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**Does Staff Cognitive Demand Influence Staff Attributions of Challenging
Behaviour for Individuals with Dementia in Care Homes?**

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By

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Abstract

There is a lack of a conceptual framework as to how cognitive demand and attributional variables interact and influence staff beliefs in response to challenging behaviour. This study tests the applicability of Gilberts (1989) attributions framework for understanding how staff cognitive demand influences staff attributions of challenging behaviour in a residential setting within Weiner's (1986) model of attributional dimensions. The use of this model may also serve to support the applicability of Gilberts' (1989) model in Geriatric settings in the context of previous research findings. The basic notion that is outlined in the introduction highlights that when we attempt to perform several operations at once, then this often results in the failure of the least automatic (most effortful) operation. A rationale for cognitive demand attributions is based on the research that has suggested that people go through a two-stage process when making attributions (Gilbert, 1989, 1991). Firstly, people assume that a person's behaviour is something to do with their disposition (internal factors) before an attempt is made to explain their attributions externally, accordingly taking into account external situational factors. It may be argued that if a person is already pre-occupied, distracted and experiencing high levels of cognitive demand when making an attribution about another person's behaviour, they may not get to the second stage, as making such adjustments needs more concentration and effort than the first step which occurs spontaneously and quickly (Gilbert & Osbourne, 1989). Therefore, the implication is that staff experiencing high levels of cognitive demand would be more likely to make negative and blaming internal dispositional attributions of challenging behaviour. They are more likely to report higher levels of controllability for the behaviour and report that they feel less optimistic that the behaviour would change and that it affects wider areas of their life.

The study employed a cross-over experimental design. Participants were asked to watch 2 video clips of challenging behaviour, one under conditions of cognitive demand (cognitive demand) and one under conditions of no extra demand (non-demand condition). A total of 46 staff working in nursing and residential homes for the elderly completed a self-reported attributions questionnaire developed for the purpose of the study, demographics questionnaire and stress measures.

Results

In general, the hypothesised model in the current study was found to be partially supported as results suggest that cognitive demand does have a role in determining staff's attributions of internality. There is evidence that more internal attributions are made under cognitive demand conditions for aggressive behaviour. No support however was found for "other" behavioural classifications. More weighting was given in the interpretations for aggression as the content of the videos was considered to be more matched in terms of behavioural typologies displayed in the video clips. Partial support was found for the role of cognitive demand on attributions of controllability. A significant relationship was found between cognitive condition and attributional dimension of controllability for "other" behavioural classifications. The results indicate that participants attribute higher levels of controllability whilst under cognitive demand conditions than whilst under non-demand conditions. However, no such support for a relationship between cognitive condition and attributional dimensions of controllability for ratings of aggression was found. The model was not found to be generalised to the other attributional dimensions identified within Weiner's model - no support was found for the role of cognitive demand on the other main attributional dimensions (Stability, Generability, and Globality) for either "aggression" or "other" behavioural classifications. No effect of stress was found.

Conclusion

The study set out to test the applicability of Gilbert's (1989) attributional framework for understanding how staff cognitive demand influences staff attributions of challenging behaviour in a residential care setting and with reference to Weiner's (1986) attributional dimensions. The hypothesised model in the current study was found to be supported, as results suggest that cognitive demand does have a primary role in determining staff attributions of internality and controllability. The model was not found to be generalised to the other attributional dimensions identified within Weiner's model apart from partial support for the influence on control.

In conclusion cognitive demand was found to impair care staffs' ability to use contextual/situational information when forming causal attributions regarding an individual with dementia displaying challenging behaviour.

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Chapter 1

INTRODUCTION

1.1 Dementia and Challenging Behaviour

Dementia is a degenerative disease that affects both cognition and behaviour, and it is often behavioural problems that result in reduced quality of life for the person with dementia and the staff who serve them in residential and nursing homes. Dementia affects around 5% of the population over the age of 60 years and increasing to 20 % in people over 80 years of age (Livingston & Hinchcliffe, 1993). The number of people living over the age of 80 is set to increase by almost half between 1995 and 2025, with the number of people living to 90 doubling (See National Service Framework-Older People, department of Health, 2001). The prevalence and severity of dementia in local authority residential homes in the UK has increased as a reflection of our ageing population (Wood and Castledale, 1993) and also as a result of a reduction in local authority residential provision, resulting in greater numbers of elderly people being cared for within the private and voluntary sector (Darton and Wright, 1993). Clearly, the treatment and management of those with Dementia will become an increasing health concern as the population ages and the prevalence increases.

Dementia is associated with changes in both cognition and behaviour and 70-90% of sufferers may present with behavioural disturbances (Teri, Rabins, Whitehouse, Berg, Reisberg, Sunderland et al. 1992). Behavioural and psychiatric symptoms of dementia (BPSD) include psychosis, depression, anxiety, euphoria, eating and sleeping disturbance, agitation, aggression, excessive verbal behaviour (for example shouting),

wandering, over activity, loss of sexual inhibition and apathy (Finkel, Costa, & Silva 1996). A large proportion of people with dementia engage in activities that have been labelled as “challenging behaviour” (CB). Actions commonly labelled in this way include aggression towards others and stereotyped behaviour such as wandering (Hastings, Remington & Hopper 1995). Emerson (1995) defined 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 the use of, or result in the person being denied access to ordinary community” (pp. 4-5)

The term challenging behaviour has its origins in the field of learning disabilities and incorporates a psychosocial approach to the aetiology of the behaviour which can be influenced by factors that are intrinsic and extrinsic to the person with dementia.

The label challenging behaviour(s) avoids the negative connotations about the person with dementia associated with other descriptions, such as the term difficult or disruptive behaviour, problematic behaviour, behavioural disturbance, aberrant or disorder behaviour and non-cognitive symptoms - all of which are commonly used terms used to describe the range of behaviours that staff caring for people with dementia have difficulty in managing. Such terms imply that the behaviour is intrinsic to the person and that environmental factors do not contribute to aetiology.

Burgio & Bourgeois, (1992) argue that the majority of elderly residential and nursing home residents, whether cognitively impaired or not, are believed to exhibit some form of behavioural disturbance. These are however, more marked with clients affected by dementia. The changes associated with ageing, such as sensory loss and reduced

mobility may also result in depression, boredom, confusion and social isolation. Moreover this may be compounded by the loss of privacy and sense of isolation and abandonment often reported by older people who are hospitalised or placed in residential care, resulting in the appearance of challenging behaviour (English & Morse, 1998).

The link between dementia and challenging behaviour is clear, particularly when considering the population who reside in nursing and residential home. Cohen-Mansfield (1986) found 73% of residents with dementia exhibited one or more forms of challenging behaviour, including aggression and agitation. Challenging behaviour is known to increase with the severity of the dementia, but does not appear to differ in frequency or type between people diagnosed as having Alzheimer's disease and those diagnosed with multi-infarct dementia (Swearer, J. M., Drachman, D. A., O'Donnel, B.F. & Mitchell, A. L 1998). Woodhouse and Elston (1993) surveyed 126 elderly people living in five local authority homes in East Yorkshire, UK and found that 66% had moderate to severe dementia, with 40% displaying behavioural difficulties. One home reported 204 behavioural problems in 22 residents, with 126 of these behaviours occurring daily.

Behavioural problems are frequently cited as one of the factors that predict institutionalisation (Kasper & Shore, 1994: Haley & Lebine, 1987: Downs, Zarit, Edwards & Steiner-Williams, 1994). As Kane, Saslow & Brundage (1991) point out "cognitive impairment by itself does not require long term care". However behavioural problems have also been referred to as "excess disability", implying that they can respond to treatment and are not an inevitable part of the disease process (Oberleder, 1976). Ragneskog (2001) claims that behavioural symptoms of dementia (BPSD)

results from an interaction between an individual's biological impairment and environmental factors, socio-psychological factors and poor interpersonal relationships between the carer and an individual with dementia. BPSD has multiple negative consequences for the quality of life of both the individual and carers (Chappel & Novak, 1994; Mace, 1990; Steele, Rodner, Chase & Folstein, 1990). BPSD has important clinical consequences such as increased demands on staff resources and increased psychotropic agents. It has also been associated with low staff morale, high absenteeism and turnover rates within residential settings (Hagen & Sayers, 1995). Furthermore, BPSD has been observed to lead to increased use of physical restraint (Sullivan-Marx, Strump, Baumgartun & Maislin, 1999) A recent national survey in Norway showed that physical restraint and limitations of rights were used towards 67% of nursing residents (Kirkevold, 2003).

