of a patient, and the attributions that staff make in relation to this diagnosis, might impact on what has been established as another important role of the forensic psychiatric nurse: the establishment of the therapeutic relationship.

1.8.4 Psychiatric diagnosis and the therapeutic relationship

The establishment of a good therapeutic relationship is crucial for all mental health professionals working with difficult and distressed patients (Gallop *et al*, 1989). Fraser and Gallop (1993) argued that the establishment of a good therapeutic relationship is based on the presence of empathy. They characterised empathy as ‘the ability to know or wish to know and understand the experience of others’. It has already been established that forensic nurses face a particular challenge when attempting to form good relationships with mentally disordered offender patients (Burrow, 1991; Chaloner & Kinsella, 1999;

Mason, 2002). Indeed, it is arguable that it is difficult to 'wish to know and understand' the experience of another, when that individual may have committed serious and dreadful acts. However, it also seems that a patient's psychiatric diagnosis might impact on this process.

Gallop *et al* (1989) investigated the influence of the psychiatric diagnoses of mental illness and borderline personality disorder on the expressed empathy of nursing staff. They examined the written responses of nurses to a series of hypothetical statements and reported that nurses were more likely to show affective involvement with patients with a diagnosis of mental illness, whilst giving contradicting or 'belittling' responses to patients with a diagnosis of borderline personality disorder. Gallop *et al* interpreted this finding as demonstrating that nursing staff provide 'stereotypical' responses and less empathic care when a patient has a diagnosis of borderline personality disorder.

A less empathic response may result from previous negative experiences of working with patients with a personality disorder (Markham and Trower, 2003) who often display behaviour associated with the 'difficult patient' (for example, disruptive, manipulative and controlling behaviour (Markham, 2003). Pilgrim (2001) acknowledged that such behaviour can be anxiety-provoking and frustrating and that nursing staff attempting to develop therapeutic relationships with patients with a personality disorder may experience feelings of guilt and helplessness (Hinshelwood, 1999; Gunn, 2000). However, the elicitation of negative emotions such as anger, frustration and anxiety are not confined to nursing and care staff. In a much cited study, Lewis and Appleby (1988) reported on the negative emotions evoked in psychiatrists by the presence of the label; whilst Brody and Farber (1996) reported that clinical psychologists rated higher levels of anger and irritation toward

a patient with personality disorder when compared to those with a mental illness.

Furthermore, individuals with a personality disorder seem to generate powerful counter-transference responses in mental health professionals, which include feelings of anger, hostility and helplessness (Fraser & Gallop, 1993). As a result of these processes, mental health professionals may 'reject' the patient as a way of defending themselves against their therapeutic 'despair' (Gunn, 2000) and abandon attempts to establish a therapeutic relationship and a positive treatment intervention.

Again, the principal researcher was unable to find any studies which examined the influence of the label of learning disability in comparison to other diagnoses. However, it has been established in the learning disability literature that aggressive challenging behaviour generates strong emotional reactions (anxiety, anger, and fear) in staff (Bromley & Emerson, 1995; Allen & Tynan, 2000). Lack of empirical research means that it is difficult to say whether these affective responses are more extreme than with other diagnoses. However, the research concerning causal attributions outlined in the previous sections would suggest that this is not the case.

Empirical research studies have shown that causal attributions can impact on staff affect, which in turn, may mediate feelings of optimism and willingness to help. In relation to forensic nursing staff, it is probable that these causal attributions would impact on their appraisal and expectancies of risk, and the development of the therapeutic relationship. Moreover, it is likely that these causal attributions would be further influenced by the mental health classification of the patient group they work with. Finally, it is likely that

patient diagnosis might influence a further facet of staff attributions, that is the causal *models* they consider important when seeking to explain aggressive challenging behaviour.

1.9 Causal models and aggressive challenging behaviour

Current interventions and treatment for challenging behaviour are informed by psychological theories and hypotheses about its causes (Emerson, 1995). The role of the clinical psychologist in the management of an individual's challenging behaviour might be to draw on a variety of assessment techniques (e.g. observation; functional analysis; environmental analysis; consideration of distal factors) to arrive at an evidence-based formulation of the cause and maintenance of the behaviour. An appropriate treatment intervention might then be implemented. However, in a hospital environment, the day to day implementation of treatment interventions are carried out by nursing staff (Scott & Philip, 1985; Burrow, 1998; Martin, 2001). Consequently, the beliefs and attitudes of these staff may contribute to the success or failure of the interventions (Scott & Philip, 1985; Berg & Walker, 1991; Fenwick, 1995), particularly where staff explanations are in opposition to the causal hypotheses underlying approaches to interventions (Hastings, Remington & Hopper, 1995). For example, staff may be less inclined to implement interventions they believe to be irrelevant or do not fully understand the rationale of (Whitworth, Harris & Jones 1999), or even engage in inappropriate responses as a result of their own explanations (Fenwick, 1995). As such, it has been suggested that clinical psychologists should routinely include an examination of staff beliefs about the causes of a challenging behaviour (e.g. the causal models they employ) as part of their formulation (Fenwick, 1995).

A variety of different methods have been used to access staff explanations for the causes of challenging behaviour including: direct interviews with care staff (Hastings, 1995); questionnaires requiring open ended responses (Berryman, Evans & Kalbag, 1994; Bromley & Emerson, 1995); rating scales (Hastings *et al*, 1995); and multiple choice questions (Oliver *et al*, 1996). However, findings from such studies appear somewhat idiosyncratic and difficult to generalise with some researchers eliciting attributions about a fictional patient, whilst others have not specified an individual at all, furthermore, the topography of the behaviour under study has varied (Hastings, 1997a). Recognising that there was no established method for measuring staff attributions regarding causal explanations for challenging behaviour, Hastings developed his Challenging Behaviour Attributions Scale (CHABA) (Hastings, 1997b), which reflects a range of causal models found in the learning disability literature regarding the causes and function of challenging behaviour (Grey *et al* , 2002).

Tynan and Allen (2002) used the CHABA when measuring staff causal explanations about the aggressive challenging behaviour of a described individual with either mild or severe learning disability. They reported that, like Hastings (1997b), staff drew on a variety of explanations when seeking to explain the aggressive behaviour, with emotional and learned behaviour models being the most favoured. However, staff were significantly more likely to favour a biomedical causal explanation when considering the more severely learning disabled individual. Tynan and Allen (2002) interpreted this finding as implying that staff might be less willing to implement behavioural interventions for such individuals, relying more on pharmacological methods, in spite of demonstrated effectiveness of the former.

Given the heterogeneity of the population of patients they care for, it might be expected that forensic nursing staff would also draw on several models when seeking to explain challenging behaviour. However, it may also be hypothesised that forensic nurses who work with different patient groups (in terms of their diagnosis and mental health classification) would be more likely to favour different causal explanations. For example, mental illness is based within an medical model of disease, and as such forensic nursing staff who work with mentally ill patients may be more inclined to favour a biomedical explanation than nurses who work with other patient groups. On the other hand, forensic nursing staff who work with patients with a personality disorder may draw on their knowledge of the disorder (such as difficulties with affectivity and interpersonal behaviour) and the current therapeutic interventions employed (Dialectical Behaviour Therapy (see Linehan, 1992) and Cognitive Analytic Therapy (see Ryle, 1990; 1997)) and conclude that an emotional explanation is more appropriate. Behavioural approaches have a long history within the field of learning disability, as such it is probable that forensic nursing staff who work with learning disabled clients might favour a learned behaviour model when seeking to explain challenging behaviour.

1.10 Forensic nursing staff attributions, aggressive challenging behaviour and the role of clinical psychology

The role of the clinical psychologist in the assessment, management and treatment of challenging behaviour is often two- fold: to develop a formulation of the problem behaviour; and use this formulation to inform an appropriate intervention with the aim of reducing the behaviour (ideally helping the patient to substitute that behaviour for a more

appropriate, yet equally functional behaviour) (Emerson, et al, 1998). In a hospital environment it is most often the nursing staff who are in a position to implement and maintain these psychologically derived interventions (Scott & Philip, 1985; Martin, 2001). However, the current review of the literature demonstrates that the causal attributions and beliefs of staff regarding a challenging behaviour may impact on the success or failure of treatment interventions.

The causal attributions that nursing staff make about aggressive challenging behaviour may influence their optimism about the efficacy of treatment interventions or their willingness to help alleviate the behaviour, resulting in a reluctance to adhere to treatment programmes. Furthermore, nursing staff may arrive at their own explanations for the causes of the behaviour and reject or modify interventions that do not 'fit' with their own account. Moreover, it would seem that attributions and explanations about challenging behaviour are influenced by patient characteristics, most notably psychiatric diagnostic label. As a result it has been recognised that clinical psychologists should have an appreciation of staff attributions and beliefs about the challenging behaviour being considered (Hill-Tout & Lowe, 1992; Fenwick, 1995).

The current review of the research literature and consideration of the role of forensic nursing staff suggests that an investigation of this staff groups' causal attributions and beliefs about aggressive challenging behaviour is timely. It is anticipated that the findings of the current study could be used to highlight areas of need and inform a further role for clinical psychology, for example in teaching and training (McKenzie, Paxton, Patrick,

Matheson & Murray, 2000; Stanley & Standen, 2000; McKenzie, Paxton, Loads, Kwaitek, McGregor *et al*, 2004), and supervision (Fraser & Gallop, 1993; Markham, 2003).

Clinical psychology is a somewhat scarce resource in the health service, and it is further anticipated that an investigation into the attributions and beliefs of forensic nursing staff who work with different patient groups (in terms of their psychiatric diagnosis and mental health classification) might highlight particular areas of need.

1.11 Aims, research questions and hypotheses

The aim of the current study was to investigate whether forensic nursing staff who work with different patient groups (learning disabilities, mental illness, or personality disorder): make different causal attributions for an episode of aggressive challenging behaviour; draw on different causal models to explain the aggressive challenging behaviour; report different levels of optimism regarding the efficacy of therapeutic intervention for the aggressive challenging behaviour; and report different beliefs about the risk of future occurrences of the aggressive challenging behaviour.

Furthermore, it was intended that the current study would also provide a description of the responses of forensic nursing staff, in relation to the above questions, as a whole group.

Aim 1: To investigate forensic nursing staff causal attributions for an episode of aggressive challenging behaviour.

Research question 1: Do forensic nursing staff who work with different patient groups make different causal attributions (in terms of controllability, locus, and stability) about an episode of aggressive challenging behaviour?

Hypothesis 1: *Forensic nursing staff who work with different patient groups will make different causal attributions (in terms of controllability, locus, and stability) about an episode of aggressive challenging behaviour. Specifically that,*

a) *Forensic nursing staff who work with patients with a personality disorder will make causal attributions that are more internal, more stable, and involve more control over the behaviour, than nursing staff who work with the other patient groups.*

and

b) *Forensic nursing staff who work with mental health patients will make causal attributions that are more unstable, and involve less control over the behaviour, than nursing staff who work with the other patient groups.*

Research question 2: Do forensic nursing staff who work with different patient groups make different attributions about the reasons for an episode aggressive challenging behaviour?

Hypothesis 2: *Forensic nursing staff that work with different patient groups will make different attributions about the reasons for an episode of aggressive challenging behaviour, and will therefore favour different causal models. Specifically that:*

- a) *Forensic nursing staff who work with patients with a personality disorder will favour an emotional causal model; forensic nursing staff who work with mental health patients will favour a medical/ biological causal model; and forensic nursing staff who work with learning disabled patients will favour a learned behaviour model.*

Aim 2: To investigate forensic nursing staff optimism about the likelihood of therapeutic intervention reducing the aggressive challenging behaviour.

Research question 3: Do forensic nursing staff who work with different patient groups vary as to how optimistic they are about the likelihood that therapeutic intervention will reduce the aggressive challenging behaviour?

Hypothesis 3: *Forensic nursing staff who work with different patient groups will report different levels of optimism as to the likelihood of therapeutic intervention reducing the aggressive challenging behaviour. Specifically that:*

- a) *Forensic nursing staff who work with patients with a personality disorder will report lower levels of optimism than nursing staff that work with one of the other two patient groups.*

Research question 4: Do the causal attributions of controllability and stability effect forensic nursing staff optimism as to the likelihood of therapeutic intervention reducing the aggressive challenging behaviour.

Hypothesis 4: *Forensic nursing staff who attribute higher levels of controllability to the aggressive challenging behaviour, will be less optimistic about the likelihood of therapeutic intervention reducing the aggressive challenging behaviour.*

Hypothesis 5: *Forensic nursing staff who attribute higher levels of stability to the aggressive challenging behaviour, will be less optimistic about the likelihood of therapeutic intervention reducing the aggressive challenging behaviour.*

Aim 3: To investigate forensic nursing staff beliefs about: the future risk (e.g. the likelihood, frequency and severity) of the aggressive challenging behaviour occurring; and beliefs about the future levels of security required by an individual who displays such behaviour.

Research question 5: Do forensic nursing staff who work with different patient groups report different beliefs about the future risk of the aggressive challenging behaviour occurring?

Hypothesis 6: *Forensic nursing staff who work with different patient groups will report different beliefs about the future risk of the aggressive challenging behaviour occurring, in terms of:*

- a) *Likelihood*
- b) *Frequency*
- c) *Severity*

Research question 6: Do forensic nursing staff who work with different patient groups report different beliefs about the future levels of security required by an individual who displays the aggressive challenging behaviour?

Hypothesis 7: *Forensic nursing staff who work with different patients groups will report different beliefs about the required levels of security in the future.*

2. METHOD

2.1 Research design

The aim of the current study was to investigate whether forensic nursing staff who worked with different patient groups (learning disability, mental illness, or personality disorder): made different causal attributions for an episode of aggressive challenging behaviour; drew on different causal models to explain the aggressive challenging behaviour; reported different levels of optimism regarding the efficacy of therapeutic intervention for the aggressive challenging behaviour; and reported different beliefs about the risk of future occurrences of the aggressive challenging behaviour. Accordingly, a between-subjects design was utilised. This design has been used previously in attributional research (Hastings *et al*, 1995; Tynan & Allen, 2002).

2.2 Setting

The current research was conducted at a High Security hospital in England, which offered in-patient assessment and treatment to Mentally Disordered Offenders (MDOs) and patients, who require treatment under conditions of high security owing to their dangerous, violent or criminal behaviour. The hospital consisted of a combination of block wards and villas, the latter being set within the hospital grounds.

The services of the hospital were divided into four Directorates. Three of the Directorates cared exclusively for male patients, with a specific Mental Health Classification (Mental Illness, Psychopathic Disorder, or Learning Disability). However, the fourth Directorate (Women's Service Directorate) cared exclusively for all female patients regardless of their

primary diagnosis and Mental Health Act (1983) (MHA) classification. In light of this, the principal researcher decided to include only the three directorates which cared for male patients in the present study: the Mental Health Directorate; the Personality Disorder Directorate; and the Learning Disabilities Directorate. Data concerning the number of patients and their current MHA Classification were obtained from the hospital database.

The Mental Health Directorate, comprised ten wards/ villas. The majority of patients cared for in this Directorate (n= 155, 92.8%) had a primary diagnosis of mental illness, and were consequently detained under the MHA (1983) Mental Illness classification. This Directorate had the largest population of patients (n= 167, 52.2%).

The Personality Disorder Directorate, comprised seven wards/ villas. The majority of patients cared for in this Directorate (n= 83, 92.2%%) had a primary diagnosis of personality disorder, and were consequently classified as having a Psychopathic Disorder. There were 90 (28.1%) patients being cared for in this Directorate.

The Learning Disabilities Directorate, with five wards/ villas. The majority of patients cared for in this Directorate (n=46, 73%) had been classified as having either Mental Impairment or Severe Mental Impairment under the MHA. This Directorate had the smallest population of patients (n=63, 19.7%).

Overall, there were 320 male patients cared for within the three Directorates included in the current study. Of these, fifty six patients (17.5%) had at least one other psychiatric diagnosis, and consequently an additional MHA classification. Twenty four (14.3%) of

these were in the Mental Health Directorate, 4 (4.4%) in the Personality Disorder Directorate, and 28 (44.4%) in the Learning Disability Directorate.

2.3 Participants

The nursing staff sample was self-selecting and provided a cross-section of both qualified nursing staff and unqualified nursing staff (Health Care Assistants) employed in the three Directorates of the high security hospital.

All nursing staff (including qualified Nurses and Health Care Assistants) working on a ward or villa in one of the three chosen Directorates were eligible for inclusion in this study. Data concerning the current nursing staff population (including gender, qualification, and which Directorate and ward worked on) were obtained from the hospital database. Overall, this comprised 625 nursing staff. The largest group of nurses worked in the Mental Health Directorate (n=280, 44.8%). One hundred and eighty six (29.8%) worked in the Personality Disorder Directorate. The smallest number of nurses worked in the Learning Disability Directorate (n=159, 25.4%). These differences in nursing staff group numbers seemingly reflected the patient population group sizes within the hospital.

Overall, the majority of potential nursing staff participants were male (n= 464, 74.3%), with females making up just 25.7% (n=161) of the staff population. Almost half of the population (n=311, 49.7%) were qualified nurses, the remainder (n=314, 50.3%) consisting of unqualified Health Care Assistants, and this was consistent across all directorates as shown in Table 1 below.

Table 1. Demographic data of nursing staff in the three Directorates under study (N=625)

Variable	MHD* (n=280)	PDD* (n=186)	LDD* (n=159)	Total (n=625)
Gender (n and %)				
Male	219 (78.2%)	132 (71%)	113 (71%)	464 (74.3%)
Female	61 (21.8%)	54 (29%)	46 (29%)	161 (25.7%)
Qualification Status (n and %)				
Qualified	143 (51%)	95 (51%)	73 (46%)	311 (49.7%)
Unqualified	137 (49%)	73 (46%)	86 (54%)	314 (50.3%)

* MHD= Mental Health Directorate

* PDD = Personality Disorder Directorate

* LDD = Learning Disability Directorate

A power calculation based on $\alpha = 0.05$, a medium effect size of 0.38, and power of 80 percent (Cohen, 1988) revealed that a total of 90 participants would be required for the current study, with 30 participants in each of three comparison groups. Therefore, an overall response rate of 14.4% of the 625 total staff group would be required, with a range of 10.7%- 18.8% from each Directorate.