1.2 Models of CB

Literature has identified a number of aetiological factors in CB. One influential theory of CB has been based on behavioural principles of either positive or negative reinforcement (Carr, 1977). Challenging behaviour may occur because it is positively or negatively reinforced. Some behaviours may be attributed to biological factors; for example aggression has been associated with frontal lobe damage (Grigsby, Kaye, & Robbins, 1995; Miller, Darby, Benson, Cummings, & Miller, 1997), language impairment (Welsh, Corrigan, & Scott, 1996) or decreased levels of serotonin (Palmer, Stratmann, Procter, & Browen, 1998)

Kitwood (1988) developed a social-environmental perspective and introduced the concept of a "malignant social environment" which may contribute to CB and excessive disability. He further extended the framework to include psychological perspectives such as the person's biography and personality factors. In addition Stokes (2000) identified aspects of the physical environment, such as noise and lighting that can contribute to certain behaviours. Stokes (2000) describes a "multiple pathways" approach to the aetiology of CB, incorporating psychogenic, biogenic and environmental aspects. Stokes argues that CB can act as a barrier to communication, where difficult behaviour may serve the function of poorly communicated basic psychological needs such as security, safety, and so on. Stokes approach of understanding dementia encapsulates the biological, psychological, social environment and physical environmental perspectives to aetiology

1.3 Person Centred Care

The foundations of "Person Centred Care" (PCC) in dementia care are based on the work of Kitwood (1988). The term person centered care originated from Carl Rogers' client centered therapy movement, but was unused in dementia care until introduced by Kitwood in 1988. The term encompasses the key belief that person centered dementia care should emphasis communication, relationship and individuality. He was a leading researcher in the development of the way we think about people who have dementia. Historically, dementia has sat within the fields of medicine and psychiatry which led to an over-emphasis on the "treatment" of people with dementia. This included focusing on the physical changes that are happening in the brain and how best to "manage" the symptoms related to these cognitive changes.

However, what was missing from this approach is the recognition of the person with the illness, who they are, their life before the illness and how they currently feel. The approach also overlooked the influence of social and physical environments of a person with dementia

PCC, on the other hand, seeks to view the person with dementia as a whole and how the person is influenced by factors beyond the physical changes in the brain.

Principles of PCC

A person centered approach subscribes to the following principles:

Uniqueness

Regardless of illness, all people are unique and this must be acknowledged for people with dementia.

Complexity

Humans are complex beings and a myriad of factors influence the way we see and respond to the world around us.

Professor Kitwood summed up the influences on a person with dementia as:

$$D = P + B + H + NI + SP$$

Where:

D = the person with dementia's presentation

P = Personality

B = Biography (or a person's life history)

H = Physical Health status

NI = Neurological Impairment

SP = Social psychology (or the social and physical world around us)

(Kitwood, 1993)

Enabling

It is all too easy to focus on the disability and loss associated with cognitive impairment. There is a need to recognize the strengths and abilities of people with dementia and ensure opportunities exist for them to be utilized.

Personhood

This refers to the recognition of a sense of self, who we are and what place we hold in the world around us. Personhood is an intrinsic part of PCC and places an emphasis on the positive effects of daily interaction with other people. PCC teaches the recognition of well-being and ill-being of personhood.

Value of Others

PCC is not just about the way we interact with a person with dementia but also recognizes the personhood of all people. This includes organizations valuing the important roles of direct care staff, the formulation of policies and procedures and the way staff are supported by each other and by the organization.

A New Culture in Dementia Care

The development of PCC has led to a "new culture" in the way we look at the needs of people with dementia. This involves the way we support people with dementia. PCC highlights how the environment can influence individuals with dementia and more specifically how staff behaviour may maintain and cause challenging behaviour. From this perspective challenging behaviour is seen as a communication of unmet needs and communication difficulties.

1.4 Staff Responses to CB

A number of studies have investigated the way in which care staff respond to challenging behaviour. Challenging behaviour is likely to raise strong feelings for staff. Staff commonly report annoyance, anger, fear, sadness, and despair (Hastings & Remington, 1995, Bromley and Emerson, 1995). Hastings (1995), within the learning disabilities field, completed an exploratory interview study which investigated the factors that influence care staff's responses to challenging behaviour. The care staff's responses indicated that challenging behaviour caused them to experience negative emotional states themselves, such as experiencing feelings of sadness and anger. A total of 53% of care staff said that their own emotions influenced their responses to the service user's behaviour. Hasting and Remington (1995) investigated the emotional responses of nurses and students working with individuals with LD and challenging behaviour. They were asked to complete a questionnaire regarding their own emotional reactions to one of three behavioural descriptions of challenging behaviour (vignettes). Participant's ratings suggested differing emotions relating to different behavioural typologies. Participants were reported to feel more sad when witnessing self-injurious behaviour than stereotyped behaviour and less likely to feel afraid when dealing with stereotyped behaviour than aggressive behaviour. The literature has identified a number of ways in which staff management of these feelings can have a negative impact on their work with clients. Feelings of helplessness may deter staff from intervening at all (Bromley & Emerson, 1995). Alternatively, unpleasant feelings about behaviour may lead staff to avoid clients, or to take quick but ineffective action. The desire to reduce the unpleasant emotional reaction can lead to staff adopting responses such as providing immediate attention which stop the behaviour in the short term but maintain it in the long term. Inaction, avoidance, and maintenance

contingencies are all likely to be detrimental to the well-being of both clients and staff in the long term. Felce (1995) observed the behaviours of 16 individuals who displayed severe challenging behaviour and the interaction that they received from staff. The observations were recorded on a portable computer that was programmed for multiple-category real-time data capture (Repp & Felce 1990). The result indicated that when the resident displayed challenging behaviour, this resulted in the smallest share of staff's attention. Hasting and Brown (2002) suggest that staff experience more positive outcomes if they are able to manage the emotional impact of their work through strategies such as planning, humour, and using emotional support. Staff who do not acknowledge the impact of their work, vent their own emotions, blame themselves or disengage from the task thereby increasing the potential of emotional exhaustion associated with burnout.

There is extensive literature on staff stress in dementia. The contribution of difficult, uncooperative or aggressive behaviour or "non-cognitive features", which we refer to as challenging behaviour, predict stress (Donaldson, Tarrier, & Burnes, 1998). However the relationship between residential behaviour and staff distress appears complex, since the majority of difficult and uncooperative behaviour is predictable, not necessarily intrinsic to the resident and appears to occur during self-care activities such as dressing or bathing (Beck, Baldwin, Modlin & Lewis, 1990; Burgener, Jirovec, Murrel & Barton, 1992). It has been suggested that it may be minimised if the caregiver remains relaxed and smiles (Burgener et al 1992). Of interest is the observation that problematic behaviour in a given resident is often perceived differently by different staff and its impact on different staff also differs widely (Everitt, Fields, Soumerai, & Avorn (1991)

A number of studies have investigated the broad staff factors associated with perceptions of behaviour as challenging. Moniz-Cook, Wood & Gardiner (2000) investigated staff factors within a residential and nursing home setting on the perceived management difficulty of challenging behaviour. Three hundred and twenty-six staff were asked to rate their ease of management on 14 vignettes of challenging residents' behaviour. Over 30 staff variables were examined including: demographics, experiences of stress, burnout, job satisfaction, knowledge of dementia and management practices in the home. Only staff anxiety, supervisor support and the potential to relate to residents as individuals predicted perceived management difficulty. Overall, great variations in staff perception were observed; interestingly qualified staff appeared to have greater difficulty in managing challenging behaviour compared to care assistants.

1.5 The influence of Care Staff on Challenging Behaviour in Dementia

There is considerable demand for effective interventions aimed at reducing challenging behaviour exhibited by people with dementia (Moniz-Cook, Wood & Richards, 2001). Behaviours such as physical aggression towards others, excessive verbal behaviour (for example shouting) and "wandering" have multiple negative consequences for the quality of life of clients and their paid and unpaid carers (Chappel & Novak, 1994; Rodney, 1990; Steele et al, 1990). Psychotropic medications are usually used to treat difficult behaviours in institutions and residential settings (Moniz-Cook 1998). Psychotropic agents have been shown to reduce agitation and aggressive behaviour in patients with dementia (De Deyn, Rabhern, Rasmussen, Bockberger, Dauzenberg, Erikson & Lawlor, 1999). They are, however, associated with harmful side-effect such

as increased risk of falls, more rapid cognitive or functional decline and have poor efficacy - some drugs may actually increase the number of problem behaviours (Furniss, Burns, Craig, Cooke, 1998). They have also been linked with severe sensitivity reactions and increased mortality (McShane, Keene, Gedling & Fairburn, 1997). There is growing evidence for the effectiveness of non-pharmacological interventions, i.e. environmental and behavioural methods; there is a developing literature on the psychosocial management of challenging behaviour in care settings. In the UK this has been encouraged by the "new culture of dementia literature concerning psychosocial interventions - these may be grouped into three categories: Studies that aim to prevent or reduce challenging behaviour through altering the physical environment - here aspects of the architecture and design are important; or through altering social environment, by staff training; or by "enriching" both the physical and social environment. Secondly, there are case-studies of reducing challenging behaviour through person-centred and multimodal approaches to intervention. Finally, there are positive psychosocial "therapies", which attempt to experimentally establish the effect of psychosocial approaches to challenging behaviour (Moniz-Cook 1998)

Hastings and Remington (1994) identified four main sources of influence that staff have in response to challenging behaviour:-

- 1) Staff behaviour may be adopted so as to avoid prolonged contact with CB which they find aversive (e.g. frightens them, or make them angry)
- 2) Staff's own beliefs about what challenging behaviour are, why they occur, and what to do about them are likely to contribute to the manner in which staff respond to such behaviour.
- 3) Formal aspects of the service culture may influence staff in two main ways: - There may be formal policies, and training experiences that provide models for staff to use in

their work. In addition, formal contingencies may impact on appropriate and inappropriate staff action. For example, disciplinary procedures may come into force for staff abuse of the service user and staff that are seen to make considerable progress with service users may be rewarded financially.

4) Informal aspects of the service culture have also been argued to be of more importance than more formal aspects. Staff may receive advice from experienced colleagues and learn about “unwritten” ways of working in a particular service. These practices, and other actions, will be encouraged and discouraged through powerful social contingencies (e.g. acceptance in the group, assistance in difficult situations and threats to make trouble with managers)

Carers are often key agents in helping to deliver behavioural interventions to people with challenging behaviour in their care (Hasting and Remington, 1995). The beliefs and emotional responses of care staff working with clients have been suggested to be influential in shaping their responses to these behaviours and determine whether an intervention is effectively implemented or not. According to Bromley and Emerson 1995:

“The belief systems employed by staff to understand the phenomenon of challenging behaviour are of obvious importance..... (This) may impede the delivery of effective support by undermining habilitative or treatment plans”
(1995,P42)

Hasting and Remington (1994) proposed that inappropriate beliefs about the cause of behaviour are likely to result in inappropriate intervention strategies. As the care system for older adults is dependent on residential and nursing home for provision staff are responsible for the delivery of most interventions. The beliefs held by staff have been

suggested to impact on their experience of stress and feelings regarding their work and the probability of appropriately implementing intervention programs (Mitchell & Hasting, 2001). Moreover, staff responses to BPSD may inadvertently reinforce and maintain challenging behaviours (Hastings and Remington, 1994; Oliver 1996).

Hasting & Remington (1994a) interviewed 19 staff, asking them why their clients' challenging behaviour occurred. A content analysis of the interview transcripts identified the most common explanations as social reinforcement of behaviours (79% of staff), behaviours as communications difficulties (68%), behaviours as a response to the physical environments (58% of staff), or as an expression of emotional states (58% of staff). A similar list of popular explanations emerged from a large study of 83 staff (Berryman, Evans, & Kalbag, 1994). It is suggested that each of these causal explanations might suggest quite different strategies for intervening in the behaviour, suggesting that staff may experience some uncertainty or conflict in knowing how to understand and respond to challenging behaviour (Whittington & Burne 2005).

Hastings and Remington (1994b) reviewed the literature on challenging behaviour of care staff who interact with people with challenging behaviour (CB) to provide empirical evidence that supports the hypothesis that staff action affects clients CB. The study showed that staff behaviour is often counter habituate since staff spend little time interacting with clients and the quality of interaction tends to be poor. For example, staff may spend only 10% of their working day interacting with the people in their care and are more likely to spend time with people who engage in challenging behaviour than those who do not. Through observational analysis, the actions of care staff have frequently been identified as sources of socially mediated reinforcement capable of developing and maintaining challenging behaviour (Hastings and Remington 1994).

Research has identified CB to be aversive (Hall & Oliver 1992). Bromley & Emerson (1995) argue that the desire to reduce the unpleasant emotional reaction can lead to staff adopting responses such as providing immediate attention, which stop the behaviour in the short term, but maintain it in the long term. Observation studies in the review highlighted that staff respond inconsistently to CB's. For example, Warren and Mondy (1971) observed staff providing some form of positive attention in response to challenging behaviour once in every 10-20 occurrences which behavioural principles would predict could be sufficient to maintain the behaviour in the impoverished social environment typical of many care homes (Cullen, Burton, Watts, & Thomas, 1983) and self-reported studies also indicate that many of these behaviours may be maintained through the intermittent reinforcement. Staff claim that challenging behaviour such as self-injury and aggression elicit strong negative emotions in them (Bromley and Emerson, 1995, Hasting & Remington 1994), and identify challenging behaviour as a significant source of stress (George & Baumeister, 1981). Hastings and Remington (1994) also noted in the review that there was evidence to suggest that behavioural programs for clients with CB's were rare and, where they do exist; they are often not carried out by staff as they tend to follow their own internal rules. This phenomenon has been explained as the result of influential staff's beliefs and feelings which may override pressure to follow behavioural intervention plans (Hasting and Remington, 1995; Bromley & Emerson, 1995. Whitworth, Harris, and Jones (1999) in a qualitative investigation with staff of residential learning disabilities service described a preference for following their own informal rules aimed at keeping the individual safe in the immediate situation, over formal longer-term aims. Emerson & Emerson (1987) identified a number of barriers to the effective implementation of a habituated behavioural program in institutions. In general behavioural methods were considered useful by staff, although their knowledge concerning such methods was found to be

low. A range of significant barriers to the effective implementation was identified, including problems related to implementation of behavioural programs, such as problems related to inadequate resources, the ward environment, lack of professional support, and competing contingencies operating on residents' behaviours.

1.6 Staff Training

The ways in which staff beliefs and feelings about challenging behaviour develop over a period of time appears complex and may be influenced by many factors. For example, there is some evidence that levels of staff experience and exposure to training impacts upon beliefs and feelings (Hastings, Remington & Hopper 1995).

Staff training has been regarded as a method for improving the care that staff provide. However mixed outcomes have been observed. Lintern, Wood and Phair (2000) found that, despite changes in staff awareness, training alone was not enough to change care practices and had little impact on the well-being of residents in a nursing home. It is also the case that when changes do occur they are rarely maintained (Cohen-Mansfield et al 1997; McCallion, Lacey & Banks 1999; Moniz-Cook, Agar, Silvers, Wood, Wam, Elston, et al 1998). Origination obstacles have also been identified as preventing change (Cervero, 1985; Lintern, 2000) and the over-riding culture of care (Loveday, 2001; Noray, 2002) have been implicated. Many ideas for impacting on this have been suggested (Kassalainen, 2002; Lintern et al., 2000; Loveday, 2001). Despite difficulties in making comparisons between studies due to the content of the training and evaluation it does appear that some benefits may be found. Moniz-Cook et al (1998) found that, whilst the frequency and intensity of a range of challenging behaviour

remained constant, after a brief in-service training program, staff ratings of the difficulty in management were reduced and they therefore viewed behaviours as less challenging. McKenzie, Sharpe, Paxton, & Murray (2002) examined the impact of a training course which had previously been found to significantly increase the knowledge (McKenzie et al 2000) of staff working with learning disabilities service on staff attributions and practice. Staff rated their knowledge levels as higher both immediately following training and 8 weeks later. No significant changes were found in staff attributional dimensions following training. A decrease in the use of attributional categories "communication deficit" was found 8 weeks after training. The authors reported significant changes in their practice from baseline to follow-ups and 5 months later.

It may be hypothesised that knowledge regarding how to manage challenging behaviour may not transfer directly into staff behaviour. Although training may temporarily change care staff members' perception of dementia and challenging behaviour broadly, it may not fundamentally alter the way they think about the causes of a person's behaviour in situ as it unfolds alongside other aspects of the situation, and how they subsequently respond in vivo.

1.7 Attribution Theory for challenging behaviour- Weiner Attribution-Emotion Theory (1985)

Initially research was focused on staff's overt responses to challenging behaviour (e.g. Felce, Saxby, Kock, Reoo & Blunden 1987), but more recently the cognitive factors that affect staff's behaviour towards clients has been explored.