A total of 88 nursing staff consented to participate in the current study and returned the questionnaire pack, giving a response rate of 14%. Overall, 59 (67%) of participants were male, and 25 (28.4%) female, in keeping with the ratio of male to female staff across the three Directorates as a whole. Of the 90 percent that reported their qualification status, fifty eight participants (65.9%) described themselves as qualified nurses, while 21 (23.9%) described themselves as unqualified. This differed from the ratio of qualified to unqualified staff across the three Directorates as a whole. Participants' ages ranged from 20 to 59 years of age, with a mean of 38.4 (SD = 10.2). On average, participants had worked in a forensic mental health setting for 9.9 years (SD = 9.9). The full demographic characteristics of the sample, as a whole and by Directorate, are presented in the Results section.

2.4 Measures

A questionnaire pack, containing a descriptive vignette to be read by participants and a battery of self-report measures was compiled by the principal researcher for the purposes of the current study (see Appendix 1 for the overall questionnaire pack). These were:

- Vignette
- Causal attribution questionnaire
- The Challenging Behaviour Attribution Scale (CHABA) (Hastings, 1997b)
- Intervention and future risk questionnaire
- Demographic, employment, and training questionnaire

2.4.1 Vignette

A vignette (see Appendix 2), to be read by participants prior to completing the self-report measures, was developed by the principal researcher with their field supervisor, a clinician at the host hospital, and described a fictional composite high secure patient (in terms of gender, and type of aggressive challenging behaviour displayed). It was decided to exclude other patient characteristics, particularly diagnosis or mental health classification, to avoid influencing participants' attributions. However, following comments during the pilot stage (see section 2.4.1), in the final version of the vignette, the patient was described as having 'complex social and psychological difficulties'. The style of the vignette was adapted from one used by Hastings *et al* (1997) in a study investigating the causal attributions of community care staff.

Two questions concerning the vignette followed. The first asked the participant how realistic they felt the story to be. The participants were then asked to rate the vignette using a 5- point Likert rating scale, with 1 being ‘not at all realistic’ and 5 being ‘very realistic’. The second question asked the participant to indicate whether they had experienced the type of situation described in the vignette.

2.4.2 Causal attribution questionnaire

Three items designed to assess nursing staff attributions of causality were included. These items were based on Weiner’s (1980) three dimensions of causality: controllability (controllable or uncontrollable); locus (internal or external); and stability (stable or unstable) (see Appendix 3). All items were rated on a 5-point Likert rating scale.

The Causal attribution questionnaire had previously been developed and used by Fenwick (1997) and later adopted by Tynan and Allen (2002) when investigating staff causal attributions about challenging behaviour. As with the current study, Tynan and Allen (2002) used the items the items to elicit staff causal attributions in conjunction with a vignette that included a description of an episode of challenging behaviour.

2.4.3 The Challenging Behaviour Attributions Scale (CHABA) (Hastings, 1997b)

The Challenging Behaviour Attributions Scale (CHABA) (as shown in Appendix 4) was developed by Hastings (1997b) to measure the attributions made by care staff as to the reasons why individuals with learning disabilities might engage in challenging behaviour. It was designed for use both as a research tool as described by Hastings 1997b (e.g. with the use of descriptive vignettes) and for inclusion in a battery of measures to evaluate staff

training about challenging behaviour (Hastings, 2002). The scale was not intended to measure staff 'attributional style', rather it is concerned with the application of causal models of challenging behaviour in specific circumstances (Hastings, 1997b).

The CHABA is a self-report scale and consists of 33 statements that relate to five causal models of challenging behaviour, which reflect the range of models found in the research literature (Hastings, 1997b; Grey *et al*, 2002). These are: learned behaviour; biomedical; emotional factors; aspects of the physical environment; and self-stimulation. Participants are asked to rate the applicability of each statement on a 5-point scale.

Summing the items in each subscale and then dividing this score by the number of items in the subscale calculates each subscale score. A subscale score greater than zero suggests that the particular causal model is considered by the participant to be applicable to the rated behaviour, whilst a score below zero would indicate the converse. Scores on individual subscales can be compared directly, for example, a more positive score for learned behaviour would indicate that the participant regards this causal model as more relevant in the described (vignette) situation (Hasting, 1997b).

The CHABA has been used solely with learning disability care or nursing staff to assess attributions regarding a range of challenging behaviours, including aggressive behaviour (Hasting, 1997b; Tynan and Allen, 2002; Grey *et al*, 2002). Used with this population this measure demonstrates reasonably good levels of internal consistency and reliability, with Cronbach's alpha levels ranging between 0.65- 0.87 (Hastings, 1997b), and 0.65- 0.74

(Tynan & Allen, 2002). However, validity has been more difficult to establish owing to a lack of objective external validation criteria (Hastings, 1997b; Hastings, 2002). However, Hastings (2002) suggests that this shortcoming must be balanced against the lack of other tools for this purpose. Furthermore, Hastings (1997b) reports that anecdotal evidence suggests that the CHABA has good face validity. One recommendation by Hastings (1997b) is that the CHABA's utility within other contexts be investigated.

Although never having been utilised with the staff population under study in the current research, the CHABA was selected for several reasons: the lack of other more appropriate tools specifically designed to investigate staff attributions about challenging behaviour within the context of causal models; the range of causal models reflected in the scale; reported good levels of internal consistency and reliability; and good face validity.

An additional open-ended question, asking participants about any reasons they could think of as to why someone might engage in aggressive challenging behaviour, was also included. This question was intended to elicit any reasons that might not be included in the five causal models covered by the CHABA. This item preceded the 33 items of the CHABA to allow participants to complete this item with minimal 'prompting' from the information contained in the CHABA. Responses to this open-ended question were coded according to themes or reasons for aggressive challenging behaviour and presented in order of rank in the Results section.

2.4.4 Optimism, Intervention and future risk questionnaire

The third questionnaire (see Appendix 5) included items that were intended to elicit participants' beliefs about: their optimism about the likelihood of therapeutic interventions reducing aggressive challenging behaviour, what those interventions might be; and the future risk of the behaviour (in terms of likelihood, frequency, severity and security needs). The items in this section were developed by the principal researcher with the aid of their field supervisor.

The first item of the Intervention and future risk questionnaire, asked participants to rate how likely they felt it was that therapeutic intervention would help in reducing the aggressive behaviour of people like the patient described in the vignette. A 5-point Likert rating scale was used (with 1 being 'very unlikely' (VUL), and 5 being 'very likely' (VL)). The form of therapeutic intervention was not specified. However, the second item of this questionnaire asked participants to identify what kinds of therapeutic intervention they might consider useful. This item consisted of an open-ended question in order to allow participants to report any intervention they might consider helpful/ therapeutic. Responses to this open-ended question were coded according to themes or types of therapeutic intervention and presented in order of rank in the Results section.

Items three, four, and five of the Intervention and future risk questionnaire were concerned with participants' beliefs about the risk of the aggressive challenging behaviour occurring in the future. As cited in the Introduction, an important aspect of the assessment of risk is consideration of: the *likelihood* of the behaviour occurring; the *frequency* of the behaviour; and the *severity* of the behaviour. Additionally, as identified risks can increase and

decrease, these three variables need to be considered over time (MacInnes, 2000). The three items asked participants to give their opinion on these aspects of the behaviour:

- i) The risk of someone like Tom engaging in the aggressive behaviour.
- ii) How often (frequency) someone like Tom would engage in the behaviour.
- iii) How severe the aggressive behaviour of someone like Tom would be.

Participants were asked to consider and give an opinion of these items across three time scales: the short term (1- 3 years); the medium term (4- 8 years); and the long term (more than 9 years). For example,

The short term (e.g. 1-3 years)	low risk	medium risk	high risk
The medium Term (e.g. 4-8 years)	low risk	medium risk	high risk
The Long Term (e.g. more than 9 years)	low risk	medium risk	high risk

The time periods chosen (e.g. 1-3 years, 4- 8 years, and 9+ years) were chosen on the basis of average length of stay for patients in maximum security, the previously reported average length of stay of high security hospital patients (8- 10 years) (Maden *et al*, 1993; Taylor, 1997)) and the host hospitals' Annual Report (2000). According to the Report, the majority of patients (n= 185, 50%) left after an assessment period of 1- 3 years, a further third (n= 121, 33%) had resided at the hospital for between 4- 8 years. As of 2000, 17% (n=62) of

patients had been at the hospital in excess of the average length of stay as reported by Maden *et al* (1993) and Taylor (1997). Further examination of the host hospitals' data revealed that 17 patients had resided at the hospital for between 15 and 25 years. It was considered likely by the principal researcher that this small group of long- stay patients might skew the 'average' length of stay at the hospital. Therefore, it was decided that the time period during which the third of patients left (4- 8 years) would be considered 'medium term', with the period 1- 3 years being 'short term', and patient stays in excess of nine years 'long term'.

Item six of this questionnaire asked participants to give their opinion on how likely it was that the level of security required to care for the patient would reduce over time. This was in the form of a Likert rating scale, with 1 being 'very unlikely' (VUL), and 5 being 'very likely' (VL). As with the preceding items concerning the likelihood, frequency, and severity of the behaviour occurring, participants were asked to consider this question over time (the short, medium, and long term).

2.4.5 Demographics, employment and training questionnaire

The final questionnaire concerning demographic information (see Appendix 6) was developed by the principal researcher. Information was collected on: age; gender; current employment (Directorate worked in, qualification status); previous employment; and length of service. Participants were also asked to comment on any training they might have received about the causes of and responses to aggressive behaviour, in terms of its form and usefulness. Owing to a relative lack of data regarding forensic nursing staff demographic qualities and employment and training experiences, it was anticipated that

such measures might provide a fuller picture of this participant group. Furthermore, training and experience have been demonstrated to influence attributions made by individuals (Hastings *et al*, 1995).

2.5 Procedure

2.5.1 Pilot study

Prior to commencement of the main study, a pilot study was undertaken. The purpose of this pilot study was to consider the face validity of the vignette and the measures used. Three staff members (one from each Directorate) were approached and agreed to read the vignette and then complete the questionnaire pack, and discuss the process with the principal researcher. These participants were either ward managers or team leaders, and were approached because they had prior knowledge of the study, following the researcher's attendance at the ward managers meeting. The fourth participant (a Health Care Assistant) approached the researcher to volunteer.

Participants reported that the language used in the questionnaire was easily understandable and did not report any difficulty in following the written instructions when completing the measures. All reported that the vignette was a fairly valid description of an episode of challenging behaviour, rating it as 4/5 for realism. Furthermore, all four participants said that they had experienced the described situation before.

Two of the participants commented that they would have liked more information regarding the characteristics of the patient. Following discussion with the researcher's field supervisor, it was decided to further describe the fictional patient as having 'complex

social and psychological difficulties'. The intention was to provide some additional information without specifically identifying or alluding to a particular patient 'type', which might direct participants in their attribution-making. No other required changes to the questionnaire were identified at this time.

2.5.2 Main study

Initially the principal researcher attended ward managers' meetings for each of the Directorates in order to introduce themselves, explain the research protocol, and to gain consent to approach ward staff. In addition, a letter was sent to all relevant wards and villas in an attempt to inform any ward managers who had been unable to attend these meetings (see Appendix 7). All ward managers agreed that the researcher could approach staff. Following this, the principal researcher made telephone contact with each ward manager to arrange the most appropriate time to visit their ward.

Given the nature of the service, and the resultant security and safety implications, any visit to the ward and villa environment had to be pre-arranged. Indeed, on several occasions the researcher had to re-schedule visits when difficult and/ or potentially dangerous incidents had occurred prior to arrival. On discussion with individual ward managers it was decided that the most appropriate course of action was for the researcher to attend a 'handover' meeting. These meetings commonly occurred at the end of nursing staff shifts, where staff could discuss patient status and any other issues that needed to be communicated to the staff about to start work. Most often the researcher attended the lunchtime handover meeting. However, it became apparent that many wards were relatively short staffed, with

staff doing double shifts, and therefore, not needing to attend this meeting. In these instances, the early morning meeting was attended by the principal researcher.

During the handover meetings the principal researcher would introduce themselves and the research to the staff team, informing staff of what was involved in terms of completing the questionnaire, and assuring anonymity and confidentiality. A comprehensive participant information sheet (see Appendix 8) was also given out at this time. Additionally, any questions the staff had about the study were also answered.

The questionnaire packs were then given out to staff attending that meeting for completion at that time. Given apparent staff shortages and the nature of their role (e.g. supervision and observation) it was often not possible for staff to complete the questionnaire packs either with the principal researcher present, or during their shift. In most instances it was assumed that staff would complete the pack at a later time. Upon completion, staff were required to put their questionnaires in the provided envelope, addressed to the hospital's psychology department, and place them in the internal mail. Consent was implied, in that staff who had read the participant information sheet, completed the questionnaire, and returned it to the researcher had consented to participate in the study.

Handover meetings at each ward were only attended once by the principal researcher due to the large number of wards (N=22) and the time constraints. Therefore, following each handover meeting attended, the requisite number of questionnaire packs (including the comprehensive participant information sheet and an addressed envelope) were supplied to the wards for distribution to staff not at the meeting. Furthermore, the principal researcher

liaised with several ward managers, following the initial visit, to remind them to distribute the questionnaire packs to those absent staff.

All nursing staff present at the handover meeting were thanked by the principal researcher for their attendance. In addition, a written appreciation was included in the both the participant information sheet and the questionnaire.

2.6 Ethical approval

Initially, the proposed research was discussed at the Senior Forensic Nurses' Forum of the host hospital. Following this, approval was gained from the General Managers of the three Directorates included in the current study.

Ethical consent was then obtained from the relevant Local Research Ethics Committee (LREC). In addition, approval for the research was gained from the local NHS Trust Research and Development Department (R & D), the NHS Trust with whom the principal researcher had an honorary contract (See Appendix 9 & 10 for the letters of approval from the LREC and R & D).

2.7 Data storage

Owing to the difficulties inherent in working with data on the secure hospital site (e.g. shortage of computing facilities and security restrictions regarding the movement of data on disc and by e-mail) and for ease of access, completed questionnaires were kept in a locked drawer at the principal researcher's home. However, prior to removing them from the hospital site, and in order to comply with Data Protection Act, the questionnaires were:

i) visually inspected to ensure that no participant had unwittingly provided information by which they might be identified (e.g. giving their name or providing the name of the ward/villa on which they worked); and ii) assigned a number that was the only way of identifying the data. Questionnaire responses were inputted by the principal researcher onto their home computer. Data were kept on a computer database which was password protected. Upon completion of the current research study, the questionnaires would be shredded.

3. RESULTS

The Results section comprises: i) a discussion of the rationale for the statistical analysis; ii) participant characteristics (in terms of demographics, training and qualification variables) so that any group differences might be considered; iii) consideration of the reliability of measures employed; and iv) testing of the research questions and hypotheses, with further analyses of interest.

3.1 Statistical procedure for analysis

Prior to any statistical analysis being considered, all the data were checked for errors (for example, scores out of any possible range; incorrect data in-putting). Following this the data were examined to establish which statistical tests would be most appropriate.

A number of assumptions must be met if parametric analysis is to be undertaken, these being that: the population scores should display normal distribution; the data must be interval or ratio in nature; and (particularly for parametric tests of difference) homogeneity of variance must be evident (where the variance of scores within groups are similar) (Clark-Carter, 2004). However, it is not unusual for psychological research data to violate one or more of these assumptions (Pallant, 2001) and a range of non-parametric tests may be applied when such violation occurs.

The majority of the data in the current study were nominal (categorical) or ordinal in nature. Demographic characteristics (e.g. gender and qualification) were categorical, as were the questions relating to future risk. The measures pertaining to usefulness of training, causal attributions and therapeutic optimism were ordinal being measured on

Likert rating scales. An exception to this were the demographic variables of 'age' and 'length of service' which were interval.

Unsurprisingly, where data were nominal in nature, non-parametric tests were applied. Therefore, in the current study, any difference between such data were examined using a chi-square test.

Ordinal data are categorised and can be ordered in terms of 'more' or 'less', and unlike interval data, distances between scores cannot be assumed, suggesting that application of non-parametric test be most applicable. However, debate exists within the literature, with some researchers suggesting that parametric tests can be applied to ordinal data where the other assumptions required for parametric analysis are not violated (e.g. abnormal distribution) (Bryman and Cramer, 1990).

The ordinal data in the current study were assessed for normality of distribution through: visual inspection using histograms with a superimposed normal distribution curve; consideration of skewness and kurtosis values; and the Kolmogorov-Smirnov statistic. This procedure indicated that all data for the ordinal variables did not display the normality of distribution required for parametric analysis. In such instances mathematical methods can be employed to 'transform' the data and promote a distribution that looks more normal, although this approach remains controversial (Pallant, 2001). A further consideration is that researchers who have previously used the Likert type measures of causal attribution used in the current study applied non-parametric tests to their data (Grey *et al*, 2002; Tynan & Allen, 2002). Therefore: given the violation of the assumptions required for

parametric analysis; and the previous use of non-parametric tests with the measures under consideration, the principal researcher decided to employ non-parametric tests with the ordinal data. Accordingly where group differences were being examined, a non-parametric alternative to the one-way between groups analysis of variance was employed: the Kruskal-Wallis test. Where associations between two ordinal variables were being considered the Spearman's Rank Order Correlation (ρ) was employed, as an alternative to the Pearson's product-moment correlation coefficient.