Attribution theory is concerned with how individuals interpret events and how this relates to their thinking and behaviour. Heider (1958) was the first to propose attribution theory. Weiner and colleagues developed Heiders' original work. Attribution theory assumes that people try to determine why people do what they do i.e. attribute a cause to behaviour. A person who seeks to understand why another person behaved in a certain way may attribute one or more causes for the occurrence of the behaviour. A three-stage process underlies an attribution (1) the person must perceive or observe the behaviour, (2) then the person must believe that the behaviour was intentionally performed, and (3) then the person must determine if they believe that other person was forced to perform the behaviour (in which case the cause is attributed to the situation) or not (in which case the cause is attributed to the person). This influences the decision whether or not to help another person in need, such as the perceived cost and benefit to the helper and the recipient of the help, the number of people available and the value and norms of the culture. Weiner (1986) proposed a model of helping behaviour.

Weiner's attributional theory provides one framework for conceptualising the way that staff think about challenging behaviour in situ, since the way that they understand the causes of another person's behaviour affects their emotional reaction and their responses. Studies on staff appraisal and challenging behaviour have drawn on this model because of the assertion that it is broadly applicable where behaviour is an issue. This theory implies that carers' responses to challenging behaviour will be shaped by their causal attributions (beliefs about the causes of the behaviour), combined with the emotion generated, specifically anger and sympathy and their

expectation of change and likelihood of offering extra help. Three independent causal dimensions forming the underlying structure of the attribution are:

- 'internality' (whether the cause of the behaviour is thought to be within the person or outside the individual)
- 'stability' (whether the cause is seen as likely to influence behaviour in the future and whether the behaviour is global or specific to the situation)
- 'controllability' (whether the behaviour is seen as under or outside the control of the person).

The model highlights the mediating role of emotions in determining staff help. Weiner predicts that 'helping behaviour' is more likely to occur if the potential helper makes the attribution that the cause is external and stable; i.e., it is both outside the control of the person in need, and likely to occur in the future. If an undesirable behaviour is believed to be under the control of the person (e.g. "they are trying to wind me up"), carers may experience negative emotions (anger and disgust) and are less likely to offer extra help, whereas 'uncontrollable' attributions are consistent with sympathy and offering help (Stanley & Standen, 2000).

The application of Weiner's (1986) models in helping professionals was initially explored by Sharrock, Day, Qazi & Brewin (1990), who reported a study of staff in a secure setting for mentally disordered offenders. Staff rated attributions of controllability, stability, globality and internality, as well as optimism concerning potential change, feelings of anger and sympathy and a self-reported likelihood of offer extra help. The study was based around one person who was known to all staff. Each staff member identified the cause for each of 14 "negative, institutionally related behaviours". Using a form of pathway analysis Sharrock et al (1990) found that staff generally made internal, controllable, stable and global attributions about their patients.

In addition both stability (whether the cause was likely to be the same each time the behaviour occurred) and controllability (whether the person has control over the cause of the behaviour) were negatively related to optimism, which was positively related to predicted willingness to offer extra help. However this study found no support for Weiner's (1986) main hypothesis of a mediating affect for emotional response. Therefore, the results of this study did not support Wiener's model as the staff's levels of optimism rather than the staff's affect was found to be the most important determinant of the staff's helping behaviour. Sharrock et al (1990) suggested that care staff may have learned not to be significantly influenced by their emotional responses to patients' behaviour as they may have habituated to such emotions.

A number of studies have supported the basic attribution-emotional-behavioural structure of this model and have demonstrated predictive variation in attribution and emotion across different behavioural typographies' and perceived levels of disability in learning disabilities (e.g., Dagnan, Trower & Smith 1998; Stanley & Standen 2000. Tynan & Allan 2002., Wanless and Johoda 2002).

Dagnan et al. (1998) attempted to replicate the Sharrocks (1990) study in a LD setting. A number of methodological changes were made. A larger range of emotional responses (anger, disgust, sympathy, pity, anxiety, sadness, depression, happiness, love, relaxation); and an additional rating that asked the respondents to evaluate a person showing such behaviour and the behaviour themselves was used. Such evaluations were suggested as being central to Cognitive-behaviour-therapies (Trower, Casy & Dryden, 1998) The participants included 20 care staff who worked with people who displayed moderate levels of challenging behaviour and 20 who worked with older people, most of whom did not show significant challenging behaviour. The care staff

were presented with six behavioural descriptions of challenging behaviour. The examples of challenging behaviour were taken from those used in Sharrock et al (1990) but selected as representing behaviour more likely in services for people with learning disabilities. They included behaviours such as refusal to comply with requests and threats towards clients and staff. For each of the examples of challenging behaviour they were asked to identify a probable cause and to rate four attributional dimensions (locus of control, stability, globality, internality). They were also asked to rate their optimism for being able to change the behaviour, their evaluations of the behaviour and of the person showing the behaviour, their emotional response to the behaviour and their willingness to put in extra effort in helping change the behaviour. Data analysis using correlation and regression methods indicated that carers working with people with challenging behaviour were more likely to evaluate the person more positively and report they would be more likely to offer extra effort in helping than care staff who did not work with individuals displaying challenging behaviour. A path analysis showed that helping behaviour was best predicted by optimism, which was best predicted by negative emotions, which in turn was best predicted by attribution of controllability. The author of the study concluded that the results were consistent with Weiner's cognitive-emotional model of helping behaviour. Again no mediating role was found for positive affect as a mediator of helping behaviour. As such, the findings of both Sharrock et al (1990) and Dagnan et al (1998) studies suggest that Wiener's (1986) helping behaviour model would have to be modified if it was to be applicable in a clinical setting, particularly as optimism is not a central feature of Weiner's (1985) model of achievement and motivation.

Standen and Standen (2000) further tested the applicability of Wiener's model and the role of optimism. Standen and Standen (2000) also applied Wiener's model (1986) in a

replication of Sharrock et al (1990) and Dagnan et al (1998) work. A total of 50 care staff who worked in a challenging behaviour day services with individuals having LD were presented with six case studies. The case studies were written to describe three different topographies of aggression, destructive and self-injurious behaviour and two levels of dependence including "independent" and "dependant" functioning in areas such as activities of daily living skills and communication. The care staff were then asked to rate seven 9-point scales for each of the case studies. These scales were concerned with control; optimism and helping. Correlation analysis was employed to examine the relative affect of positive affect, negative affect and optimism on carers' propensity to help. The results of the study indicated that there were relationships between the attributional dimensions, affect, helping dependence and typography. The author concluded that Weiner's (1986) model of helping behaviour does apply to this care situation, provided that the typographic and dependency factors are allowed to vary. It was reported that the more self-directed and dependent the service user's challenging behaviour, the greater the carers' attribution of stability, positive affect and propensity to help. Conversely, the more independent and outer-directed the challenging behaviour, the greater the carer's attribution of control and negative affect, and the less propensity to help. Overall, with all of the different forms of challenging behaviour, the results indicted that optimism best predicted the care staff's ability to provide helping behaviour.

Hastings (1995) completed an exploratory interview study which investigated the factors that influence care staff's responses to challenging behaviour. The interview covered staffs definitions of challenging behaviour, the reasons for its occurrence, and strategies for its amelioration: their views on training and behavioural programmes; and their reported emotional responses to challenging behaviour. The data indicated that

most of the categories in responses regarding the care staff's belief about the cause of challenging behaviour were consistent with contemporary models of causation. For example, staff proposed that individuals displayed challenging behaviour for social reinforcement or to express themselves. The care staff's responses also indicated that challenging behaviour caused them to experience negative emotional states such as feelings of sadness and anger.

Jones and Hastings (2003) investigated the application of an amended version of Weiners's (1986) attributional model of helping behaviour to care staff who worked with adults with LD. A total of 123 care staff viewed one of two videos showing a person engaging in self-injurious behaviour. The care staff then completed the self-reported questionnaire designed to measures their attributions, affects and helping behaviour. Unlike in previous research completed within the area of LD, helping behaviour was defined as behaviour more or less likely to reinforce challenging behaviour rather than as willingness to provide extra effort for helping. This study also investigated the role of both positive and negative emotions. The results of the study did not provide support for Weiner's attributional-emotional model of helping behaviour.

Todd and Watts (2005) applied Wiener's model to staff working with people affected by dementia who exhibit challenging behaviour. A relationship between attributions and emotion was reported. Staff reported experiencing more disgust when they held stable and internal attributions about a resident's behaviour. Interestingly, they noted that participants were least optimistic and most emotional regarding physical aggression than other behavioural typographies, such as wandering or verbalisation and that the relationship between emotion and attribution was strongest for physical aggression.