Using the above procedure for assessing normality, it was also revealed that the interval variables of age and length of service were not normally distributed. Therefore, a Kruskal-Wallis test was employed.

One caveat of using non-parametric tests is that they are less 'powerful' than parametric tests. A result of which is that they may fail to detect some differences between groups leading the researcher to commit a Type II error (mistakenly rejecting an experimental hypothesis) (Pallant, 2001). However, Clark-Carter (2004) suggests that this is usually only true when non-parametric tests are used in spite of fulfilment of the assumptions for parametric analysis. This was not the case in the current study, and Clark-Carter further suggests that when such assumptions are not met, non-parametric tests can be more powerful than their parametric equivalents. Therefore, the principal researcher felt that non-parametric methods were appropriately employed in the current study.

The data were analysed using the Statistical Package for the Social Sciences (SPSS: version 12).

3.2 Description of participants

Eighty eight participants returned the questionnaire pack, giving an overall response rate of 14%. Of these 88 participants, 21 (23.9%) did not fully complete the questionnaire pack: four (4.5%) had not provided any demographic data, 15 (17%) failed to provide information on age, nine (10.2%) on gender, and nine (10.2%) on their qualification status. However, as those participants had completed the other measures and indicated the Directorate in which they worked, these were included in the statistical analysis, giving a total sample of 88 forensic nursing staff.

3.2.1 Demographic characteristics

Thirty three (37.5%) participants worked in the Learning Disabilities Directorate (LDD), giving a response rate of 20.7%. Thirty participants (34.1%) worked in the Mental Health Directorate (MHD), giving a response rate of 10.7%. Twenty five participants (28.4%) worked in the Personality Disorder Directorate (PDD), giving a response rate of 13.4%. Table 2 shows the demographic characteristics of the sample as a whole and by Directorate in which they worked. Tests of differences between the three groups of participants were conducted using Kruskal- Wallis test or chi square test.

No significant differences were found between the groups in relation to gender ($\chi^2 = 0.23$, $df = 2$, $p > 0.05$, ns) or age ($H = 0.41$, $df 2$, $p > 0.05$, ns).

Table 2. Demographic data of nursing staff participants (N=88)

Variable	LDD* (n=33)	MHD* (n=30)	PDD* (n=25)	Total (N=88)
Gender (n and %)				
Male	23 (69.7%)	19 (63.3%)	17 (68%)	59 (67%)
Female	10 (33.3%)	9 (30%)	6 (24%)	25 (28.4%)
Missing	0	2 (6.7%)	2 (8%)	4 (4.5%)
Age (yrs)				
Mean	38.4	39.3	37.4	38.4
Median	41	38	38	38
Range	35 (20-55)	36 (23-59)	36 (22-58)	39 (20-59)
SD	11.8	8.8	9.5	10.2
Missing	4 (12.1%)	8 (26%)	0	15 (17%)

* LDD- Learning Disabilities Directorate

* MHD- Mental Health Directorate

* PDD- Personality Disorder Directorate

3.2.2 Qualification, training and length of service

The majority of participants were qualified nursing staff (n=58, 65.9%), and sixty three (71.6%) reported that they had received formal training or qualification prior to taking up their post as shown in Table 3 below.

Table 3. Participant self- reported qualification and prior formal training.

Qualification Status	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Qualified	21 (63.6%)	18 (60%)	19 (76%)	58 (65.9%)
Unqualified	8 (24.2%)	9 (30%)	4 (16%)	21 (23.9%)
Missing	4 (12.1%)	3 (10%)	2 (8%)	9 (10.2%)
Training				
Yes	24 (72.7%)	20 (66.7%)	19 (76%)	63 (71.6%)
No	9 (27.3%)	8 (26.7%)	4 (16%)	21 (23.9%)
Missing	0	2 (6.7%)	2 (8%)	4 (4.5%)

There was no significant difference between Directorate groups in relation to the proportion of participants who were qualified and unqualified ($\chi^2 = 1.64$, $df = 2$, $p > 0.05$, ns) or who had received formal training ($\chi^2 = 0.61$, $df = 2$, $p > 0.05$, ns).

Fifty eight participants (66%) specified the type of formal training/ qualification they had received prior to taking up their post, and all of these were qualified nursing staff. All participants specified some form of nurse training/ qualification (e.g. nursing degree/ diploma, Registered Mental Nurse (RMN), Registered Mental Health Nurse (RMHN), and Registered Nurse Learning Disability (RNLD).

Participants reported to have worked in a forensic mental health setting for an average of 9.9 years (range 0.08-40 years, SD=9.94) as shown in Table 4 below.

Table 4. Participants' reported length of service in a forensic mental health setting (N=88).

Length of Service (years)	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Mean	12.4	7.6	9.2	9.9
Median	8	4.6	7.5	5.5
Range	39.5 (0.5-40)	24 .6 (0.3-25)	34.2 (0.08-34)	39.92 (0.08-40)
SD	12.4	6.6	8.7	9.94
Missing	0	3 (10%)	3 (12%)	6 (6.8%)

There was no significant difference between Directorate groups in relation to the length of time they had worked in a forensic setting ($H = 0.45$, $df = 2$, $p > 0.05$, ns). However, it was noted that, as length of service increased, participant numbers decreased. For example, almost half of participants ($n = 41$, 46.6%) had worked in a forensic mental health setting for less than five years and one fifth ($n = 17$, 19.3%) for less than two years. Just over a third of participants ($n= 31$, 35.2%) had worked in a forensic setting above the average 9.9 years reported here.

Just below half of the participants ($n=37$, 42%) had worked in another area of forensic mental health as shown in Table 5 below.

Table 5. The number of participants with previous experience of working in another area of forensic mental health (N=88).

Other area of forensic mental health	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Yes	13 (39.4%)	12 (40%)	12 (48%)	37 (42%)
No	19 (57.6%)	15 (50%)	11 (44%)	45 (51.2%)
Missing	1 (3%)	3 (10%)	2 (8%)	6 (6.8%)

There was no significant difference between the groups in relation to whether participants had worked in another area of forensic mental health ($\chi^2 = 0.73$, $df = 2$, $p > 0.05$, ns).

In relation to type of forensic setting in which they reportedly worked, four main types were identified. Twelve participants (13.6%) had worked in another Directorate within the same hospital: 12 (13.6%) in medium secure services; 7 (8%) in the prison service; and 4 (4.5%) in low secure services. Twelve participants (13.6%) indicated that they had worked in more than one type of forensic setting. Table 6 shows the main forensic settings worked in by participants as a whole and by Directorate.

The data in Table 6 suggests that many participants have a range of experience in forensic mental health settings prior to taking up their post at the host hospital.

Table 6. Participants previous experience in forensic settings by Directorate (N=88).

Type of Forensic Setting	LDD (n= 33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Other Directorate	6 (18%)	2 (6.7%)	4 (16%)	12 (13.6%)
Medium Secure	4 (12.1%)	4 (13.3%)	4 (16%)	12 (13.6%)
Low Secure	0	2 (6.7%)	2 (8%)	4 (4.5%)
Prison	2 (6.1%)	2 (6.7%)	3 (12%)	7 (8%)
Missing	1 (3%)	3 (10%)	2 (8%)	6 (6.8%)
Not Applicable	19 (57.5%)	15 (50%)	11 (44%)	45 (51.2%)

Half of all participants (n= 44, 50%) had worked in a non- forensic mental health setting at some time as shown in Table 7.

Table 7. Participant previous experience in non-forensic settings by Directorate (N=88)

Non-forensic setting	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Yes	15 (45.5%)	17 (56.7%)	12 (48%)	44 (50%)
No	17 (51.5%)	10 (33.3%)	11 (44%)	38 (43.2%)
Missing	1 (3%)	3 (10%)	2 (8%)	6 (6.8%)

In relation to having worked in a non- forensic mental health setting, there was no significant difference between the groups ($\chi^2 = 1.55$, $df = 2$, $p > 0.05$, ns). Four main types of non- forensic setting were identified: almost a quarter of participants (n= 20, 22.7%) had worked in Adult Mental Health Services (including acute admission); 10 (11.4%) in Learning Disability Services; five (5.7%) in Older Adult Services; and four (4.5%) in Treatment and Recovery. Eleven participants (12.5%) had worked in more than one non- forensic setting. Table 8 shows the main non- forensic settings within which participants reported to have worked.

Table 8. Participants previous experience in non- forensic settings by Directorate (N=88)

Type of Setting	LDD (n= 33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Adult Mental Health	0	11 (36.7%)	9 (36%)	20 (22.7%)
Learning Disability Service	7 (21%)	1 (3.3%)	2 (8%)	10 (11.4%)
Older Adult Service	0	3 (10%)	2 (8%)	5 (5.7%)
Treatment and Recovery	0	2 (6.7%)	2 (8%)	4 (4.5%)
Missing	4 (12%)	3 (10%)	2 (8%)	9 (10.2%)
Not Applicable	17 (51.5%)	10 (33.3%)	11 (44%)	38 (43.2%)

This suggests that (as with previous experiences in forensic mental health settings), many participants have worked in a range of non- forensic mental health settings prior to taking up their post at the host hospital.

On average, participants had worked in mental health services (forensic and non-forensic settings) for an average of 13.2 years (range 0.5-40 years, SD= 10.36) as shown in Table 9

Table 9. Self-reported number of years worked in Mental Health Services by Directorate (N=88)

Total length of service (years)	LDD (n= 33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Mean	15.6	11.3	12.2	13.2
Median	12.5	10	11.9	11.2
Range	39.5 (0.5-40)	23.25 (1.75-25)	32. 2(1.08-34)	39.5 (0.5-40)
SD	12.98	7.47	8.98	10.36
Missing	3 (9%)	4 (13%)	3 (12%)	10 (11.4%)

There was no significant difference between the groups in terms of the total length of their service ($H = 0.42$, $df = 2$, $p > 0.05$, ns). Again, as with length of service in forensic mental health settings, it was noted that as length of service increased, participant numbers decreased. For example, just over a quarter of staff ($n = 23$, 26%) had worked in mental health services (both forensic and non-forensic) for less than five years. Just over a third of participants ($n = 33$, 37.5%) had worked in mental health services above the average of 13.2 years reported here. This seems to suggest that, whilst a number of staff (approximately a third) remain working in mental health services for some time, a significant proportion leave the service within the first few years.

3.2.3 Training about the causes of, and how to respond to aggressive behaviour

Sixty participants (68.2%) reported that they had received training about the causes of aggressive behaviour, as shown in Table 10

Table 10. Participants self reported previous training about the causes of aggressive behaviour by Directorate (N = 88).

Previous training about the causes of aggressive behaviour	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Yes	23 (69.7%)	19 (63.3%)	18 (72%)	60 (68.2%)
No	9 (27.3%)	9 (30%)	4 (16%)	22 (25%)
Missing	1 (3%)	2 (6.7%)	3 (12%)	6 (6.8%)

There was no significant difference between Directorate groups in relation to the proportion of participants who reported that they had received previous training about the causes of aggressive behaviour ($\chi^2 = 1.27$, $df = 2$, $p > 0.05$, ns).

Forty nine (81.7%) participants who reported that they had received previous training about the causes of aggressive behaviour specified training type. On average they reported between 1-2 (1.6; range 1-4) types of training. Table 11 shows the type of training cited by rank.

Table 11. Type of training about the causes of aggressive behaviour reported by participants by rank.

Type of training about the causes of aggressive behaviour	Frequency (n= 49)
Management of Violence and Aggression (MVA)	24 (49%)
Nurse training	19 (39%)
Other (e.g. relaxation training; behaviour modification training; Enhanced Thinking Skills)	11 (22.4%)
Training courses/ workshops at host hospital	10 (20.4%)
Anger Management training	6 (12.2%)
Experience	4 (8.2%)
Risk Assessment training	2 (4.1%)
RAID training (Reinforce Appropriate Ignore Difficult (behaviour))	2 (4.1%)

As can be seen, the most cited form of training regarding the causes of aggressive behaviour was Management of Violence and Aggression Training (formerly Control and Restraint training). Almost half (49%) of the participants who specified training type specified this. The second most cited training about the causes of aggressive behaviour were the various forms of formal nurse training undertaken by participants (n= 19 (39%)). In most other instances, participants cited a range of different training types.

Table 12 shows how useful participants rated their previous training as being on a Likert rating scale, with 1 being 'not very useful' and 5 being 'extremely useful'.

Table 12 How useful participants reported their previous training about the causes of aggressive behaviour by Directorate (score 1-5).

Usefulness of training about the causes of aggressive behaviour	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Mean	4.08	4.17	4.3	4.17
Median	4	4	5	4
Range	3 (2-5)	2 (3-5)	4 (1-5)	4 (1-5)
SD	0.83	0.72	1.07	0.87
Missing	9	13	7	29

On average, participants reported their prior training as being 'very useful'. There was no significant difference between Directorate groups in relation to how useful participants reported their previous training about the causes of aggressive behaviour as being ($H = 1.49$, $df = 2$, $p > 0.05$, ns).

Seventy nine participants (89.8%) reported that they had received training about how to respond to aggressive behaviour, as shown in Table 13.

Table 13. Participants self reported previous training about how to respond to aggressive behaviour by Directorate (N = 88).

Previous training about responding to aggressive behaviour	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Yes	30 (90.9%)	26 (86.7%)	23 (92%)	79 (89.8%)
No	3 (9.1)	0	0 (8%)	3 (3.4%)
Missing	0	4 (13.3%)	2	6 (6.8%)

There was no significant difference between Directorate groups in relation to the proportion of participants who reported that they had received previous training about how to respond to aggressive behaviour ($\chi^2 = 4.6$, $df=2$, $p > 0.05$, ns).

Seventy two participants (91.1%) who reported that they had received previous training about how to respond to aggressive behaviour specified training type. On average they reported between 1-2 (mean 1.3, range 1-4) types of training. Table 14 shows the type of training cited by rank.

As with type of training regarding the causes of aggressive behaviour, a large proportion of participants (86%) cite MVA (which is concerned with physical reactive strategies).

However, 16.7% cited de-escalation techniques (which is covered to some degree in MVA training) as a way they have been trained to respond to aggressive behaviour.

Table 14. Type of training about how to respond to aggressive behaviour reported by participants by rank.

Type of training about how to respond to aggressive behaviour	Frequency (n= 72)
Management of Violence and Aggression (MVA)	62 (86%)
De- escalation techniques	12 (16.7%)
Other (e.g. Psychosocial Intervention training)	5 (6.9%)
Breakaway training	3 (4.2%)
Nurse training	3 (4.2%)
RAID training (Reinforce Appropriate Ignore Difficult (behaviour))	3 (4.2%)
Courses/ workshops at host hospital	3 (4.2%)
Riot Shield training	2 (2.7%)

Table 15 shows how useful participants rated this previous training as being on a Likert rating scale, with 1 being not very useful and 5 being extremely useful.

Table 15. How useful participants reported their previous training about how to respond to aggressive behaviour by Directorate (score 1-5).

Usefulness of training about how to respond to aggressive behaviour	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Mean	4.41	4.34	4.36	4.37
Median	4	4	5	4
Range	3 (2-5)	4 (1-5)	3 (2-5)	4 (1-5)
SD	0.87	0.89	0.85	0.85
Missing	4	4	3	11

On average, participants reported their prior training as being very useful. There was no significant difference between Directorate groups in relation to how useful participants reported their previous training about the causes of aggressive behaviour as being ($H = 0.23$, $df = 2$, $p > 0.05$, ns).

In general, it would seem that the majority of participants found the training they received (most often MVA training) as very useful when responding to aggressive behaviour.

However, it is arguable that these results suggest an over reliance on physical interventions at the expense of more behavioural or other psychologically formulated approaches.

Indeed, several participants commented on this. For example, in relation to general training regarding responding to aggressive behaviour one participant commented that, “*Staff need more input in this area*”.

More specifically, regarding MVA training one participant said that, “*Some aspect of the courses touch on de-escalation skills etc. but not enough.*”

However, one participant went as far to say that MVA is, “*Good for physical restraint, rubbish for de-escalation and psychological approaches*”.

The indication was, that some participants felt that they have a restricted range of skills to draw on when attempting to explain and manage aggressive challenging behaviour.

In general it can be seen that the three forensic nursing staff groups did not significantly differ in terms demographic characteristics and their qualification and training variables.

3.3 Reliability of measures used

3.3.1 Vignette

As shown in Table 16, the majority of participants reported that the episode of aggressive challenging behaviour, as depicted in the vignette, was realistic, giving a mean rating of 4.51 (with 1 being ‘not at all realistic’ and 5 being ‘very realistic’).

There were no significant differences found between the groups in relation to reports of the vignettes realism ($H = 2.7$, $df = 2$, $p > 0.05$, ns).

Table 16. Participants reported rating (including mean and median scores) of vignette realism and their experience of this type of situation, by Directorate (N=88).

Variable	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Realism				
Mean (SD)	4.67 (0.69)	4.6 (0.67)	4.2 (1.15)	4.51 (0.85)
Median	5	5	5	5
Range	3 (2-5)	2 (3-5)	4 (1-5)	4 (1-5)
Experience (n (%))				
Yes	33 (100%)	28 (93.3%)	23 (92%)	84 (95.5%)
No	0	2 (6.7%)	2 (8%)	4 (4.5%)

As seen in Table 16 the majority of participants (n= 84, 95.5%) had experienced the type of situation depicted in the vignette before. There were no significant differences between nursing staff groups in relation to the proportion of participants who had and had not experienced this type of situation before ($\chi^2 = 2.57$, $df = 2$, $p > 0.05$, ns). This would indicate that the episode of aggressive challenging behaviour, as depicted in the vignette, was familiar to the majority of high security forensic nurses.

Four participants (4.5%) commented that, owing to limited information, it was difficult to make a judgement about either the causes of the aggressive challenging behaviour depicted in the vignette or its future occurrence.