Hill and Dagnan (2002) examined the role of coping style, attributions and emotions in response to challenging behaviour in predicting helping behaviour by support staff for people with learning disabilities. Thirty three staff completed questionnaires identifying their attributions of controllability, internality, stability and globality, their emotional responses (anger and sympathy) and their likelihood of offering help. Coping style of practical problem solving and wishful thinking and attributions of controllability and intentionality were independent and significant predictors of effort to help. The initial correlations between variables were found to be consistent with Weiner's (1980: 1985) models. Wishful thinking coping style was found to be predictive of staff showing less willingness to provide effort and practical problem solving style produced more effort. Additionally the attributions of internality and controllability also independently predicted helping. The more internal and the more controllable the behaviour is seen to be, the less effort in helping is predicted. The results failed to find a significant role for the emotions of sympathy and anger in offering of help. This differs from the model proposed by Weiner (1986), who identified sympathy and anger as key components in potential for offering help.

Dagnan, Grant and McDonnell (2004), building on Wiener's model, developed a measure of attributions made by care staff regarding the perceived controllability of specific instances of challenging behaviour in dementia. A 15-item Controllability scale was produced and was found to have good psychometric properties. Using this scale, Dagnan et al (2004) found attributions of control to be related to emotional and behavioural responses to challenging behaviour. Specifically, care staff were less likely to respond with practical problem solving, and were more likely to engage in wishful thinking when they believed strongly that an individual had control over their

challenging behaviour. However, attributions of low control did not relate to either way of coping.

Dagnan & Cairns (2005) examined the importance of responsibility for challenging behaviour in predicting their emotional and intended helping responses. Carer staff completed questionnaires regarding attributions of internality, stability and controllability, emotions of sympathy and anger, judgements of responsibility for the development of challenging behaviour and for its resolution and intended effort in helping in response to a scenario describing an aggressive behaviour. A significant correlation between judgements of responsibility and attributions, emotions and intended effort in helping was reported. Regression analysis showed that the best predictor of intended help is the emotion of sympathy and that sympathy is best predicted by the attribution of externality - the judgement that people are not responsible for the development of CB and the judgement that people are not responsible for its resolution. In conclusion judgements of responsibility predict emotional and intended behavioural responses of carers.

1.8 Methodological Issues in the Measurement of Causal attributions

Making attributions about behaviour on its own which is essentially what vignette methods ask study participants to do, is more difficult than making attributions about an actual person's behaviour. Heider (1958), an influential figure in the development of attributional theory, stated :

...."a person reacts to what he thinks the other person is perceiving, feeling and thinking in addition to what the other person is doing" (P.1 the psychology of interpersonal Relations).

Studies in this area have been criticized because of reliance on vignettes as means of investigating staff reaction (Grey, Mclean & Barnes-Homes, 2002., Wanless & Johoda 2002). These vignettes provide scant information about the episode of challenging behaviour presented by an individual and fail to take account of personal contextual factors. Wanless & Johoda (2002) investigated how staff reactions in relation to vignette methodology differ from how staff react to actual incidents of challenging behaviour. Two conditions were examined:- firstly, participants were asked to rate their responses to vignettes; secondly, care staff were asked to rate real incidents of aggression involving someone they work with. Incidents involving a real person evoked stronger emotions from the participants. Moreover, staff perceptions of the aggressive client, rather than their perceptions of the behaviour per se, were more strongly linked to their cognitive and emotional responses to aggression.

Bailey, Hare & Limb (2006) investigated the application of Wiener's models to care staff working with service users with LD and challenging behaviour. They attempted to investigate staff's actual behaviour in situ. A total of 27 staff completed two sets of measures. One set regarded self-injurious behaviour and the other regarded other forms of challenging behaviour. The measures focused on care staff attributions, emotion, optimism, and willingness to help. In addition 16 of the sample care were observed interacting with clients. The aim being to test the application of Weiners's model to a real life situation by observing the care staffs actual responses to challenging behaviour. For both self-injurious behaviour and other forms of challenging

behaviour, associations were found between the care staff's internal, stable and uncontrollable attribution scores. However, no association was found between level of emotion, optimism and willingness to help. Some associations were found between the care staff's level of willingness to help and observed helping behaviour. There were significant differences between the care staffs' attribution scores with higher scores being obtained for uncontrollable and stable attributions for other forms of challenging behaviour. No significant difference was found between the care staff's emotions, optimism, willingness to help and observed helping behaviours, level of emotion, optimism and willingness to help. The author concluded that the results did not support Weiner's attributional model of helping behaviour. A preliminary model of negative care staff behaviour was derived - Bailey and Colleagues proposed an association between internal, stable and uncontrollable attributions and negative emotions in care staff and also negative emotions and negative behaviour displayed by care staff in response to the actions of service users who exhibit challenging behaviour.

1.9 Staff Experience and Training on Attributions

Staff responses to challenging behaviour may inadvertently reinforce challenging behaviour and contribute to their long term maintenance (Hasting and Remington, 1994). In this context it is of particular interest to examine whether staff training is effective in altering staff's causal attributions about challenging behaviour and the impact of staff experience.

Dagnan et al (1998) reported that staff who worked with people with challenging behaviour were more likely to evaluate the person showing the challenging behaviour

more favourably and more likely to predict they would be willing to help people than carers who worked with individuals who were not challenging. Age was also found to be related to attributional style and emotional response. Thus it is important to examine the effect of these and other individual variables, such as training, experience and stress

Hasting et al (1995) found that inexperienced staff were more likely to explain challenging behaviour in terms of emotional factors, environmental elicitations and attention seeking, whereas experienced staff are more likely to understand challenging behaviour as attempts to communicate which are consistent with (Stoke 2000) notions of challenging behaviour as a communication of unmet needs. Hastings asserts that if staff training is based on behaviour principles, one would predict that, If training is successful and in line with contemporary literature in the field of behaviour analyses, that staff would place a greater emphasis on causal attributions that relate to positive and negative reinforcement processes and environmental setting events (including lack of stimulation) and place fewer hypotheses related to emotional factors. Berryman et al (1994) similarly reported that, after formal training, staff were more likely to attribute challenging behaviour to tangible reinforcements and escape/avoidance (negative reinforcement) whereas prior to training they primarily endorsed emotional factors and low self-esteem as causal variables. Training and interventions are often based on person centred care developed by Kitwood (1988). Implicit to much of the training is to improve knowledge and identify psychosocial aspects that contribute to the challenging behaviour.

Relatively little is known about how care staff come to form attributions. For instance, how current situational factors might shape the formation of attributions of instances of

challenging behaviour. A greater understanding of the attributional process may facilitate the development of effective interventions and training packages for carers.

1.10 Attributions, Errors and Biases

Research suggests that the attributional process may be riddled with errors and biases (Heider, 1958). For example, the 'fundamental attributional error' occurs when behaviour is attributed to internal and enduring states, such as personality variables, rather than environmental influences that may actually be producing the behaviour. (Heider, 1958). Kelley and Michela (1980) identified an actor-observer bias in which individuals have a tendency to see their own behaviour as caused more by situational factors whilst attributing others' actions to their attitudes and actions. These biases may be observed in the care setting. People have an overwhelming tendency to explain behaviour in terms of personal dispositions (Heider 1958; Jones 1990), despite considerable evidence that shows that social situations have a large impact on a person's behaviour, and often do not make enough of an adjustment (Aronson, Wilson, & Akert 1997). Care staff have been found to rarely blame themselves for aggressive incidents and show a tendency to assume greater levels of control instead of blaming themselves. They attribute violent episodes to the clients' internal factors (Cottle, Kuipers, Murphy & Oaks 1995). Hastings (1995) and colleagues also found that 74% of challenging behaviour was viewed by carers as intentional.

A relationship between attributions and biases in memory for an event has also been identified. Craik and his colleagues (Craik, 1983; Craik, Naveh-Benjamin, Govoni, & Anderson, 1996) suggest that remembering and perceiving are similar. They state that the processes involved in encoding external events in memory are essentially those

also involved in the perception and comprehension of these events and that subsequent retrieval of the event from memory represents an attempt to replicate these initial processes. From this point of view what people remember is what they perceived and comprehended. It is therefore possible that there is an as yet unexplored relationship between how observers remember the behaviour of an 'actor' and the causal attributions they make regarding that behaviour. This has implications for the ways in which care staff perceive and remember incidents of challenging behaviour.