3.3.2 Reliability of the CHABA

The internal consistency of the five subscales of the CHABA was initially calculated using Cronbach's alpha. A minimum of 0.7 is most often cited as the accepted minimum for internal reliability (Nunally, 1978; Kline, 1997). However, as can be seen in Table 17, three of the subscales did not meet this minimum standard. Nevertheless, this was in keeping with the internal consistency reported by Hastings (1997) where two subscales did not reach 0.7 (Biomedical (0.65) and Stimulation (0.69), and Tynan and Allen (2002) with three subscales (Biomedical (0.65), Learned (0.67), physical environment (0.66), and stimulation (0.66).

Table 17. Reliability analysis for the CHABA

CHABA subscale	Cronbach's α	Mean inter- item correlation
Emotional	0.74	0.29
Learned	0.58	0.22
Biomedical	0.59	0.20
Physical environment	0.79	0.32
Stimulation	0.59	0.19

A further consideration is that Cronbach's alpha is dependant on the number of items in the scale. Pallant (2001) reports that when there are a small number of items in the scale (e.g. less than 10: as is the case with the CHABA subscales), Cronbach's alpha values can be relatively small (e.g. 0.5). Pallant suggests that it might therefore, be more appropriate to report the mean inter-item correlations of the items. Briggs and Cheek (1986) recommend a range of 0.2-0.4 as being optimal for mean inter-item correlations. As can be seen in Table 17, with the exception of the stimulation subscale, all the mean inter-items correlations of the scales fell within the range. This suggests that on the whole the internal consistency of the CHABA in the current study was adequate and in keeping with the alpha levels reported by previous researchers.

3.3.3. Completion of demographic information

The section of the questionnaire concerning demographic, qualification and training data was the least likely to be completed by participants. Four participants (4.5%) provided no demographic information about themselves, whilst others omitted certain information, for example: age (n=6, 6.8%); job title (n=5, 5.7%); and what type of ward they worked on (n=7, 7.9%) were missing data. The proportion of missing data on the demographics may have been due to the questionnaire length, or that the demographic information was collected last. However, a further possibility is that participants may have perceived the questionnaire as lacking complete anonymity or confidentiality. Two participants commented on this. For example, in relation to the items concerning demographic and training information one participant commented that this was, "*None of your business! This is supposed to be confidential, it wouldn't take two minutes to work out who is who with these questions*", whilst the other said, "*Why don't you just ask for a name*".

3.4 Addressing research questions

3.4.1 Research question 1: Do forensic nursing staff who work with different patient groups make different causal attributions (in terms of controllability, locus, and stability) about an episode of aggressive challenging behaviour?

Hypothesis 1: *Forensic nursing staff who work with different patient groups will make different causal attributions (in terms of controllability, locus, and stability) about an episode of aggressive challenging behaviour. Specifically that,*

c) Forensic nursing staff who work with patients with a personality disorder will make causal attributions that are more internal, more stable, and involve more control over the behaviour, than nursing staff who work with the other patient groups.

and

d) Forensic nursing staff who work with mental health patients will make causal attributions that are more unstable, and involve less control over the behaviour, than nursing staff who work with the other patient groups.

Participant scores (including mean, standard deviation (SD), median, and range) for the causal attribution questionnaire items control, locus, and stability, are shown in Table 18. An examination of the mean scores showed that participants who worked with patients with a personality disorder reported causal attributions that were more internal, stable and involved more control than the other two groups. Furthermore, it was participants who worked in the Learning Disability Directorate, rather than staff who worked in the Mental

Health Directorate, who made casual attributions that were more unstable and involved less control. However, it should be noted that the mean and median scores for participants by Directorate and as a whole do not deviate significantly from a value of 3, the central point of the 5-point Likert rating scale.

Table 18. Participant mean and median scores for the causal attribution questionnaire by Directorate (N=88)

Variable	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Control				
Mean (SD)	3.18 (1.10)	2.93 (0.94)	2.8 (0.87)	2.99 (0.98)
Median	3	3	3	3
Range	4 (1-5)	4 (1-5)	3 (1-4)	4 (1-5)
Locus				
Mean (SD)	3.00 (0.90)	2.83 (0.87)	2.84 (0.75)	2.9 (0.85)
Median	3	3	3	3
Range	4 (1-5)	4 (1-5)	3 (1-4)	4 (1-5)
Stability				
Mean (SD)	2.88 (0.86)	3.07 (1.08)	3.16 (0.89)	3.02 (0.95)
Median	3	3	3	3
Range	3 (2-5)	4 (1-5)	3 (1-4)	4 (1-5)

Unsurprisingly, a Kruskal-Wallis test indicated that there were no significant differences between the median rating scores of the forensic nursing staff groups for: Control ($H = 2.3$, $df = 2$, $p > 0.05$, ns); Locus ($H = 0.37$, $df = 2$, $p > 0.05$, ns); and Stability ($H = 2.4$, $df = 2$, $p > 0.05$, ns).

These findings, therefore, provide no support for hypothesis 1: that nursing staff who work with patient with a personality disorder will make attributions that are more internal, stable and involve more control over the behaviour; and nursing staff who work with mental health patients did not make attributions that were unstable, and involved less control.

3.4.2 Research question 2: Do forensic nursing staff who work with different patient groups make different attributions about the reasons for an episode of aggressive challenging behaviour?

Hypothesis 2: *Forensic nursing staff who work with different patient groups will make different attributions about the reasons for an episode of aggressive challenging behaviour, and will therefore favour different causal models. Specifically that:*

- a) *Forensic nursing staff who work with patients with a personality disorder will favour an emotional causal model; forensic nursing staff who work with mental health patients will favour a biomedical causal model; and forensic nursing staff who work with learning disabled patients will favour a learned behaviour model*

As shown in Table 19, mean scores across all conditions for the subscales: emotional; learned; stimulation; and physical environment are above zero (range 0.09 – 1.07). This indicates that participants, by Directorate, and as a whole, considered these causal models as being relevant in accounting for the aggressive challenging behaviour depicted in the vignette. The exception was the biomedical subscale which was rated as zero and below (range -0.33 – 0), thus indicating that participants did not consider this causal model as relevant when explaining the aggressive challenging behaviour depicted in the vignette. Examination of the mean scores indicated that participants working across all three Directorates favoured the emotional and learned behaviour models, with these subscales gaining the highest ratings. Participants working within the Personality Disorder Directorate considered the emotional model most applicable, giving it the highest rating of

the five subscales, followed by the learned behaviour model. This finding was replicated with staff working in the Mental Health Directorate. Participants working in the Learning Disability Directorate, however, provided higher ratings for the learned behaviour model, followed by the emotional model. Stimulation and physical environment were rated by all three groups of participants as being minimally relevant. The biomedical model was considered to have the least causal importance by all three groups.

Table 19. Participant mean and median scores for the five subscales of the Challenging Behaviour Attributions Scale (CHABA) by Directorate (N=88).

CHABA subscale (Mean & SD)	LDD (n=33)	MHD (n=30)	PDD (n=25)	Total (N=88)
Emotional				
Mean (SD)	0.94 (0.51)	1.07 (0.40)	1.26 (0.40)	1.07 (0.46)
Median	0.85	1.14	1.28	1.07
Learned				
Mean (SD)	0.96 (0.51)	0.92 (0.45)	0.97 (0.55)	0.95 (0.49)
Median	1.16	0.92	1.00	1.00
Stimulation				
Mean (SD)	0.18 (0.53)	0.47 (0.63)	0.28 (0.58)	0.31 (0.59)
Median	0.16	0.33	0.33	0.33
Physical environment				
Mean (SD)	0.09 (0.64)	0.12 (0.60)	0.10 (0.66)	0.10 (0.63)
Median	0.12	0	0.25	0.13
Biomedical				
Mean (SD)	- 0.13 (0.64)	- 0.09 (0.57)	- 0.10 (0.51)	- 0.10 (0.58)
Median	0	-0.16	-0.33	-0.17

A Kruskal-Wallis test indicated that there were no significant between-group differences for ratings of the causal models: learned behaviour ($H = 0.55$, $df = 2$, $p > 0.05$, ns); stimulation ($H = 2.39$, $df = 2$, $p > 0.05$, ns); physical environment ($H = 0.02$, $df = 2$, $p > 0.05$, ns); and biomedical ($H = 0.01$, $df = 2$, $p > 0.05$, ns). However, a significant between-group difference for ratings of the emotional model was indicated ($H = 6.84$, $df = 2$, $p < 0.05$). A Mann-Whitney U test revealed that participants who worked in the Personality

Disorder Directorate were significantly more likely to favour the emotional causal model than participants who worked in the Learning Disability Directorate ($U = 254.5$, $z = 2.49$, $p < 0.01$). However, this was not the case when compared with participants who worked in the Mental Health Directorate ($U = 281$, $z = -1.59$, $p > 0.05$, ns).

As shown in Table 20, a Spearman's rho was used to examine the correlation between the subscales of the CHABA, for the participant sample as whole.

Table 20. Correlations between the CHABA subscale scores: Spearman's rho

Subscale	Emotional	Learned	Stimulation	Physical environment	Biomedical
Emotional		0.46 **	0.38**	0.33**	0.28**
Learned			0.28**	0.32**	0.32**
Stimulation				0.41**	0.28**
Physical environment					0.58**
Biomedical					

** $p < 0.01$

All of the resulting correlations were statistically significant at the 0.01 level. These findings are in accordance with those of Tynan and Allen (2002) who reported significant correlations at the 0.05 and 0.01 level, and suggested that participants in the current study hold concurrent explanations for the episode of aggressive challenging behaviour.

This suggestion is further evident in the responses given by participants asking them to give reasons as to why 'people like Tom' might engage in aggressive challenging behaviour. Eighty-two (93%) participants provided explanations, giving on average 3.46 reasons (range 1-9). Responses were grouped into themes by the principal researcher. Ten common themes of explanations became apparent, with five of these concurring with the original five represented in the CHABA. Table 21 shows the themes derived from the whole participant group, and ranked according to the frequency (number and percentage)

of participants who cited them as a possible cause of an episode of aggressive challenging behaviour.

Table 21. Ranked causal themes, given as an explanation for aggressive challenging behaviour, by the participant group as a whole

Causal theme	Frequency (n & %)
Emotional (including: frustration; feeling let down; fear; low self-esteem; anger)	34 (41.5%)
Biomedical (including: Psychosis (hallucinations & delusions); Schizophrenia; medication; Tiredness; pain)	32 (39%)
Poor social & cognitive skills (including: problem solving; communication skills; coping skills; interaction difficulties)	30 (36.6%)
Learned behaviour (including: using aggression to get own way; attention seeking; demands not being met; reputation to live up to)	27 (32.9%)
Physical environment (including: noise; temperature; institutionalisation; security restrictions; staffing levels/ changes; overcrowding)	24 (29.3%)
Other (including: 'culturally related issues'; staff attitudes; illicit substance misuse; boundary pushing)	18 (22%)
Stimulation (including: boredom; enjoyment; lack of activities).	16 (19.5 %)
Past history (including: experience of sexual and/ or physical abuse; 'poor parenting'; dysfunctional family)	11 (13.4%)
Personality disorder (including Psychopathy)	5 (6.1)
Learning Disability	2 (2.4%)

Overall, participants provided a wide range of reasons for the episode of aggressive challenging behaviour. The causal theme of emotion was the most frequently cited (38.6%), followed by biomedical (36.4%), poor social and cognitive skills (34.1%), learned behaviour (30.7%), and physical environment (27.3%). On the whole these concur with the import given by participants to the causal models represented in the CHABA. However, one discrepancy was the relatively high level of causal importance ascribed to biomedical factors, the least favoured causal model when examined using the CHABA. An examination of the biomedical factors cited by participants revealed a range of reasons

(particularly related to mental ill-health e.g. psychosis) that are not covered by the CHABA. Furthermore, participants cited social and cognitive skills as being of causal importance, a model that is not represented in the CHABA.

These findings partially support Hypothesis 2. For example, when utilising the CHABA, participants who work with patients with a personality disorder favoured an emotional causal model, providing the highest rating of the three groups for this model. This was significant when compared with ratings provided by participants who worked with Learning Disability patients ($p < 0.01$). Participants who worked with learning disability patients did favour the learned behaviour model, although this was not significantly different from the other two participant groups. However, participants who worked with Mental Health patients did not favour a biomedical model, and (as did the other two participant groups) considered it the least relevant of the five models. Like participants who worked in the Personality Disorder Directorate, the emotional followed by learned behaviour model was favoured by this group.

There is also evidence that as a whole, participants hold concurrent explanations for the occurrence of the aggressive challenging behaviour depicted in the vignette. Furthermore, examination of responses to the open-ended question suggested that, whilst a high level of importance is given to some of the causal models represented in the CHABA (e.g. emotions and learned behaviour), participants also place equal or greater import on causal factors that are not included in the CHABA, most notably biomedical and social and cognitive skills.

3.4.3 Research question 3: Do forensic nursing staff who work with different patient groups vary as to how optimistic they are about the likelihood that therapeutic intervention will reduce the aggressive challenging behaviour?

Hypothesis 3: *Forensic nursing staff who work with different patient groups will report different levels of optimism as to the likelihood of therapeutic intervention reducing the aggressive challenging behaviour. Specifically that:*

- b) Forensic nursing staff who work with patients with a personality disorder will report lower levels of optimism than nursing staff who work with one of the other two patient groups.*

Table 22 shows mean and median ratings reported by participants about the likelihood of therapeutic intervention reducing the aggressive challenging behaviour depicted in the vignette.

Table 22. Participant mean and median ratings about the likelihood of therapeutic intervention reducing the aggressive challenging behaviour, by Directorate (N=79).

Likelihood of therapeutic intervention reducing the aggressive challenging behaviour.	LDD (n=30)	MHD (n=27)	PDD (n=25)	Total (N=79)
Mean (SD)	4.06 (1.01)	3.96 (1.05)	4.14 (0.88)	4.05 (0.98)
Median	4	4	4	4
Range	3 (2-5)	4 (1-5)	3 (2-5)	4 (1-5)

As shown in Table 22, and in contrast to Hypothesis 3, participants who worked in the Personality Disorder Directorate reported slightly higher ratings than participants who worked in either the Learning Disability or Mental Health Directorate. Nevertheless, the

majority of scores coalesce around a mean and median rating of 4 'Likely' (that therapeutic intervention will reduce the aggressive challenging behaviour). A Kruskal Wallis test indicated that there were no significant differences between participant groups ($H = 0.26$, $df = 2$, $p > 0.05$, ns). Therefore, Hypothesis 3 was not supported.

Seventy-seven (87.5%) participants gave their opinion as to what type of therapeutic intervention might be helpful in reducing the aggressive challenging behaviour, each providing on average 3 reasons (range 1-7). Intervention types were grouped into themes by the principal researcher and ten common intervention themes were identified. Table 23 shows the intervention themes derived from the whole participant group, and ranked according to the frequency (number and percentage) cited.

A large proportion of participants cited a good therapeutic relationship (40.3%) and psychological input (37.6%) as being helpful in reducing aggressive challenging behaviour. Social skills training and medication issues were also rated as relevant, in keeping with biomedical issues and social skills deficits being rated by participants as likely causes of aggressive challenging behaviour. Overall, Table 23 shows that participants were able to cite a wide range of therapeutic interventions that might be helpful in reducing the aggressive challenging behaviour depicted in the vignette.

Table 23. Ranked intervention themes, cited as being helpful in reducing aggressive challenging behaviour, by the participant group as a whole

Intervention type	Frequency (n (%))
Psychological Intervention: (including specified & unspecified interventions e.g. CBT/ DBT and ‘psychology sessions’; functional analysis; Behavioural programs (e.g. reward/ sanction plan; positive reinforcement; boundaries)	33 (42.8%)
Therapeutic relationship: (including One to one sessions (e.g. with named nurse); good relationship with staff (e.g. non- judgemental attitude; unconditional positive regard)	31 (40.3%)
Activities (including: physical activities (e.g. swimming, gym); Occupational therapy; art; games)	21 (27.3%)
Other (including: sharing of decision making; good MDT working; seclusion; staff training; family contact	17 (22.1%)
* Anger management	15 (19.5%)
* Social skills training (including: problem solving; enhanced thinking skills; coping strategies)	13 (16.8%)
Medications issues (e.g. review and monitoring of medication regime)	12 (15.6%)
Other group work (e.g. including those offered at host hospital e.g. substance misuse; violent offender treatment group)	9 (11.7%)
Physical environment (e.g. reduce noise levels; sufficient staffing)	5 (6.5%)

* Anger management and Social skills training were considered as separate to ‘Psychological Interventions’, this was owing to the fact the hospital under study provided these as group work involving both psychologists and nurses.

3.4.4 Research question 4: Do the causal attributions of controllability and stability effect forensic nursing staff optimism as to the likelihood of therapeutic intervention reducing the aggressive challenging behaviour.

Hypothesis 4: *Forensic nursing staff who attribute higher levels of controllability to the aggressive challenging behaviour, will be less optimistic about the likelihood of therapeutic intervention reducing the aggressive challenging behaviour.*

A Spearman's rho correlation demonstrated no significant correlational association between participants' attributions of controllability for the aggressive challenging behaviour and their therapeutic optimism ($r = 0.18$, $n = 79$, $p > 0.05$, ns). Therefore, Hypothesis 4 was not supported.

Hypothesis 5: Forensic nursing staff who attribute higher levels of stability to the aggressive challenging behaviour will be less optimistic about the likelihood of therapeutic intervention reducing the aggressive challenging behaviour.

A Spearman's rho correlation demonstrated no significant correlational association between participants' attributions of stability for the aggressive challenging behaviour and their therapeutic optimism ($r = -0.16$, $n = 79$, $p > 0.05$, ns). Therefore, Hypothesis 5 was not supported.