Dagnan 1998 reported an overwhelming tendency to generalise attributions made regarding an individual's behaviour to the person. Dagnan (1998) reported that evaluations of behaviour and the person as a whole tend to be high, suggesting that staff tend to generalise from specific behaviour to attribute characteristics related to the whole person, for example someone who is anxious in one situation may be viewed as being dispositionally anxious.: an example of an erroneous and dysfunctional global attribution (Trower et al 1998). Attributions of controllability and negative evaluation of person and behaviour is important from a cognitive-behavioural perspective. Training and intervention from this perspective may aim to enable carers to separate their evaluations of an individual's behaviour from their evaluation of the person (Dryden, 1990, Trower et al 1998). The basic notion behind training and interventions being to help staff reflect on their behaviour and evaluate how situational factors influence the behaviour so that less blaming and more external attributions are formed which are associated with less negative emotions such as anger and disgust.

1.11 Attribution Formation

The process of attribution formation has been investigated systematically from a broad social perspective and there is potential to apply this framework to staff attributions of challenging behaviour in dementia. Gilbert (1989, 1991) suggests that a social attribution is formed by three sequential processes. Social interaction imposes a variety of attentional demands on those who attempt it

- Categorization (what is the person doing?),
- Characterization (what traits does the character imply?), and
- Correction (what situational constraints may have caused the action?)

Gilbert (1989) argues that the correction phase of the formation of attributions is less automatic (i.e. more easily disrupted) than the earlier categorization or characterization phases (See also Baron, 1988; Uleman, 1987; Winter & Uleman, 1984; Winter, Uleman, & Cuniff, 1985; Bassili & Smith, 1986). He describes characterization as a generally over learned and relatively automatic process requiring little conscious effort, whereas correction is a deliberate, controlled process that uses a significant portion of cognitive resources. Thus, initially we may all make internal attributions about the behaviour of another person and then we move on to a 'correction phase' to take into account external situational features that are influencing that behaviour. As a result, the addition of another resource-consuming task should impair the latter but not the former operation. However, people have an overwhelming tendency to explain behaviour in terms of personal dispositions (Heider 1958; Jones 1990), despite considerable evidence that shows that social situations have a large impact on a person's behaviour, and often do not make enough of an adjustment (Aronson et al 1997). Situational

factors are important in determining how much of an adjustment people will make. In two experimental studies Gilbert (1988) found that placing individuals under high levels of cognitive demand when making an attribution about another person's behaviour resulted in an impairment of the 'correction phase' of attribution formation. Gilbert used the term cognitive busyness rather than more familiar cognitive demand or cognitive load to describe the mental state when a number of attentional tasks are being performed or tasks that require a large proportion of cognitive resources (Gilbert & Osbourne 1989). In one experiment, perceivers watched an anxious-looking woman who has ostensibly been asked to discuss a variety of anxiety provoking topics (e.g., her sexual fantasies) with a stranger. Those perceivers who were busy rehearsing word-strings during their observations of the woman were particularly likely to consider her dispositionally anxious. These cognitive busy perceivers did not use information about the situational context (i.e. the anxiety provoking discussion topic) to correct their characterizations of the woman, despite the fact that the word-strings they were rehearsing were the discussion topic themselves and were able to recall the topics being discussed. Thus although aware of situational factors, participants under high cognitive demand failed to consider these factors when making attributions regarding the behaviour of a target individual. They therefore tended to make more internal causal attributions under conditions of high cognitive demand.

Although the failure of cognitive busy perceivers to correct their characterization has been documented with a variety of busy-induced tasks such as rehearsing word strings (Gilbert, 1988) or numbers (Gilbert & Osbourne 1989), such tasks are merely experimental mimics of many resource-consuming tasks of ordinary life. Gilbert and Osbourne (1989) further examined the role consequence of cognitive demand on social attributions in a series of four experiments. The four experiments examined the

corrigibility of the effect of cognitive busyness. It was argued that busy perceivers fail to correct their characterizations because they are too busy to use information about the situational context, but not because they fail to notice, gather, or recall that information. Gilbert (1988) assumed that the effect of cognitive busyness occurs at the attributional stage rather than at the preceding behavioural identification stage (cf Trope, 1986). That is, busy perceivers and non-busy perceivers are assumed to perceive behaviour equally well e.g. in terms of severity, and recall situational factors that may be influencing the behaviour but the busy perceivers are ostensibly more likely to make dispositional attributions of that behaviour than are non-busy subjects. Gilbert & Osbourn (1989) measured the ability to perceive by asking participants to provide ongoing reports on the target's behavioural state anxiety as they watched the video. Participants provided these reports by continuously adjusting the position of a pointer on an electronic slide (a linear potentiometer). One side of the pole was labelled anxious and the other labelled calm. Participants were asked to adjust the side continuously so that its pointer described the targets' behaviour at any given moment. Busy and non busy subjects are assumed to perceive the same degree of state anxiety in targets behaviour, but busy subjects are ostensibly more likely to make dispositional attributions for the behaviour than are non-busy subjects. They also required participants to recall the discussion topics to determine if participants were able to recall the situational constraints influencing the behaviour (Gilbert 1988) Gilbert & Osbourne (1989) argued that busy perceivers who failed to correct their characterizations whilst they are busy should be able to do so retrospectively, They experimentally investigated if busy perceivers' failure to correct their attributions was reversible. The experiment employed the same design as Gilbert, Pelham, and Krull's 1988 study. However after making their ratings of the targets trait anxiety all participants then spent 5 minutes writing an essay about the target and then rated the

target trait anxiety. Busy perceivers were able to correct their mistaken impressions retrospectively. It was observed that after just a few minutes of writing about the target, formerly busy perceivers spontaneously corrected their characterization and achieved precisely the same impression as had their never-busy counterparts. The content of the essays was rated on how much each subject's essay about the target explicitly emphasised dispositional factors and situational factors on a five-point scale. Although the essays were found to be the same length, formerly busy perceivers apparently did more corrective thinking; that is, they wrote more about the causal efficacy of the targets situation than did never-busy perceivers. This suggested that formerly busy perceivers were doing in retrospect the very part of attentional work that never-busy perceivers were able to do.

It is, of course, virtually impossible to know with precision the specific sequence of cognitive operation that enables the formerly busy perceivers' recovery. Nonetheless, attribution theory does suggest that correction (or discounting) is a resource consuming operation in which the attributional implications of situational context are realized and are then used to undo one's initial belief about a particular target, see Gilbert, 1989, Jones, 1979, Quattrone, 1982). Recovery then is merely the post hoc performance of this familiar discounting operation

Gilbert & Osbourne (1989) however demonstrated that such retroactive corrections were found but not inevitable. They argue that if formerly busy perceivers subsequently turn their attention to other tasks, they should not correct their characterization of the target unless those subsequent tasks specifically encourage corrective thinking about the target. Hence correction does not occur spontaneously and requires reflection and attention. Their results suggested that the failure to correct can be reversed if the

formerly busy perceivers do the very sort of corrective thinking that busyness prevented in the first place,

In addition busy perceivers were able to correct their original impressions retrospectively. However, they were still unable to correct subsequent information that had been biased by those original impressions. As such, perceivers were occasionally able to overcome the primary, but not subsidiary, effect of cognitive busyness. Therefore the uncorrected impression itself may be undone by a few minutes of thought, but this does not mean that the subsidiary effects of this impression are equally easy to eradicate. For example, if busy perceivers erroneously conclude that another person is dispositionally anxious, then this erroneous belief may colour the perceiver's subsequent reading of neutral or ambiguous information. Corrective thinking may well be seen to repair the original misperception but, because that misperception has already contaminated subsequent information processing, a complete cure may be unattainable.

Rose & Rose (2005) developed Gilbert's assumptions to develop a framework of how stress and attributional variables interact and influence staff's behaviour in response to challenging behaviour. These suggested that if people were already preoccupied and stressed when making an attribution about another person's behaviour then this would then prevent them from completing the second stage, as making such an adjustment needs more concentration and effort than the first step which occurs spontaneously and quickly (Gilbert & Osbourne 1989). They suggested that staff experiencing stress would be more likely to make negative and blaming attributions of challenging behaviours, respond emotionally with anger, feel less optimistic about the change and consequently be less likely to offer help. Rose & Rose (2005) employed a total of 107 staff working in

the community home for individuals with learning disabilities who completed a self-report questionnaire measuring stress, burnout, attributions, emotion, and optimism and helping behaviour in response to challenging behaviour. Attributions were measured using a modified Attributional Style Questionnaire (ASQ). In general the hypothesised model was not supported, as results suggested that stress does not play a primary role in determining outcomes for staff and clients when examined with Weiner's (1986) attributional model of helping confirmed through the use of structural path modelling. The model was a poor fit for the data and offered little explanation over integrating the stress and attributional theoretical perspective. Limited support in general for Weiner's (1986) model of helping behaviour is therefore available. In this context, staff responses were associated with levels of optimism; i.e. their expectations of successfully helping a client displaying challenging behaviour. Reduced staff optimism was related to negative effect and global attributions regarding challenging behaviour. The study was unable to examine staff helping as staff responses were not normally distributed. Despite staff reporting high stress levels and moderate burnout, this did not appear to have any relationship to their reporting of thought and feelings and propensity to help regarding challenging behaviour in the study vignettes. The results were not found to be consistent with Wiener's attributional model; in particular there was a lack of correlation between the beliefs staff held about challenging behaviour and the way they were emotionally affected by it. Weiner's helping model suggests that increased anger and sympathy would be associated with attributions of controllability, which would then determine helping behaviour of staff. This was not supported. Interestingly the study highlighted the role of globality. However, Weiner (1986) has argued that globality as a construct has moderate reliability because of its close relationship to stability, and has a limited role in the model. The study also found a role for optimism, which is central to Weiner's (1985) model of achievement and motivation rather than the model of helping.

It was suggested that the poor fit of stress within the model may have been due to methodological difficulties, for example the use of the GHQ (Goldberg 1978), a general measure of well-being which may not have measured what was intended.

Despite, Rose & Rose (2005) failure to support the application of Gilbert's framework in understanding the role of stress on causal attributions, Gilbert's model regarding attributional formation has been drawn upon for the purpose of the present study. The present study aimed to manipulate cognitive demands specifically using additional cognitive tasks which is more consistent with Gilbert's model. The study investigated the impact of cognitive demand placed on care staff and the impact of attribution of individuals with dementia who display challenging behaviour.

Gilbert's model is a framework that could help us more fully understand the processes influencing staff attributions of the causes of challenging behaviour in dementia. This in turn could help us to understand the reasons why staff knowledge has not been found to be easily transferable in practice. It may be hypothesised that the cognitive resources of care staff are depleted by competing demands and heavy workloads in an environment that can offer little time for reflection. These could be seen as factors that influence the process of attribution formation and they may mean that care staff have difficulty in fully considering external situational factors when faced with challenging behaviour in vivo. In turn this could result in more internal and controllable causal attributions being made by care staff and this could have implications for the helping behaviours that staff initiate.

A greater understanding of the process by which staff think about challenging behaviour may improve the effectiveness of training being offered. Current training has

not been found to be very effective and the positive effects are rarely maintained (Cohen-Mansfield et al 1997 Linter et al 2000; McCallion et al., 1999). It may be argued that further research into the processes by which carers come to understand their individual clients and make decisions about appropriate interventions is warranted. The findings of the present study may have significant implications for care practice and may highlight the need for care environments to facilitate reflection on challenging behaviour.

The implication is that staff experiencing high levels of cognitive demand would be more likely to make negative and blaming attributions of challenging behaviour and to feel less optimistic that the behaviour would change and so be stable. As such Gilbert's model may be integrated within Wiener's model to providing an integrated framework of the factors that influence the way in which care staff think about challenging behaviour. Thus, the purpose of this study was to test the applicability of a more explanatory model for the impact of cognitive demand on the attributions care staff make regarding the challenging behaviour of an individual who has dementia within the previously described applications of Wiener's model.

Chapter 2

Rationale and Research Questions

2.1 Rationale

The purpose of this study is to test the applicability of Gilbert's attributions as a framework for understanding how staff cognitive demand influences staff attributions of challenging behaviour within the applications of Weiner's (1986) model of attributional dimensions. The use of this model may also serve to support the applicability of the Gilbert's (1986) model in Geriatric settings in the context of previous research findings.

It is suggested that cognitive demand has a primary role in explaining the way in which staff form casual attribution about an individual's behaviour. A rationale for cognitive demand on attributions is based on the research that has suggested that people go through a two-stage process when making attributions (Gilbert, 1989,1991). Firstly, people assume that a person's behaviour is something to do with their disposition (internal factors) before an attempt is made to explain their attributions externally. Accordingly, taking into account external factors. It may be argued that if a person is already pre-occupied, distracted and experiencing high levels of cognitive demand when making an attribution about another person's behaviour, they may not get to the second stage, as making such adjustments needs more concentration and effort than the first step, which occurs spontaneously and quickly, (Gilbert & Osbourne, 1989). Therefore, the implication is that staff experiencing high levels of cognitive demand would be more likely to make negative and blaming internal attributions regarding challenging behaviour. They are more likely to report higher levels of controllability for

the behaviour and report that they feel less optimistic that the behaviour would change and that it affects wider areas of their life.

2.2 – Research Questions

The main research questions is:

Does cognitive demand influence the causal attributions carers make (i.e., internality, globality, generality and controllability) about challenging behaviour in people with dementia?

The main research questions may be broken down further into the following:

- 1) Do high levels of cognitive demand reduce the ability of care staff to use situational information that influence the behaviour of an individual displaying challenging behaviour in forming attributions? This was assessed by examining participants' recall of factual information from the video to ascertain if being under high levels of cognitive demand impairs the ability of care staff to recall internal and situational information.
- 2) Do high levels of cognitive demand impact on carer's internality attributions about the cause of observed behaviour - this was examining by comparing internality scores under the two conditions?
- 3) Do high levels of cognitive demand impact on carers attributions regarding the cause of observed challenging behaviour?
- 4) In what ways do cognitive demands influence the relationship between attributional dimensions (internality, stability, Globality, Generability and controllability)? These were analysed using correlational analysis between the dimensions under conditions of non-demand and cognitive demand.

Hypotheses

- 1) High levels of cognitive demand will reduce the ability of care staff to use situational information that may influence the behaviour of an individual displaying Challenging Behaviour in forming causal attributions.
- 2) Carers who are under a high cognitive demand will make fewer external causal attributions and more internal attributions about the cause of observed challenging behaviour.
- 3) Carers who are under a high cognitive demand will attribute higher levels of control, globality and stability to the cause of observed behaviour.
- 4) There will be a significant relationship between the dimensions of internality, stability, globality and control

Chapter 3

Methodology

3.1 Design

The study employed a cross-over experimental design. Participants were asked to watch 2 video clips of challenging behaviour, one under conditions of cognitive demand (cognitive demand) and one under conditions of no extra demand (non-demand condition). The study involved 2 stages; there was a minimal time interval of one week between each stage. Participants in group 1 and 2 underwent the cognitive demand condition first. Group 2 and 3 underwent the non-demand condition first. Participants therefore act as their own controls. The employment of a cross-over design helps to control for individual factors thereby producing greater statistical power. For the analysis only data was analysed for participants who underwent both conditions to test the experimental hypotheses. The data was analysed in accordance with (Jones and Kenward, 1989) for analysis of cross-over data. An alpha level of 0.5 was used throughout the analysis.

3.2 Participants

45 participants were recruited in total of whom 30 underwent both conditions allowing for analysis using a cross-over design, and 15 undergoing just one condition.

A power calculation based on a medium effect size and 80% power and a two tailed 5% significance level suggested a minimum participant sample size of 34 for the cross-over

design. A larger sample size was recruited so as to gain sufficient numbers for analysis using the cross-over design statistically. A deficit of participants was recruited for the Cross-over design from the original forecasted recruitment

Participants were recruited from 4 private, residential and nursing homes within West Yorkshire, UK: Home 1 is an 8 bedded residential home, Home 2 is a 40 bedded residential and nursing home. It has a specialist EMI unit. All of the participants recruited from this home worked within the specialist unit and had experience of working with individuals with challenging behaviour and dementia. Home 3 is an 8 bedded mixed nursing and residential home. Home 4 is a 20 bed mixed nursing and residential home.

28.9% (13/45) of the total sample were recruited from home 1. 42.2% (19/45) from home 2, 17.8% (8/45) from Home 3 and 11.1% (5/45) from Home 4. Home 3 withdrew their consent during data collection resulting in a number of participants being unable to complete the cross-over experiment and only completing at a single time-point (11.1%, 5/45). The reason for participants not completing both of the experimental conditions is due to staff ceasing their employment within the home or due to the home's (Home 3) withdrawal of consent due to time constraints.

There was a 33.33% (15/45) participant drop out rate between stage one and two. The resulting sample was made up of 30 (66.7% 30/45) of the original sample. The drop out rate for each home was: Home 1 = 4/45, (8.9% of the original number of participants), Home 2 = 5/45 (11.1%) Home 3 = 5/45 (11.1%) and Home 4 = 1/45 (2.2%).

The analysed sample (N=30) comprised of 26(86.7%) females and 4(6.3%) males.

Table 3.1 presents the gender descriptive.