3.4.5 Research question 5: Do forensic nursing staff who work with different patient groups report different beliefs about the future risk of the aggressive challenging behaviour occurring?

Hypothesis 6: Forensic nursing staff who work with different patient groups will report different beliefs about the future risk of the aggressive challenging behaviour occurring, in terms of:

- a) Risk (Likelihood)*
- b) Frequency*
- c) Severity*

a) Table 24 shows participants' beliefs about the future risk (likelihood) of the aggressive challenging behaviour occurring in the short, medium and long term. A chi square test revealed that there was no significant difference between the groups in relation to their beliefs about the likelihood of the behaviour occurring in the short term ($\chi^2 = 1.52$, $df = 2$, $p > 0.05$, ns), medium term ($\chi^2 = 6.69$, $df = 4$, $p > 0.05$, ns), or the long term ($\chi^2 = 0.73$, $df = 4$, $p > 0.05$, ns).

b) Table 25 shows participants' beliefs about the frequency of the aggressive challenging behaviour occurring in the short, medium, and long term. A chi square test revealed that there was no significant difference between the groups in the short term ($\chi^2 = 1.46$, $df = 2$, $p > 0.05$, ns), the medium term ($\chi^2 = 9.21$, $df = 4$, $p > 0.05$, ns), or the long term ($\chi^2 = 2.83$, $df = 4$, $p > 0.05$, ns).

c) Table 26 shows participants' beliefs about the severity of the aggressive challenging behaviour in the short, medium and long term. A chi square test revealed no significant difference between the groups in short ($\chi^2 = 1.51$, $df = 4$, $p > 0.05$, ns), the medium term ($\chi^2 = 1.51$, $df = 4$, $p > 0.05$, ns), the medium term ($\chi^2 = 5.28$, $df = 4$, $p > 0.05$, ns), or the long term ($\chi^2 = 2.59$, $df = 4$, $p > 0.05$, ns).

Therefore, Hypothesis 6 is not supported. Overall, the majority of staff reported that risk of the aggressive challenging behaviour, in terms of likelihood, frequency and severity (see Tables 24-26) would be high in the short term, before decreasing in the medium term, presenting least risk in the long term.

Table 24. Participants' beliefs about the future risk (likelihood) of the aggressive challenging behaviour occurring in the short, medium and long term, by Directorate expressed as a percentage (N=86)

<i>Participant group</i>	Risk of the aggressive challenging behaviour occurring in the future (%)								
	<i>Short term (1-3 years)</i>			<i>Medium term (4-8 years)</i>			<i>Long term (9+ years)</i>		
	low	medium	high	Low	medium	high	low	medium	high
LDD (n=32)	0	25	75	3.2	90.3	6.3	40.6	50	9.4
MHD (n=30)	0	16.6	83.4	3.5	71.5	25	42.8	42.8	14.4
PDD (n=24)	0	12.5	87.5	8.3	62.5	29.2	41.6	50	8.4
Total (N=86)	0	18.6	81.4	4.8	75.9	19.3	41.6	47.7	10.7

Table 25. Participants beliefs' about the frequency of the aggressive challenging behaviour occurring in the short, medium, and long term, by Directorate expressed as a percentage (N=85)

<i>Participant group</i>	Frequency of the aggressive challenging behaviour occurring in the future (%)								
	<i>Short term (1-3 years)</i>			<i>Medium term (4-8 years)</i>			<i>Long term (9+ years)</i>		
	Rarely	Often	Very often	Rarely	Often	Very often	Rarely	Often	Very often
LDD (n=31)	0	35.4	64.6	6.6	90	3.4	61.4	35.4	3.2
MHD (n=30)	0	30	70	14.2	67.9	17.9	42.8	50	7.2
PDD (n=24)	0	47.8	54.2	25	54.2	20.8	58.3	33.3	8.4
Total (N=85)	0	36.4	63.5	14.6	72	13.4	54.2	39.7	6.1

Table 26. Participants' beliefs about the severity of any aggressive challenging behaviour in the short, medium and long term, by Directorate expressed as a percentage (N=83)

Participant group	Severity of future occurrences of the aggressive challenging behaviour (%)								
	<i>Short term (1-3 years)</i>			<i>Medium term (4-8 years)</i>			<i>Long term (9+ years)</i>		
	low	medium	high	Low	medium	high	low	medium	high
LDD (n=30)	3.3	33.3	63.4	10.3	79.4	10.3	50	36.4	13.4
MHD (n=29)	0	31	69	17.3	69	13.7	46.4	42.8	10.8
PDD (n=24)	4.2	37.5	58.3	29.2	50	20.8	66.6	25	8.4
Total (N=83)	2.4	33.8	63.8	18.3	67	14.7	53.6	35.4	11

3.4.6 Research question 6: Do forensic nursing staff who work with different patient groups report different beliefs about the future levels of security required by an individual who displays the aggressive challenging behaviour?

Hypothesis 7: *Forensic nursing staff who work with different patients groups will report different beliefs about the required levels of security in the future.*

Table 27 shows participants' beliefs about the likelihood of someone like Tom in the vignette who displays aggressive challenging behaviour having reduced security needs in the short, medium and long term.

Table 27. Participants' beliefs about the likelihood that future security needs will reduce over time expressed as a percentage (N=83).

Time scale & Participant group	Likelihood that security needs will reduce in the future (%)				
	<i>Very unlikely</i>	<i>Unlikely</i>	<i>Equally likely/unlikely</i>	<i>Likely</i>	<i>Very Likely</i>
Short term (1-3 years)					
LDD (n= 30)	40	26.7	20	10	3.3
MHD (n=29)	37.9	41.4	10.4	6.9	3.4
PDD (n=24)	41.6	25	0	20.8	12.6
Total N=83)	39.7	31.3	10.8	12	6.2
Medium term (4-8 years)					
LDD (n= 29)	0	24.2	51.7	20.6	3.5
MHD (n=28)	10.7	32.2	32.2	21.4	3.5
PDD (n=24)	8.4	29.2	25	20.8	16.6
Total N=81)	6.2	28.4	37	21	7.4
Long term (more than 9 years)					
LDD (n= 30)	3.3	3.3	46.6	23.4	23.4
MHD (n=29)	0	6.8	41.4	31	20.7
PDD (n=24)	4.2	0	16.6	58.4	20.8
Total N=83)	2.4	3.6	36	36	22

Table 27 shows that overall, participants believed that required security levels will reduce over time. However, nursing staff who worked with patients with a personality disorder were more likely to consider that it was either 'likely' or 'very likely' that security needs would reduce in the long-term. Nursing staff that worked with mental health and learning disability patients were more likely to be unsure as to whether security needs would reduce in the long term. However, this observed trend was not significant, and a Kruskal Wallis test revealed that there was no significant difference between the groups in the short term ($H = 0.39$, $df = 2$, $p > 0.05$, ns), medium term ($H = 1.39$, $df = 2$, $p > 0.05$, ns), or the long term ($H = 2.7$, $df = 2$, $p > 0.05$, ns). Therefore Hypothesis 7 was not supported.

Overall, the results suggest that, in the current study, participants who worked with the three different patient groups constitute a fairly homogenous group in terms of their demographic characteristics, training, and experience. Therefore, it is likely that the results of the current study can be taken as a whole and used to provide a more detailed picture of forensic nursing staff.

4. DISCUSSION

The Discussion comprises: i) a summary of the findings of the current study; ii) interpretation of these findings in relation to the literature outlined in the Introduction; iii) a consideration of potential methodological shortcomings of the current study; iv) implications of the findings of the current study, particularly in relation to clinical psychology; v) directions for future research; and vi) conclusions.

4.1 Summary of findings

From the current study, forensic nursing staff who worked with the different groups of patients (Mental Health; Personality Disorder; and Learning disability) did not report different causal attributions, in relation to control, locus, or stability, for an episode of aggressive challenging behaviour described in a vignette.

Forensic nursing staff who worked with the three different patient groups did not report different levels of optimism. Overall, staff reported that they believed that therapeutic intervention would be 'likely' to reduce the aggressive challenging behaviour.

Additionally, the levels of optimism reported by staff were not significantly influenced by their attributions of control or stability for the challenging behaviour. When asked to provide their opinion as to what type of therapeutic intervention might be helpful in reducing the aggressive challenging behaviour, nine intervention types emerged. Each staff member reported on average three types of therapeutic intervention they considered helpful. Overall, staff cited psychological interventions as being potentially the most helpful, followed by an appreciation of their therapeutic relationships with patients.

Changes to the physical environment were least considered as potentially helpful in reducing aggressive challenging behaviour.

Forensic nurses staff who worked with the three different patient groups did not report different beliefs about the future risk (in terms of likelihood, frequency, or severity) of the aggressive challenging behaviour occurring in the short, medium, or long term. Overall, the majority of staff reported that risk of the aggressive challenging behaviour, in terms of likelihood, frequency and severity would be high in the short term, before decreasing in the medium term, presenting least risk in the long term. Forensic nursing staff who worked with the three patient groups also did not differ in their beliefs about the likelihood of the security needs reducing in an individual who displayed challenging behaviour in the short, medium or long term. Overall, nursing staff reported that they expected security needs to reduce over time irrespective of the patient group worked with.

Overall, nursing staff considered all of the causal models reflected in the Challenging Behaviour Attribution Scale (CHABA) (emotional, learned behaviour, stimulation, and physical environment), with the exception of the biomedical model, as being relevant in accounting for the aggressive challenging behaviour depicted in the vignette. Accordingly, all of the causal models were significantly correlated with each other suggesting that the nursing staff held concurrent explanations for the challenging behaviour.

The three nursing staff groups rated the emotional and learned behaviour models as being the most causally relevant and there were no significant differences between the ratings given by the three nursing staff groups for four of the causal models (learned behaviour,

stimulation, physical environment, and biomedical). However, nursing staff who worked with patients with a personality disorder were significantly more likely to consider the emotional model as causally relevant than nursing staff who worked with learning disabled patients.

When asked to provide their own explanations for the aggressive challenging behaviour, ten explanatory themes emerged. Nursing staff were again (as with the CHABA) most likely to cite emotional causes (e.g. frustration). However, in response to this open question, biomedical causes were the second most cited explanations for the challenging behaviour. This is in contrast to staff responses to the CHABA, where the biomedical model was least favoured. Social and cognitive skill deficits (which were not included in the CHABA) were also highly cited as a potential cause for the challenging behaviour. However, staff provided a number of explanations for the occurrence of the challenging behaviour, citing on average 3-4 reasons each.

As a whole, the majority of nursing staff had received training about the causes of challenging behaviour. However, the bulk of this appeared to comprise information imparted during mandatory 'Management of Violence and Aggression' training (MVA) and previous formal nurse training. On the whole, staff reported that they had found this training 'very useful'. Almost all nursing staff reported that they had received training on how to respond to aggressive challenging behaviour. Again, however, the vast majority of this training consisted of MVA training. On average nursing staff reported this training to be 'very useful'.

Overall, the three staff groups under study did not differ significantly in terms of: demographic characteristics; qualification status; training; length of service; or their previous experience in both forensic mental health and general mental health settings.

4.2 Interpretation of results

4.2.1 Causal attributions

One aim of the current study was to investigate whether forensic nursing staff who worked with different groups of patients made different causal attributions about an episode of aggressive challenging behaviour. In relation to this, empirical research studies have demonstrated that nursing staff causal attributions about challenging behaviour can be influenced by the psychiatric diagnosis of the patient (Crichton, 1997; Markham & Trower, 2003).

In relation to attributions of locus, it was hypothesised that participants who worked with mental health patients would be less likely to ascribe the aggressive challenging behaviour to dispositional 'non- illness' factors and therefore make less internal attributions than participants who worked with patients with a personality disorder. However, in the current study, this hypothesis was not supported. Nevertheless, this finding is consistent with that of Markham and Trower (2003) who explained this by suggesting that whilst staff may attribute the cause of the behaviour to phenomena associated with mental illness, they rate this as 'internal' to the patient (e.g. not being caused by other people or the environment). In the current study, when asked to provide reasons for the challenging behaviour, it was noted that over one third (39%) of participants cited biomedical factors including psychotic phenomena such as hallucinations and delusions. Arguably then, the participants in the

current study who worked with mental health patients might have been more inclined to rate these phenomena as 'internal' as suggested by Markham and Trower (2003).

Attributions of control have also been associated with psychiatric diagnosis (Crichton, 1997; Tynan & Allen, 2002; Markham & Trower, 2003) and illness factors (Lewis and Appleby, 1988). In the current study it was hypothesised that participants who worked with patients with a personality disorder would make attributions involving more control, whilst participants who worked with mental health patients would report the converse. However, reported attributions of control did not significantly vary across any of the staff groups.

It has been posited that the term 'personality disorder' does not readily fit into a medical model of disease (Blackburn 1988), and as such, individuals with a personality disorder are often not considered to be suffering from a 'formal' mental illness or afforded the advantages of the 'sick' role (such as being more deserving of care) (Mann & Lewis, 1989; Gunn, 2000; Haddock *et al*, 2001; Pilgrim, 2001). However, from the current study it is arguable that participants who worked with patients with a personality disorder were no more or less likely to attribute an episode of aggressive challenging behaviour to non-illness factors than participants who worked with either mental health or learning disabled patients. Perhaps participants who worked with patients with a personality disorder in a forensic setting are more likely to consider the diagnosis personality disorder a 'formal' illness and as such, would consider an individual who engaged in an episode of aggressive challenging behaviour as less responsible for (or in control of) their actions and more deserving of care, than nursing staff in other settings in previous research studies. However, examination of the patient groups cared for by participants may provide an

equally probable explanation; that is that almost one fifth of all patients had at least one additional mental health classification (the majority being patients in the Learning Disability and Mental Health Directorates). Therefore, when considering notions of illness it is possible that participants who worked with mental health or learning disabled patients, being exposed to patients with an additional diagnosis of personality disorder, were less likely to attribute the challenging behaviour to illness factors (and therefore, attribute higher levels of control), than nursing staff in previous research studies. In the current study either of the above suppositions may be valid however, the data do not allow further conclusions to be drawn.

Previous studies have demonstrated a relationship between attributions of stability and psychiatric diagnosis, most notably in relation to psychiatric classification (e.g. personality disorder) (Markham & Trower, 2003) and level of dependency in learning disability (Stanley & Standen, 2000). Furthermore, in relation to mentally disordered offenders, the classification Psychopathic Disorder is described as a 'persistent disorder or disability of mind' and possibly evokes the notion of a relatively intractable (and stable) cause. Therefore, in the current study it was hypothesised that participants who worked with individuals with a personality disorder would make more stable attributions about an episode of aggressive challenging behaviour than those who worked with mental health and learning disabled patients. However in the current study, attributions of stability did not vary across participant groups. This finding suggests that participants who worked with different patient groups were not likely to have been influenced by psychiatric diagnosis and as such, were no more or less likely to attribute the aggressive challenging behaviour to stable (unchangeable) causes. However, this explanation is somewhat tentative as the

issue of patient co-morbidity, as discussed in relation to attributions of control, may have resulted in a blurring of the distinction between the patient groups cared for by participants.

Attributions of stability have been associated with optimism for change (Sharrock *et al*, 1990; Dagnan *et al*, 1998; Markham & Trower, 2003). Therefore, a potential implication of the finding that attributions of stability did not vary across participant groups, was that no one staff group would experience greater or lesser optimism about potential for change. This finding is discussed below.

Finally, biases exist in the attribution process, therefore, when considering the causal attributions of participants as a whole group, it might be expected that participants would make attributions consistent with the predictions of the fundamental attribution error (Ross, 1977, as cited in Hewstone, 1989), and 'actor-observer' bias (Jones & Nisbet, 1972, as cited in Fiske & Taylor, 1991) (e.g. making more internal and stable attributions about the challenging behaviour). However, in the current study, overall mean ratings for locus and stability did not significantly deviate from the value of 3, the central point of the Likert rating scales used. This finding is consistent with that of Tynan and Allen (2002) who also reported that mean scores in their study did not greatly deviate from the central point of similarly used scales. This suggests that participants would be equally likely to consider external factors when making attributions about the episode of aggressive challenging behaviour. This finding could well have implications for the application of therapeutic intervention programmes by forensic nursing staff. For example, by considering external factors, when making attributions about challenging behaviour, nursing staff might be

more willing to implement interventions which require changes to their own behaviour or the environment, this will be discussed further later. Overall it was found that participants who worked with different patient groups did not report significantly different causal attributions (e.g. locus, control and stability) about an episode of aggressive challenging behaviour.

4.2.2 Optimism, risk and therapeutic intervention

Participants who worked with different patient groups did not report different levels of optimism about the likelihood of therapeutic intervention reducing the episode of aggressive challenging behaviour. This finding was unexpected and inconsistent with the findings of previous research studies (Markham & Trower, 2003; Markham, 2003). Using the findings of these studies and with an appreciation of the literature concerning the mental health classification 'Psychopathic Disorder' (e.g. see Blackburn, 1988; Gunn, 2000; Haddock *et al*, 2001), it was hypothesised in the current study that participants who worked with patients with a personality disorder would be less optimistic about the efficacy of therapeutic intervention. However, this hypothesis was not supported. On the whole, mean ratings for all three participant groups for optimism tended to aggregate around a score of 4: that therapeutic intervention would be 'likely' to reduce the aggressive challenging behaviour.

Overall, participants reported that they expected the risk of the aggressive challenging behaviour (in terms of its likelihood, frequency and severity) to reduce over time. It has been suggested that the perceived treatability of the offender patient is negatively related to perceived dangerousness and risk (Quinsey & Cyr, 1986) and that a patient is perceived as

less treatable when their actions are attributed to highly stable causes (Reid & Millard, 1997). In the current study, attributions of stability were not significantly inflated; furthermore, optimism for treatment efficacy was fairly high. Therefore, this finding is perhaps unsurprising. It was expected that participants who worked with patients with a personality disorder would report higher levels of risk regarding the aggressive challenging behaviour. However, no one participant group reported significantly different expectations of the risk of the challenging behaviour occurring in the future. Nevertheless, in light of the fact that participant groups did not significantly vary across the causal dimensions, this finding is less unexpected.

Individuals detained in conditions of high security must be considered to pose a 'grave and immediate danger' (Cope & Ward, 1993; Ness & Collins, 2003). In accordance with this, in the current study, as participants' expectancies about future risk of the challenging behaviour decreased over time, so did their expectancies of the future security needs.

Participants cited a range of interventions that they felt would be helpful in reducing the aggressive challenging behaviour. Encouragingly, the two most cited interventions concerned 'psychological' interventions (42.8%) and aspects of the therapeutic relationship (40.3%). Just 15.6% suggested the use of medication, however, in light of the other findings of the current study (e.g. where no one participant group seemed more or less likely to ascribe the challenging behaviour to 'illness' factors) this finding might be expected. Recreational activities (e.g. sport, art work) were also considered to be valuable interventions by many participants (27.3%), as were existing group treatment programmes in the hospital setting (e.g. social skills training). Unexpectedly, given the restricted

conditions patients live in, changes to the physical environment were the least considered effective intervention and was cited by just 6.5% of participants. Perhaps suggesting that, in spite of neutral attributions of locus, participants in the current study would be less willing to consider changes to the physical environment as part of a treatment programme. Nevertheless, when taking into consideration the 'dilemma' faced by forensic nursing staff (e.g. security versus care and treatment) (Kitchiner & Topping-Morris, 1992; Burrow, 1993) this outlook is understandable. The implications of these findings will be discussed more fully later in this discussion.

Previous research studies have suggested the existence of a relationship between attributions of control and stability and optimism (Sharrock *et al*, 1990; Dagnan *et al*, 1998) which may influence motivation and willingness to help. In their study, Sharrock *et al* (1990) reported that causal attributions of control and, in particular stability, predicted optimism. However in the current study, correlational analysis did not demonstrate a relationship between optimism and attributions of stability or control. Nevertheless, it is clear that all participant groups were equally optimistic about the efficacy of therapeutic intervention reducing the aggressive challenging behaviour. Furthermore, it would seem that their beliefs about future risk and security needs reflected this optimism.

These conclusions could impact directly on the role of nursing staff in the forensic setting and the clinical psychologists who work with them, most notably in relation to the implementation of therapeutic interventions for challenging behaviour. For example, the optimism levels reported by participants in the current study suggests that participants who work with different patient groups would be equally amenable and motivated to engage in

helping behaviour, possibly through the implementation of therapeutic interventions developed by psychologists. Furthermore, when asked, almost half of all participants (42.8%) cited some form of psychological intervention as being helpful in addressing aggressive challenging behaviour. Therefore, it might also be anticipated that participants would be likely to regard psychologically informed interventions as helpful and be more inclined to apply intervention plans formulated by clinical psychologists. Furthermore, the establishment of a good therapeutic relationship has been identified as crucial for the successful implementation of therapeutic interventions and regimes (Scott & Philip, 1985). In relation to this, in the current study, 40.3% of participants recognised the importance of the therapeutic relationship when commenting on helpful intervention strategies. It is probable then, that participants would be willing to try and form good relationships with the patients they care for, which can only enhance the efficacy of psychologically developed interventions.

4.2.3 Causal explanations of aggressive challenging behaviour

It was hypothesised (Hypothesis two) that participants who worked with different patient groups would favour different causal models when seeking to explain the aggressive challenging behaviour, i.e. that participants who worked with mental health patients would favour a biomedical model; participants who worked with personality disorder would favour an emotional model; and participants who worked with learning disabled patients would favour a learned behaviour model. However, only one significant difference was found between the groups: that participants who worked with patients with a personality disorder were significantly more likely to consider the emotional model as having

relevance than participants who worked with learning disabled patients. Therefore, providing only partial support for Hypothesis two.

Overall, participants favoured the emotional and learned behaviour causal models reflected in the Challenging Behaviour Attributions Scale (CHABA) (Hastings, 1997b), independent of the patient group with whom they worked. This is in keeping with the findings of previous studies concerning learning disability staff (Hastings, 1997b; Tynan and Allen, 2002). All three participant groups rated the biomedical as having the least causal importance. This unexpected finding can be explained in light of other findings of the current study where no one participant group seemed more or less likely to ascribe the challenging behaviour to 'illness' factors. However, shortcomings in the measure used seem more likely as discussed below. Aspects of the physical environment was also minimally rated as being causally relevant for explaining the challenging behaviour.

In the current study, correlational analysis suggested that participants held concurrent explanations for the challenging behaviour and this is in accordance with the findings of Tynan and Allen (2002). This finding suggests that participants are willing to consider a range of causal explanations for aggressive challenging behaviour and is consistent with current theories about challenging behaviour which emphasises multiple causation (Emerson, 1995; Tynan & Allen, 2002).

The wide range of causal models that were considered by participants was also reflected in the range of responses to the open-ended question which asked participants to give reasons for the aggressive challenging behaviour. Overall, as with the CHABA, emotional causes

(e.g. frustration) were cited the most by participants (41.5%). Biomedical causes (e.g. psychotic phenomena such as hallucinations) were the next most popular explanation for the aggressive challenging behaviour (39%). In light of participant responses to the CHABA this finding was unexpected, perhaps further evidence of the limitations of the CHABA. Aspects of the physical environment were cited by just under a third of participants (29.3%). Given the conditions of security in the current setting, it might have been expected that more participants would have cited this as contributing to the challenging behaviour. However, this finding is in keeping with finding that changes to the physical environment were not seen as a useful intervention. Surprisingly, given the dual classification of many patients, just 8.5% of participants cited the presence of another psychiatric disorder (e.g. personality disorder or learning disability) as a possible influence.

Participants also cited explanations that were not reflected by the models included in the CHABA, most notably, social and cognitive skills and past history. Given the problematic and often traumatic backgrounds of many high security patients, it is encouraging that participants had an appreciation of these factors as antecedents to challenging behaviour. Indeed, social skills training (including problem solving and coping strategies) were considered as useful interventions.

4.2.4 Training about aggressive challenging behaviour

Just 68.2% of participants reported that they had received training about the causes of aggressive challenging behaviour. This finding is concerning for two reasons. Firstly, given that patients detained in conditions of high security are deemed to pose a 'grave and

immediate' danger, it is probable that most patients would present with aggressive challenging behaviour at some point during their detention. Secondly, the development and application of interventions for challenging behaviour are contingent on staff having an appreciation and understanding of the causes of the behaviour. In the current study, participants cited a range of explanations and interventions for aggressive challenging behaviour. However, in light of this finding it is arguable that much of participants' skills and knowledge pertaining to aggressive challenging behaviour is acquired from hands on' experiences on the wards as previously suggested by Minto & Morrow (2000), rather than established training. Furthermore, the majority of participants cited their mandatory 'Control and Restraint' training (49%) or nurse training (39%) as sources of knowledge. Control and restraint training does include some theoretical content concerning the causes of aggressive challenging behaviour. However, this is somewhat idiosyncratic, varying across instructors and high security settings (Maughan, personal communication) meaning that participants may not have received consistent information. Additionally, participants had been working in mental health services for an average of 13.2 years. It is likely then that participants' current knowledge may be 'out of date' or been forgotten.

Eighty nine percent of participants reported that they had received training about how to respond to aggressive challenging behaviour. Again, the majority (92.9%) cited Control and Restraint training or other physical interventions (e.g. breakaway or riot shield training). Of concern, only 11.1% of participants mentioned responses which might be considered as psychological in nature (e.g. psychosocial interventions; RAID training). This could suggest that, in spite of possessing knowledge about the causes of aggressive challenging behaviour and appropriate intervention strategies, many participants regarded

reactive physical interventions as a first resort, at the expense of more proactive therapeutic interventions. Perhaps, when considering responses to challenging behaviour, the majority of participants did not regard the implementation of less physical interventions as one of their roles. Given that nursing staff are crucial to the successful application of treatment interventions, this is an issue which must be addressed.

4.3. Methodological critique

As with any piece of research, shortcomings in the research design and methodology of the current study could be identified, most notably in relation to the participant population and measures used.

4.3.1 Type I and Type II errors

A Type I error occurs when the researcher incorrectly accepts the experimental hypothesis, while a Type II error occurs when the researcher incorrectly rejects the hypothesis. Type I errors arise because significant results can appear by chance (Clarke-Carter, 2004). The possibility of this happening rises as the number of analyses the data are subjected to increases (Pallant, 2001). Meanwhile, a Type II error occurs when a finding fails to reach significance even though the effect/ relationship the researcher was attempting to demonstrate does exist.

Type I errors can be minimised by the researcher selecting an appropriate α level (e.g. 0.01 as opposed to 0.05) (Pallant, 2001) and by not subjecting the data to numerous analyses. In the current study, relatively few variables were analysed. Moreover, the one finding

which reached significant (Hypothesis 2) did so at the 0.01 level. It is therefore unlikely that a Type I error occurred.

However the possibility that a Type II error was committed cannot be discounted. One finding was close to, yet a little above the 0.05 α level cut-off and was regarded as insignificant (Hypothesis 4). Also, despite best efforts, the number of participants recruited was less than the number a power calculation indicated would be necessary for this study (reducing the power of the non-parametric tests used (see Pallant, 2001). This raises the possibility that existing effects/ relationships may not have been detected. Caution should therefore be used when interpreting the findings of the current study.

4.3.2 Characteristics of the participant sample

The characteristics of the participant sample may impose constraints on the findings of the current study, most notably in relation to the generalisability of these findings to the wider forensic nurse population.

The participant sample was self-selecting, and as such cannot be considered as a random sample of the forensic nursing staff who worked at the host hospital. Examination of the demographic characteristics of the potential participants pool also suggests that the participant sample in the current study was not representative of the nursing staff group as a whole. For example in the current study, the majority of participants were qualified nurses (65.9%), whereas in the whole population, qualified nurses make up approximately half (49.7%) of the nursing staff group. Gender differences appeared to be better

represented with females making up 28.4% of the participant sample and 25.7% of the nursing staff population as a whole.

In the current study it is likely that the under- representation of unqualified nursing staff would have had an influence on reported findings. For example, differences in staff causal explanations for aggressive challenging behaviour have been reported in relation to qualification status and experience (Hastings *et al*, 1995), with more experienced staff rating emotional and social explanations above behavioural explanations. This suggests caution when attempting to generalise current findings concerning participants' causal explanations for aggressive challenging behaviour to a wider forensic nurse population.

Nevertheless, the three comparison groups in the current study did not significantly differ from each other in terms of demographics, training and qualification status. Therefore, it is likely that any differences in reported findings would be less likely to be due to confounding variables.

Eighty six percent of the forensic nursing staff population did not participate in the current study. A number of factors may have accounted for this including concerns about anonymity and how the study findings might be used, and 'over researching'. High security hospitals are among the most high profile services offered by the National Health Service, often attracting intense media speculation and public criticism (Ness & Collins, 2003). In recent years these hospitals have been subject to external scrutiny, resulting in several 'damning' reports regarding patient care (Blom-Cooper, 1992; Fallon, 1999), where forensic nursing staff have been singled out for the strongest criticism (Dale *et al*,

1995). Understandably then, many members of the forensic nursing staff population might be wary about participating in research studies owing to concerns as to how the data might be used. In relation to anonymity, two participants commented that they felt it would be possible to identify participants using the demographic data. A further 4.5%- 7.9% omitted demographic details in some form.

Finally, forensic nursing staff constitute a somewhat 'captive' audience providing a large population pool for research studies. At the time of the current study, several research projects involving nursing staff had recently been completed. It is therefore also likely that some nursing staff may have been experiencing research 'fatigue', and therefore declined to participate in the current study.

Nevertheless, it must be acknowledged that this large population of 'non- responders' might have reported different attributions and beliefs about an episode of aggressive challenging behaviour, than the current participants. As such, caution should be applied when attempting to generalise the current findings to the wider forensic nurse population.

4.3.3 Vignette

Vignettes have previously been used in studies investigating attributions and challenging behaviour (e.g. see Hastings *et al*, 1997; Dagnan *et al*, 1998; Tynan & Allen, 2002).

However, vignettes are not without their limitations (Hughes & Huby, 2002). For example, it has been recognised that responses made by participants about a theoretical episode of challenging behaviour as opposed to a real life situation may vary (Wanless & Jahoda, 2002; Grey *et al*, 2002; Markham & Trower, 2003). Participants may experience greater

emotional responses to real-life scenarios than a hypothetical one (Wanless & Jahoda, 2002), whilst it is likely that attributions made about a real-life episode of challenging behaviour would be based on additional contextual information available in the situation (Markham & Trower, 2003). In relation to the current study, four participants commented that they would have liked more information on which to base their attributions and beliefs. This suggests that some participants would use the additional information available in a real life situation to form attributions, and as such these attributions might differ from those reported in the current study.

A further limitation with the vignette employed in the current study was the limited information presented. It is suggested that when people have little contextual information to form causal attributions they tend to make attributions that are consistent with their own beliefs (Aronson, 1995). Therefore, the written vignette employed in the current study merely described a composite patient (in terms of gender and type of aggressive challenging behaviour displayed), and it was presupposed that participants would relate the described behaviour to their own experiences (e.g. the patient group they work with). The advantage of this being that the presented stimulus could be controlled, in that all participants were exposed to the same information. Nonetheless, the presupposition that participants related the information to the classification of patients in their care cannot be proved. However, Richman and Mercer (2002) purport that the written vignette can act as a prompt to personal experiences. Therefore, when considering this assertion, and the fact that the majority of participants (95.5%) in the current study reported that they had experienced the situation depicted in the vignette and that it was realistic, it is reasonable

to assume that the vignette employed encouraged participants to consider their own experiences in relation to the patient group they cared for.

In spite of these potential limitations, when considering the advantages of using a written vignette to elicit participant attributions and beliefs, as outlined in the Introduction, the principal researcher believes that a vignette methodology was the most appropriate for use in the current study. Furthermore, little research has been conducted into the attributions and beliefs of high secure nursing staff for aggressive challenging behaviour. It would be questionable to utilise other more time- consuming and costly methods when it could not be assumed that significant or useful results would be forthcoming.

4.3.4 The Challenging Behaviour Attributions Scale

The CHABA was chosen as it was the most recently developed psychometric scale to assess the causal attributions made by care and nursing staff as to the reasons why an individual might engage in challenging behaviour.

The CHABA was a fairly newly developed measure and had only previously been used by a very small number of studies at the time of writing the current report. As such, validity for the CHABA has yet to be established. In relation to this, previous researchers have raised concerns about the content validity of the some of the subscales of the CHABA (Grey *et al*, 2002). Grey *et al* (2002) argued that the item content of the subscales use only a restricted range of variables which do not necessarily reflect the array of variables that might function as setting or antecedent events for challenging behaviour. They use the example of the subscale 'physical environment', where the scale mainly contains items

relating to environmental pollutants (e.g. bright lights), as opposed to other possible environmental factors (e.g. lack of opportunity for interactions).

In relation to the current study that used the CHABA with forensic nursing staff, the content validity of the CHABA would also seem to be the main limitation of the scale. Given that Grey *et al* (2002) reported difficulties with content validity when using the scale with learning disability staff (for whom the scale was initially developed) this is perhaps unsurprising. Difficulties with the CHABAs content validity came to light through one of the merits of the current study, the inclusion of an open- ended question where participants were asked to provide any other reasons for the episode of aggressive challenging behaviour. This question was intended to elicit any reasons that might not be included in the CHABA.

Comparison of the CHABA subscale scores and the explanations provided in the open- ended question demonstrated discrepancies in participant reporting. The main discrepancy was between the biomedical subscale of the CHABA (which was rated as the least relevant causal model) and biomedical factors as reported by participants in the open question (where biomedical factors were highly rated). Examination of the open- ended responses demonstrated a range of factors pertaining to mental ill health (e.g. psychotic phenomena such as hallucinations and delusions) not included in the CHABA biomedical subscale. Furthermore, aspects of the physical environment were rated as less causally relevant by participants when using the CHABA as opposed to when responding to the open question, lending support to Grey *et al*'s (2002) criticisms. Finally, participants in the current study demonstrated an appreciation of the causal implications of social difficulties (e.g. poor

problem solving and coping skills) and distal factors (e.g. past abuse), factors that again are not considered in the CHABA. Given the complex history of forensic patients, their psychiatric illnesses, and the environment in which they are detained, an appreciation of these factors is causally relevant. This would suggest that the CHABA lacks content validity when applied to forensic nursing staff who work with this population.

This is not to say that a modified version of the CHABA could not gain clinical utility with this participant population. For example, responses to the open-ended question in the current study could be used to inform future researchers wishing to modify the CHABA as to what might be considered causally relevant by forensic nursing staff. Alternatively, these responses could be used to develop a new measure of forensic nursing staff attributions for the reasons why their patients engage in challenging behaviour. Furthermore, criticism regarding the content validity of the CHABA may have implications for researchers in the learning disability field. For example, individuals with learning disabilities are a vulnerable population and as such are more likely to be exposed to poor care and abuse (Moss, 1998). Additionally, the incidence of comorbidity (e.g. mental illness) is relatively high when compared to the general population (Hatton, 1998). Therefore, a consideration of distal and mental illness factors may serve to enhance the utility of the CHABA in the field for which it was originally developed.

4.3.5 Causal attribution questionnaire

The findings of the current study reported no differences between the causal attributions of the participant groups. Additionally, mean ratings for each dimension did not deviate from the central point of the Likert rating scale assessing the dimension. This finding is

consistent with that of Tynan and Allen (2002) who also reported that mean scores in their study did not greatly deviate from the central point of similarly used scales. Whilst this may have due to participant factors (e.g. homogeneity of the three participants groups), it must also be considered that response bias played a role. Therefore, in the current study it would seem that using just one item to assess each causality dimension was problematic. Consequently, it may have been more appropriate to adopt a measure which assesses dimensions using several items (e.g. Attribution Style Questionnaire (Peterson *et al*, 1982). Nevertheless, previous use of the causal attribution questionnaire when measuring care and nursing staff causal attributions across Wiener's three dimensions of causality have demonstrated its utility in assessing differences (Fenwick, 1997; Tynan & Allen, 2002). Furthermore, given the low response rate of participants in the current study it is arguable that the adoption of additional items would have been counterproductive. The addition of a lengthier questionnaire might have discouraged more participants from taking part.

4.3.6 Measures of Optimism, Risk, and Security needs

The measure of optimism in the current study specifically related to participants' beliefs about the likelihood of therapeutic intervention reducing the episode of aggressive challenging behaviour. As with Weiner's causal dimensions, optimism was measured by a single item. However, in this instance response bias was less evident, with participants reporting a range of beliefs, the majority being 'likely' to 'very likely'. This suggests that a single item can be used to assess participant optimism, particularly when, as in the current study, one aspect is focused on i.e. the influence of therapeutic intervention.

An important aspect of the assessment of risk is consideration of: the likelihood of the behaviour occurring; the frequency of the behaviour; and the severity of the behaviour. Additionally, as identified risks can increase and decrease, these three variables need to be considered over time (MacInnes, 2000). The measures developed to assess risk of the aggressive challenging behaviour in the current study appeared a reliable way of eliciting responses from participants. Any limitations with this measure appeared to arise from the limited information contained in the vignette (as previously discussed) rather than from the measure itself, suggesting that participants use multiple data sources when attempting to assess future risk. It is likely that the same limitation applies to the item concerning future security needs.

Given the identified methodological shortcomings inherent in the current study, the principal researcher suggests that caution is used when interpreting the research findings, particularly when attempting to generalise the findings to a wider forensic nursing staff population. Nevertheless, the findings of the current study highlight a few key clinical implications for forensic nurses working with individuals who display aggressive challenging behaviour. The current findings also suggest an important role for clinical psychology in addressing these issues in the form of training and consultancy. Furthermore, directions for future research can be identified.

4.4 Clinical Implications

Psychological and behavioural interventions developed by clinical psychologists for challenging behaviours are formulated using information about that individual and their behaviour (Emerson, 1995). In addition, relevant psychological and psychiatric theories are

also used to inform any intervention strategy. As such, it is likely that an individual's psychiatric history and diagnosis would be taken into consideration. For example, the function of a challenging behaviour for an individual with personality disorder might be considered as being very different from the function for an individual with a psychotic illness or a cognitive impairment. However, it is nursing staff who are often responsible for the application of treatment interventions, and the success or failure of such interventions often rely on those staff's understanding of why a particular approach has been adopted (Hastings & Remington, 1994).

Patients in high security hospitals are defined by two things (Kitchiner, 1999): their difficult and dangerous behaviour; and their mental health classification (diagnosis). Therefore, it was expected that participants in the current study who worked with different patient groups would favour different causal models when seeking to explain an episode of aggressive challenging behaviour. However, with the exception of participants who worked with personality disorder patients favouring an emotional model, participants generally favoured the same causal models. Furthermore, whilst biomedical explanations (including mental illness) were consistently taken into consideration, less than 10% of participants considered a diagnosis of personality disorder or learning disability as contributing to the challenging behaviour. In addition, findings of the current study suggest that forensic nursing staff comprise a fairly homogenous group. For example, participants who worked with the three different patients groups did not vary significantly across demographic characteristics or training experiences. Therefore, these issues suggest that forensic nursing staff who work with different patient groups (as defined by primary diagnosis) would benefit from training that specifically addresses the aetiology,

presentation and treatment (as informed by current psychological theory) of the aggressive challenging behaviours presented by these different patient groups. It is anticipated that unqualified nursing staff (who would not have experienced formal nurse training) would particularly benefit from having the opportunity to participate in such training.

Causal attributions of nursing staff can influence responses to challenging behaviour, most notably in relation to optimism, affect, and willingness to help (Sharrock *et al*, 1990; Dagnan *et al*, 1998; Stanley & Standen, 2000). Furthermore, it has been suggested that these causal attributions can override existing staff knowledge about challenging behaviour (McKenzie *et al*, 2004). Consequently, it has been suggested that nurse training programmes about challenging behaviour should include some teaching about attribution theory (McKenzie *et al*, 2004) and the influence that attributions may have on their behaviour (Stanley & Standen, 2000). Findings of the current study suggested that participants who worked with different patient groups were not more or less likely to feel optimistic about change. Furthermore overall, participants reported causal attributions that were fairly neutral (i.e. with mean scores grouping around a central point on the measurement scales). Therefore, it is possible that making forensic nursing staff aware of the potential influence of their own casual attributions might allow them to modify these attributions in difficult circumstances, potentially increasing nursing staffs' feelings of positive affect, optimism, and willingness to help still further, thereby improving patient outcomes. It is conceivable that information about attribution theory could be included in the training about specific patient groups.

The findings of the current study also suggest that training which addresses the causal factors in the development and maintenance of aggressive challenging behaviour, should ensure an appreciation of the restricted environment of the current setting. For example, participants in the current study did not seem to consider aspects of the physical environment as being particularly relevant to the development of aggressive challenging behaviour, or changes to it as a potentially useful intervention. Participants may have become habituated to conditions of high security and therefore underestimate its influence on patient behaviour. Alternatively, given their dual role of care and containment, it is equally probable that participants felt that changes to the environment were unfeasible. Nevertheless, as environmental modifications are often of significance to treatment interventions, this issue warrants attention.

Arguably, the most important implication from the findings of the current study concerns participants' perceived role in the implementation of therapeutic interventions for aggressive challenging behaviour. Nursing staff's successful application of, and adherence to, treatment interventions has been linked to staff optimism about treatment efficacy and whether the intervention 'fits' with their existing ideas of what would be helpful (or unhelpful) (Whitworth *et al*, 1999). In the current study it was encouraging that overall participants were optimistic about the likelihood of therapeutic interventions reducing the aggressive challenging behaviour. Furthermore, many participants seemed to regard psychological interventions and the role of the therapeutic relationship as being of particular use. However, in spite of this, only a minority of participants referred to psychologically-based interventions when asked what type of training they had received on how to respond to aggressive challenging behaviour, with the majority citing 'Control and

Restraint' or other physical interventions. Whilst this may indicate that participants had not received much training specifically relating to non-physical less reactive strategies, it also suggests that participants were less inclined to regard the use of these strategies as part of their explicit remit. This could well have a detrimental effect on treatment intervention efficacy, for example, staff optimism levels and beliefs about the value of psychological interventions become impotent if they do not consider the implementation of therapeutic intervention as a primary part of their role. Previous research with learning disability staff suggests that training about challenging behaviour may not fully address the issue of the nurse's role in the implementation of therapeutic interventions (McKenzie *et al*, 2000). Therefore, it is suggested that in addition to contributing to nursing staff training programmes, clinical psychology has additional roles in addressing this issue: those of consultation and collaboration.

Clinical supervision for forensic nurses is gaining increasing importance in the profession (Rogers, Gournay & Topping-Morris, 1999; Minto & Morrow, 2000) and offers a way for nursing staff to reflect on their practice on a personal and professional level. Whilst it may not be appropriate (or indeed welcome) for a clinical psychologist to provide supervision for forensic nurses, it is likely that they might act in a consultative role. For example, where supervision takes a 'problem- orientated' approach (where supervisor and supervisee collaborate to identify patient/ clinical problems (e.g. a challenging behaviour) and develop a solution) (Rogers *et al*, 1999) a clinical psychologist might offer a psychological perspective of the difficulty and insight into the value of the role of the supervisee as part of that solution.

In relation to collaboration, the current study serves to remind clinical psychologists of the necessity (and courtesy) of involving nursing staff in the therapeutic process, through: sharing information; listening to concerns; and explaining the rationale for the intervention. Indeed, it has been shown that nursing staff are more likely to adhere to intervention programmes when they understand the underlying principles (Fenwick, 1995; Whitworth *et al*, 1999).

It is anticipated that through greater collaboration, clinical psychologists would encourage forensic nursing staff to: consider the implementation of psychological interventions for aggressive challenging behaviour as an important part of their role; and feel valued by the clinical psychologists who often ask it of them.

4.5. Future research

The majority of studies investigating forensic nursing staff's causal attributions and explanations for a behaviour have focused on participant attributions about an individual's index offence or offending behaviour (e.g. see Henderson & Hewston, 1984; Quinsey & Cyr, 1986; Gresswell, 1988; Reid & Millard, 1997; Richman *et al*, 1999). Furthermore, little attention has been paid to the influence of diagnostic label of the patient on the attributions of the forensic nursing staff who work with them. The current study, however, focused on the causal attributions made and explanations for an aggressive challenging behaviour given by forensic nursing staff, who work with different patient groups. Therefore, the findings of the current study contribute toward both the growing general body of literature concerning nursing staff attributions about aggressive challenging

behaviour and more specifically, the forensic- oriented literature. Moreover, the findings of the current study highlight areas that might warrant future investigation.

Previous research studies that have investigated nursing staff causal attributions have suggested the existence of a relationship between attributions of control, stability and optimism (Sharrock *et al*, 1990; Dagnan *et al*, 1998) and control and affect (Fenwick, 1997; Dagnan *et al*, 1998; Stanley & Standen, 2000), both of which may influence motivation and willingness to help. The current study, whilst providing a preliminary understanding of a population of forensic nursing staff' causal attributions and therapeutic optimism, did not include measures of affect or helping behaviour. In light of previous literature, that suggests that patient diagnosis may influence nursing staff affect, which in turn influences helping behaviour (e.g. Markham & Trower, 2003), this potential relationship warrants further exploration. In addition, considering the limitations of the measure used to assess participants' causal attributions in the current study, a measure which assesses attributions of causality using several items (e.g. Attribution Style Questionnaire (Peterson *et al*, 1982)) might yield a more accurate representation of the role of nursing staff causal attributions in this attribution- affect- optimism-helping relationship. It is anticipated that future research addressing this issue would contribute to the current study's supposition about forensic nursing staff's propensity to implement psychological interventions for aggressive challenging behaviour.

The current study raised concerns about the clinical utility of the Challenging Behaviour Attributions Scale (CHABA) (Hastings, 1997b) with a forensic nursing staff population. Most particularly constraints were noted about the content validity of the scale. The

existing subscales of the CHABA did not seem to reflect the array of causal explanations reported by participants in response to the open-ended question. For example, examination of participant responses demonstrated a range of factors pertaining to mental ill-health, while the CHABA focuses on physical health problems. Aspects of the physical environment as reflected by the CHABA did not perhaps accurately represent conditions of high security. Furthermore, participants cited a range of causal explanations that did not fit with any of the causal models in the CHABA (e.g. upbringing; social skills deficits). Therefore, it is suggested that future research concerning the measurement of forensic nursing staff causal explanations for aggressive challenging behaviour should address this issue.

The CHABA was developed through interviews with learning disability care staff and an appreciation of the causal models of challenging behaviour reflected in the learning disability literature (Hastings, 1997b). Therefore, a thorough examination of the forensic literature and interview studies with forensic nursing staff might inform the development of a new and more applicable research tool. Alternatively, it might be more practical to attempt to modify Hastings's existing tool. Participants reported explanations for an episode of aggressive challenging behaviour from the current study might be used to inform future researchers as to the type of factors/ models forensic nursing staff consider causally relevant when developing/ modifying this research tool.

Despite having been developed for use within learning disability services, the CHABA has been criticised for its poor content validity (Grey *et al*, 2002). As such it is arguable that any modified or newly developed tool using the causal models suggested by forensic

nursing staff could be applied to other staff populations in order to test its utility in other clinical situations.

Finally, any future research with a high security forensic nursing staff population should strive to increase participant numbers. Research studies with small population sizes will continue to find it difficult to generalise results to the wider forensic nursing staff population until this problem is overcome. Given that in the current study, participants who worked with different patient groups did not vary significantly in relation to their training and demographic characteristics, it might be profitable to recruit future participants from more than one high security setting.

4.6. Conclusions

The aim of the current study was to investigate whether forensic nursing staff who worked with different patient groups (learning disability, mental health, or personality disorder): made different causal attributions for an episode of aggressive challenging behaviour; drew on different causal models to explain the aggressive challenging behaviour; reported different levels of optimism regarding the efficacy of therapeutic intervention for the aggressive challenging behaviour; and reported different beliefs about the risk of future occurrences of the aggressive challenging behaviour.

Forensic nursing staff who worked with different patient groups did not make different causal attributions about the aggressive challenging behaviour. Furthermore, all three groups reported fairly high levels of optimism about the efficacy of therapeutic interventions in reducing aggressive challenging behaviour. Accordingly, beliefs about

future risk of the aggressive challenging behaviour decreased over time, as did beliefs about perceived security requirements.

Forensic nursing staff appeared to hold concurrent explanations for the aggressive challenging behaviour, although some explanations were considered more causally relevant than others (e.g. emotional factors and learned behaviour). In the current study, forensic nursing staff cited a range of therapeutic interventions that they considered as potentially helpful in treating aggressive challenging behaviour. Encouragingly, psychological interventions and aspects of the therapeutic relationship were most highly rated. However, when considering staff training about the causes of and responses to aggressive challenging behaviour, it seemed that forensic nursing staff were more likely to consider reactive physical strategies rather than the more proactive psychological approaches they believed to be helpful.

Overall, it was demonstrated that forensic nursing staff who worked with different patient groups varied little in terms of their causal attributions and explanations for aggressive challenging behaviour. Indeed it was shown that forensic nursing staff constitute a fairly homogenous population, varying little in terms of their demographic characteristics, work experiences and training.

Forensic nursing staff attributions of and explanations for the aggressive challenging behaviour of their patients, and their optimism regarding treatment efficacy, is an area that has received little research attention. Nursing staff attributions have been identified as a source of influence on their responses to challenging behaviour (Sharrock *et al*, 1990;

Markham & Trower, 2003), most notably in relation to their willingness to implement therapeutic interventions (Fenwick, 1995). Therefore, it is anticipated that the current study makes a new contribution to both the literature pertaining to challenging behaviour and forensic research in general. Furthermore, the research methodology used in the current study, and the limitations identified therein, point toward directions for future researchers interested in investigating this area. Finally, an enhanced role for clinical psychologists, who are required to work with forensic nursing staff when assessing and treating aggressive challenging behaviour, has been identified.

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STAFF QUESTIONNAIRE

**Forensic Nursing Staff Causal Attributions About
The Aggressive Behaviour Displayed By Their
Patients, And Their Beliefs About These Patients'
Treatability And Risk, In A High-Security Hospital.**

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Thank you for completing this questionnaire

Staff Questionnaire

Thank you for agreeing to participate in this study. Now read the description below before answering the following questions.

Description

Tom is a patient at a High Security Hospital. He has complex social and psychological difficulties. Sometimes Tom is aggressive toward the nurses who care for him and the patients he lives with. He will threaten and push people, and on occasion he will kick and punch people.

1) In your opinion how realistic is this story?

Not at all 1 2 3 4 5 Very
realistic realistic

2) Have you experienced this type of situation before?

Yes No

3) In your opinion is Tom's aggressive behaviour due to factors which he can control or factors which he cannot control?

1 2 3 4 5
Can definitely Cannot control
control

4) In your opinion does Tom's aggressive behaviour occur because of something about him or is it due to something about the situation/ circumstances?

1 2 3 4 5
Due to Tom Due to situation

5) In your opinion does Tom's aggressive behaviour occur because of something which changes from day to day, or because of something which stays more or less the same?

1 2 3 4 5
Changes from Stays the same
day to day

Based on the story you have just read, and what you know about people like Tom, please answer the following questions. Please circle the appropriate answers or write in the spaces provided.

People like Tom sometimes engage in aggressive behaviours. These are behaviours that might be dangerous to others (e.g., kicking, punching, or biting other patients or staff). I am interested in why YOU think that people like Tom display aggressive behaviour such as those described above. You have very little information compared to what you might have if you worked with Tom. Therefore, think about the **most likely** reasons for Tom to behave aggressively.

1) Based on your knowledge and experiences, can you think of any reasons why people like Tom might engage in aggressive behaviour?

.....
.....
.....
.....
.....
.....

Now, consider **how likely it is** that each of the following statements are reasons for people like Tom engaging in aggressive behaviour. Simply think about the most likely reasons for people like Tom behaving in this way.

Please give your response to each of the possible reasons, and use the scale below each reason to indicate your opinion. The key shows what the points on the scales mean.

- VUL = Very Unlikely
- UL = Unlikely
- E = Equally Likely/ Unlikely
- L = Likely
- VL = Very Likely

Please indicate your response by placing a circle around the appropriate point of the scale.

People like Tom engage in aggressive behaviours because.....

- 2) They are given things to do that are too difficult for them
VUL UL E L VL
- 3) They are physically ill
VUL UL E L VL
- 4) They do not like bright lights
VUL UL E L VL
- 5) They are tired
VUL UL E L VL

6) They cannot cope with high levels of stress	VUL	UL	E	L	VL
7) Their ward is too crowded with people	VUL	UL	E	L	VL
8) They are bored	VUL	UL	E	L	VL
9) Of the medication they are given	VUL	UL	E	L	VL
10) They are unhappy	VUL	UL	E	L	VL
11) They have not got something they wanted	VUL	UL	E	L	VL
12) They live in unpleasant surroundings	VUL	UL	E	L	VL
13) They enjoy it	VUL	UL	E	L	VL
14) They are in a bad mood	VUL	UL	E	L	VL
15) High humidity makes them uncomfortable	VUL	UL	E	L	VL
16) They are worried about something	VUL	UL	E	L	VL
17) Of some biological process in their body	VUL	UL	E	L	VL
18) Their surroundings are too warm/cold	VUL	UL	E	L	VL
19) They want something	VUL	UL	E	L	VL
20) They are angry	VUL	UL	E	L	VL
21) There is nothing else for them to do	VUL	UL	E	L	VL
22) They live in a noisy place	VUL	UL	E	L	VL
23) They feel let down by somebody	VUL	UL	E	L	VL
24) They are physically disabled	VUL	UL	E	L	VL
25) There is not much space in their ward to move around in	VUL	UL	E	L	VL
26) They get left on their own	VUL	UL	E	L	VL
27) They are hungry or thirsty	VUL	UL	E	L	VL
28) They are frightened	VUL	UL	E	L	VL
29) Somebody they dislike is nearby	VUL	UL	E	L	VL
30) People do not talk to them very much	VUL	UL	E	L	VL
31) They want to avoid uninteresting tasks	VUL	UL	E	L	VL
32) They do not go outdoors very much	VUL	UL	E	L	VL
33) They are rarely given activities to do	VUL	UL	E	L	VL
34) They want attention from other people	VUL	UL	E	L	VL

Intervention and Future Risk

Now I would like to ask you some other questions about Tom's aggressive behaviour. Whilst appreciating that determining an individuals' future risk and behaviour can be difficult I would like you to answer the following questions as best you can.

1) In your opinion how likely is it that therapeutic intervention will help with reducing the aggressive behaviour of people like Tom?

VUL UL E L VL

2) In your opinion what kinds of therapeutic intervention do you think would be helpful in reducing the aggressive behaviour of people like Tom?

.....
.....
.....
.....
.....
.....

3) In your opinion what is the risk of someone like Tom engaging in aggressive behaviour in.....

The Short Term (e.g. 1-3 years)	low risk	medium risk	high risk
The Medium Term (e.g. 4-8 years)	low risk	medium risk	high risk
The Long Term (e.g. more than 9 years)	low risk	medium risk	high risk

4) In your opinion how often would someone like Tom engage in aggressive behaviour in.....

The Short Term (e.g. 1-3 years)	Rarely	often	very often
The Medium Term (e.g. 4-8 years)	Rarely	often	very often
The Long Term (e.g. more than 9 years)	Rarely	often	very often

5) What is your Gender?: male female

6) What is your Age?:

7) How long have you worked in a forensic setting?

..... yearsmonths

8) Have you worked in any other areas of forensic mental health?

Yes No

If yes, please specify:
.....
.....
.....

9) Have you previously worked in a non- forensic setting?
(e.g. Adult mental health)

Yes No

If yes, please specify:
.....
.....
.....

10) How long have you worked within mental health services in total?

.....yearsmonths

11) Have you received any training about *the causes* of aggressive behaviour?

Yes No

If yes, could you please describe the types of training you have received (e.g. what the training involved, length of training, when it was undertaken).

.....
.....
.....
.....
.....
.....
.....

12) How useful did you find this training?

Not very Useful 1 2 3 4 5 Extremely useful

13) Have you received any training on *how to respond to aggressive behaviour*?

Yes No

If yes, could you please describe the types of training you received (e.g. what the training involved, length of training, when it was undertaken).

.....
.....
.....
.....
.....
.....

14) How useful did you find this training?

Not very Useful 1 2 3 4 5 Extremely useful

Thank you for completing this questionnaire
Please place your completed questionnaire in the envelope provided

Causal Attribution Questionnaire (Tynan & Allen, 2002)

- 3) In your opinion is Tom's aggressive behaviour due to factors which he can control or factors which he cannot control?

1 2 3 4 5
Can definitely Cannot control
control

- 4) In your opinion does Tom's aggressive behaviour occur because of something about him or is it due to something about the situation/ circumstances?

1 2 3 4 5
Due to Tom Due to situation

- 5) In your opinion does Tom's aggressive behaviour occur because of something which changes from day to day, or because of something which stays more or less the same?

1 2 3 4 5
Changes from Stays the same
day to day

The Challenging Behaviour Attributions Scale (CHABA) (Hastings, 1997b)

Based on the story you have just read, and what you know about people like Tom, please answer the following questions. Please circle the appropriate answers or write in the spaces provided.

People like Tom sometimes engage in aggressive behaviours. These are behaviours that might be dangerous to others (e.g., kicking, punching, or biting other patients or staff). I am interested in why YOU think that people like Tom display aggressive behaviour such as those described above. You have very little information compared to what you might have if you worked with Tom. Therefore, think about the **most likely** reasons for Tom to behave aggressively.

1) Based on your knowledge and experiences, can you think of any reasons why people like Tom might engage in aggressive behaviour?

.....
.....
.....
.....
.....
.....

Now, consider **how likely it is** that each of the following statements are reasons for people like Tom engaging in aggressive behaviour. Simply think about the most likely reasons for people like Tom behaving in this way.

Please give your response to each of the possible reasons, and use the scale below each reason to indicate your opinion. The key shows what the points on the scales mean.

- VUL = Very Unlikely
- UL = Unlikely
- E = Equally Likely/ Unlikely
- L = Likely
- VL = Very Likely

Please indicate your response by placing a circle around the appropriate point of the scale.

People like Tom engage in aggressive behaviours because.....

- 2) They are given things to do that are too difficult for them
VUL UL E L VL
- 3) They are physically ill
VUL UL E L VL
- 4) They do not like bright lights
VUL UL E L VL

5) They are tired	VUL	UL	E	L	VL
6) They cannot cope with high levels of stress	VUL	UL	E	L	VL
7) Their ward is too crowded with people	VUL	UL	E	L	VL
8) They are bored	VUL	UL	E	L	VL
9) Of the medication they are given	VUL	UL	E	L	VL
10) They are unhappy	VUL	UL	E	L	VL
11) They have not got something they wanted	VUL	UL	E	L	VL
12) They live in unpleasant surroundings	VUL	UL	E	L	VL
13) They enjoy it	VUL	UL	E	L	VL
14) They are in a bad mood	VUL	UL	E	L	VL
15) High humidity makes them uncomfortable	VUL	UL	E	L	VL
16) They are worried about something	VUL	UL	E	L	VL
17) Of some biological process in their body	VUL	UL	E	L	VL
18) Their surroundings are too warm/cold	VUL	UL	E	L	VL
19) They want something	VUL	UL	E	L	VL
20) They are angry	VUL	UL	E	L	VL
21) There is nothing else for them to do	VUL	UL	E	L	VL
22) They live in a noisy place	VUL	UL	E	L	VL
23) They feel let down by somebody	VUL	UL	E	L	VL
24) They are physically disabled	VUL	UL	E	L	VL
25) There is not much space in their ward to move around in	VUL	UL	E	L	VL
26) They get left on their own	VUL	UL	E	L	VL
27) They are hungry or thirsty	VUL	UL	E	L	VL
28) They are frightened	VUL	UL	E	L	VL

- | | | | | | |
|--|-----|----|---|---|----|
| 29) Somebody they dislike is nearby | VUL | UL | E | L | VL |
| 30) People do not talk to them very much | VUL | UL | E | L | VL |
| 31) They want to avoid uninteresting tasks | VUL | UL | E | L | VL |
| 32) They do not go outdoors very much | VUL | UL | E | L | VL |
| 33) They are rarely given activities to do | VUL | UL | E | L | VL |
| 34) They want attention from other people | VUL | UL | E | L | VL |

Optimism, Intervention and Future Risk

Now I would like to ask you some other questions about Tom's aggressive behaviour. Whilst appreciating that determining an individuals' future risk and behaviour can be difficult I would like you to answer the following questions as best you can.

- 1) In your opinion how likely is it that therapeutic intervention will help with reducing the aggressive behaviour of people like Tom?

VUL UL E L VL

- 2) In your opinion what kinds of therapeutic intervention do you think would be helpful in reducing the aggressive behaviour of people like Tom?

.....
.....
.....
.....
.....
.....

- 3) In your opinion what is the risk of someone like Tom engaging in aggressive behaviour in.....

The Short Term (e.g. 1-3 years)	low risk	medium risk	high risk
The Medium Term (e.g. 4-8 years)	low risk	medium risk	high risk
The Long Term (e.g. more than 9 years)	low risk	medium risk	high risk

- 4) In your opinion how often would someone like Tom engage in aggressive behaviour in.....

The Short Term (e.g. 1-3 years)	Rarely	often	very often
The Medium Term (e.g. 4-8 years)	Rarely	often	very often
The Long Term (e.g. more than 9 years)	Rarely	often	very often

5) In your opinion how severe would the aggressive behaviour that someone like Tom would engage in be.....

The Short Term (e.g. 1-3 years)	low severity	medium severity	high severity
The Medium Term (4-8 years)	low severity	medium severity	high severity
The Long Term (e.g. more than 9 years)	low severity	medium severity	high severity

6) In your opinion how likely is it that the level of security required to care for someone like Tom will reduce in....

The Short Term (1-3 years)	VUL	UL	E	L	VL
The Medium Term (4-8 years)	VUL	UL	E	L	VL
The Long Term (more than 9 years)	VUL	UL	E	L	VL

Demographics

About You

Now I would like to ask some questions about you. Please circle the appropriate answers or write in the spaces provided.

1) With which group of patients do you usually work?

Learning Disabilities Mental Illness Personality Disorder

2) What type of ward do you usually work on (e.g. admission)?

.....

3) Job Title (including grade if applicable):

4) Did you receive any formal training/ qualification prior to taking up your post?

Yes No

If yes, please specify:

.....
.....
.....

5) What is your Gender?: male female

6) What is your Age?:

7) How long have you worked in a forensic setting?

..... yearsmonths

8) Have you worked in any other areas of forensic mental health?

Yes No

If yes, please specify:

.....
.....
.....

9) Have you previously worked in a non- forensic setting?
(e.g. Adult mental health)

Yes No

11th March 2004

Dear

Re: Research study "An investigation into forensic nursing staff causal attributions about the aggressive behaviour displayed by their patients, in a high security hospital.

You may remember that I presented the proposal for my research at the ward managers meeting (4th February 2004). I have now received ethical approval for my study to commence and, as agreed at the meeting, I am writing to ask if you would be willing for me to come and meet your staff and ask if they would be willing to participate.

I am aware that not all ward managers were able to come to the meeting so here is a brief description of what the study entails:

- Nursing staff who agree to participate would be required to read a brief vignette describing an episode of aggressive behaviour and then complete a questionnaire (including questions about the possible causes of the behaviour, and some general questions about themselves).
- The questionnaire is anonymous (no names are required) and staff would be asked to put their completed questionnaire in an envelope (provided). This would then be sent via internal mail to me.
- I am intending to include all staff (qualified and unqualified) within the Learning disability, Mental health and Personality disorder directorates in this study.

If you would be willing for your staff to participate I would like to attend a handover or perhaps another staff meeting in order to introduce myself to your staff and give out the questionnaire.

I shall contact you via phone over the next week or two (due to lack of e-mail at the moment). However, if you should have any queries in the meantime please feel free to contact me on extension (psychology dept).

Yours

Heidi Carnell
Trainee Clinical Psychologist
(On placement at Hospital: Learning disabilities Directorate.)

February, 2004

PARTICIPANT INFORMATION SHEET

Title of project: Forensic nursing staff causal attributions about the aggressive behaviour displayed by their patients, and their beliefs about these patients' treatability and risk in a high-security hospital.

Researcher: Heidi Carnell: I am a Trainee Clinical Psychologist at the University of Leicester and employed by Leicestershire Partnerships NHS Trust. I am currently undertaking a training placement at Hospital.

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information.

Thank you for reading this.

What is the purpose of the study?

The purpose of this study is to investigate the causal attributions that forensic nursing staff make about the aggressive behaviour of their patients. *A causal attribution can be defined as the explanation that people make about the causes of their own and other people's behaviour.* Forensic nursing staff opinions about possible treatment (therapeutic interventions) and risk (future occurrences of the aggressive behaviour) are also being investigated.

Why have I been chosen?

All nursing staff within the Mental Health, Personality Disorder and Learning Disabilities Directorates are being invited to participate in this research project.

Do I have to take part?

It is up to you to decide whether or not to take part in this study. If you do decide to take part you will be given this information

sheet to keep. If you do decide to take part you are still free to withdraw at any time and without giving a reason.

What will happen to me if I take part and what do I have to do?

If you decide to participate in this study you will be given a questionnaire pack. This pack consists of:

- A brief description about an episode of aggressive behaviour.
- Some questions about the possible causes of the aggressive behaviour.
- Some questions about possible therapeutic interventions that might reduce the aggressive behaviour.
- Some questions about possible future occurrences of the aggressive behaviour
- Some questions about you.
- An envelope addressed to the researcher.

After receiving the questionnaire pack you will be asked to read the description of the aggressive behaviour. You will then be asked to complete the questions contained in the pack. Once you have completed the questionnaire you will be required to place the completed questionnaire in the envelope provided, seal it, and return it to the researcher.

Will my taking part be kept confidential?

This questionnaire is completely anonymous and it will not be possible to identify the responses of individual participants. The data in its raw form will be kept confidential and at no time be accessible to anyone other than the researcher and the researcher's academic supervisors.

The chairman of Staff side and the Prison Officer's Association has been consulted and is happy for this study to take place. He is also satisfied that anonymity will be maintained.

What will happen to the results of the study?

The results of this research study will be written up as a thesis in accordance with the requirements of the fulfilment of the degree of Doctorate in Clinical Psychology. A briefer version of findings will also be written up for possible publication in a relevant psychological or nursing journal.

Research findings will also be made available to nursing staff by way of:

- A presentation made to the Senior Nurses' Forum
- All wards within the Mental Health, Personality Disorder, and Learning Disability Directorates will receive a summary of the

research findings (you may also contact the researcher should you wish to receive further information)

Who is organising and funding the research?

This study is being organised and funded by
NHS Trust, and
NHS Trust.

Who has reviewed the study?

This research study has been reviewed and approved by the
Senior Nurses' Forum at Hospital.

The Local Research Ethics Committee has reviewed this study. A local Research Ethics Committee (LREC) is a body appointed by the Strategic Health Authority. It consists of a number of members both medical and non-medical who review proposed research within the health district. Their role is to consider the ethical merits of any research, that is to say, a view is taken as to whether the potential advantages of the proposed research, outweigh significant risk to which the participant may be exposed. Research projects are not undertaken unless LREC approval has been gained.

Thank you for considering taking part in this study

Contact for further info

You can contact the researcher at



Local Research Ethics Committee

10 March 2004

Miss Heidi Carnell
Trainee Clinical Psychologist
Department of Clinical Psychology
104 Regent Road
Leicester
LE1 7LT

Dear Miss Carnell

Forensic Nursing staff causal attributions about aggressive behaviour displayed by their patients, and their beliefs about these patients' treatability and risk, in a high security hospital
REC reference number: NNHA/734

The Chairman on behalf of the LREC has considered your response to the issues raised by the Committee at the first review of your application on 12 January 2004, as set out in our letter dated 2 February 2004. The documents considered were as follows:

Application form dated 21 November 2003
Research Protocol
Staff Questionnaire
Development of vignette
Participant Information Sheet dated February 2004

The Chairman, acting under delegated authority, is satisfied that your response has fulfilled the requirements of the Committee. You are therefore given approval for your research on ethical grounds providing you comply with the conditions set out below:

Conditions of approval:

- **The role of a Research Ethics Committee should be inserted in the Participant Information Sheet under the heading 'Who has reviewed the study?' A suggested paragraph is enclosed.**
- **At the end of the Participant Information Sheet, change 'Thank you for taking part' to 'Thank you for considering taking part'**
- You do not undertake this research in any NHS organisation until the relevant NHS management approval has been received.
- You do not deviate from, or make changes to, the protocol without the prior written approval of the LREC, except where this is necessary to eliminate

immediate hazards to research participants or when the change involves only logistical or administrative aspects of the research. In such cases, the LREC should be informed within seven days of the implementation of the change. Likewise, you should also seek the relevant NHS management approval for the amendment, or inform the NHS organisation of any logistical or administrative changes.

- You complete and return the standard progress report form to the LREC one year from the date of this letter and thereafter on an annual basis. This form should also be used to notify the Committee when your research is completed and should be sent to the REC within three months of completion. For a copy of the progress report please see www.corec.org.uk.
- If you decide to terminate this research prematurely, a progress report form should be sent to the LREC within 15 days, indicating the reason for the early termination. For a copy of the progress report please see www.corec.org.uk.
- You must advise the LREC of all Suspected Serious Adverse Reactions (SSARs) and all Suspected Unexpected Serious Adverse Reactions (SUSARs).
- You advise the LREC of any unusual or unexpected results that raise questions about the safety of the research.
- The project must be started within three years of the date of this letter.

Your application has been given a unique reference number, please use it on all correspondence with the LREC.

LOCAL RESEARCH ETHICS COMMITTEE

cc:

15th March 2004

Miss Heidi Carnell
Trainee Clinical Psychologist
Department of Clinical Psychology
104 Regent Road
Leicester
LE1 7LT

Dear Miss Carnell

Re: Forensic Nursing staff causal attributions about aggressive behaviour displayed by their patients, and their beliefs about these patients' treatability and risk, in a high security hospital

I am writing to confirm that this study is authorised to take place as we are now in receipt of Ethical Approval (10/03/04) and you have completed the R&D registration process.

This is a very interesting and important field of study. The Trust R&D Office follows up such work to assess its impact and influence on practice and policy. I would be grateful if you could send me a copy of the findings and recommendations if there are any when the project has completed.

All research registered with the R&D Office automatically gets included in the National Research Register (<http://www.update-software.com/national/>), and information on all projects is updated quarterly. If you wish to provide updates or there are any changes to the study, please let us know.