Table 3.1 Descriptive statistics for gender

Variable		Frequency of participants for whole sample (45)	Frequency of participants for analysed sample (30)	Frequency of participants for group 1 (20)	Frequency of participants for group 2 (10)
Sex	Male	5/44(11.4%)	4/45(8.8%)	4/20(20%)	0/10(0%)
	Female	39/44 (88.6%)	26/30(86.7%)	16/20(80%)	10/10(100%)
	Total Missing	44 1	30	20	10

The age range for the analysed sample (N=30) was 17 to 60 years old, with a mean age of 37.4 years. For participants in group 1 the age ranged from 17-60, with a mean age of 36.8 years. For participants in group 2 the age ranged from 18 to 54, with the mean age being 38.7. The age descriptives are presented in table 3.2.

Table 3.2 Descriptive for age

	Whole sample (44) 1 missing	Analysed sample (30)	Condition 1 (20)	Condition 2 (10)
Mean	35.0	37.4	36.8	38.7
Std. Deviation	14.4	14.5	15.6	12.7
Minimum	17	17	17	18
Maximum	60	60	60	54

The length of time spent in their specific role within their current home for the Analysed sample ranged from 0.1 to 40 years. The mean was 4.1 years, for group one and the range was from 0.1 to 40 years; the mean was 4.2 years. For group two this ranged from 0.1 to 12 years, with a mean of 4.2 years. Table 3.3 displays the descriptives.

Table 3.3- Descriptive for length of time in specific job role

	Whole sample (45)	Analysed sample (30)	Condition 1 (20)	Condition 2 (10)
Mean	3.7	4.1	4.0	4.2
Std. Deviation	6.6	7.5	8.9	3.7
Minimum	.1	.1	.1	.2
Maximum	40	40	40	12

For the whole sample 25 indicated that they had received a National Vocational Qualification, two had just received in-house training, three has completed related diplomas, three had received specific training regarding dementia, two classified their training as other and 11 indicated that they had not received any training

Participants were randomly allocated to one of four groups. Participants in Group 1 were in the non-demand condition first; they were asked to watch video clip 1 (Elsie) (N=13). Participants in group 2 were also in a non-demand condition first: they were asked to watch the equivalent video clip 2 (George) (N=12, 35%). Group 3 were in the cognitive demand condition first and were presented with video clip 1(Elsie) (N=12). Similarly Group 4 was in the cognitive demand state first but watched the equivalent video clip 2 (George) (N=8). For the purpose of the analysis group 1 and 2 were combined creating a non-demand group first, followed by cognitive demand condition second (Non-demand-Cognitive demand) N=20 %, Similarly, groups 3 and 4 were collapsed for the analysis to create a cognitive-demand condition first followed by non-demand and conditions (Cognitive demand-Non-demand) N=10 %.

Table 3.4 Table showing condition allocation

Variable			Frequency whole sample (44)	Frequency analysed sample (30)
Allocation of video	Elsie first	ND	13(28.9%)	12(60%)
	George first	ND	12(26.7%)	7(23.3%)
	Elsie first	CB	12(26.7%)	5(16.7%)
	George first	CB	8(17.8%)	6(20%)

3.3 Measures and Materials

- Fictional Vignettes

Two short fictional vignettes were supplied to participants regarding the people with dementia depicted in the video clips (see below). The vignettes provided basic background and contextual information in a way that should not have shaped the attributions formed by participants when they subsequently observed the challenging behaviours on the videos (See Appendix II).

- Video clips

Two equivalent-form video clips were shown to participants. These depicted brief episodes of challenging behaviour performed by actors who played the roles of the people with dementia who were described in the accompanying vignettes. The video clips involved ‘demonstrations’ of different types of challenging behaviour. Based on Todd and Watts’ (2005) findings that participants were more emotional regarding aggression, both of the clips to be used in the study contained physical and verbal aggression. Standen and Standen (2000) also suggested that the level of self-directed and dependency level of the individual exhibiting the challenging behaviour to have a significant effect on attribution, hence the videos were also matched in terms of dependence and level of functioning. In video clip 1 an elderly gentleman, George is distressed, physically aggressive with a staff member and engages in inappropriate

urination. In video clip 2 an elderly lady Elsie is portrayed as distressed and wandering which culminates in physical aggression towards her daughter. The video clips were taken from a pre-existing training video which were edited to make them more equivalent. They were edited just to show the challenging behaviour. The videos were viewed and matched by the principle researcher and two independent ratters who worked within the field.

- Cognitive demand manipulation - question tape

An audiotape was played to participants in the cognitive demand condition at the same time as they watched the video clip. The tape presented simple questions at a rate of one per 30 seconds. The questions were concerned with the working day of participants, and include queries such as “who needs a bath today?” and “Who have you helped to get up today?” Participants were required to answer each question out loud as they watched the video clip, thus dividing their attention temporarily and as an attempt to simulate the demands that the participants might face daily in their work.

- Demographics questionnaire

This questionnaire recorded participants’ age, gender, length of time in post, qualifications and previous training experience as these individual factors might influence the way that staff think about challenging behaviour and may be confounding variables (See appendix II).

- GHQ- General Health Questionnaire (GHQ-28) (Goldberg, 1978).

This is a measure of general psychological wellbeing. It has been used extensively with occupational samples including health professionals (Firth-Cozens & Hardy, 1992). It is included in the current study as a co-variate and possible confounding factor as it is

possible that general wellbeing amongst care staff influences cognitive demand and attribution formation. It was chosen as it focuses on state rather than trait disorders and is a measure of context free rather than job specific well-being (War, 1996) (See Appendix II)

- Perceived stress measure.

Participants were asked to complete a very brief measure of their subjective feelings of stress at the time of the experiment. This measure used a visual analogue scale ranging from “completely relaxed” to “very stressed”. This was included as a measure of specific feelings of stress rather than general well being since this could also influence cognitive demand and attribution formation and might therefore be a confounding factor (Rose & Rose 2005) (See Appendix II).

- Causal Attributions Questionnaire

Participants completed a bespoke self-reporting measure of causal attributions immediately after watching the video clips in both conditions. No existing specific questionnaire was considered to be suitable for the purposes of the study so several widely used and accepted attribution measures were drawn upon to create a practical self-report measure. The questionnaire developed uses the general framework employed by the Pragmatic Inference Test, PIT (Winters & Neale 1985). The PIT requires participants to provide a main causal explanation for an event and then answer a number of causal and factual questions. It has been suggested that this format provides better access to causal explanations and reduces demand characteristics. The use of embedded factual questions also controls for any memory bias, so that any observed differences may not be attributed to a failure to recall salient information. The developed questionnaire also uses three items adapted from the Attributional Style

Questionnaire modified in line with Peterson, Semmel, Von Baeyer, Abramson, Metalsky & Seligman, 1982), Sharrock et al (1990) to assess causal attributional dimensions of internality, stability and globality. One item for each of the three dimensions was embedded in the questionnaire. The questionnaire asked participants to generate a cause themselves for each of the behaviours shown in the video clips and then rate the cause on a 7-point Likert scale (1932) corresponding to internality, stability and globality dimensions. The format does not constrain or create the causal attribution made by the participant but at the same time allows simple and objective responses (see appendix II for attributional questionnaire)

- Controllability Questionnaire

A brief self-report measure of attributions of controllability of challenging behaviour was also given to participants. This simply comprised of two items taken from the Controllability Beliefs Scale (Dagnan et al 2004). This is a 15-item measures. Items were originally generated based on clinical work with staff carer groups. Items reflect the statements carers make about the control in clinical context. Dagnan (2004) reported that their was reasonable high degree of internal consistency for the whole scale(standard neutral = 0.89) and for the two factor derived subscales, "High control" (standardised neutral = 0.92) and "low Control subscales"(standardised neutral = 0.73),, acceptable corrected item-total correlations, and a clear factor structure indicating high control and low control beliefs as two distinct factors. The two items that loaded most highly on to the two factors of high and low control for the questionnaire were used as some items from the scale developed by Dagnan et al (2004) were found to load on both factors. Item (3) "they are doing it deliberately" was used for high control and item (5) "they have no control over their behaviour" was used for low control. Items were scored on a 5-point Likert scale with anchored ratings of

agree strongly, agree slightly, untrue, disagree slightly, disagree strongly. Item (5) was reverse scored. Higher scores indicate greater attributions of controllability (Appendix II)

- Compliance Scale.

Participants were asked to complete a very brief measure of their subjective ability to concentrate on the video during the experiment. This was measured using a visual analogue scale ranging from “totally unable to concentrate on the video” to “completely”. The purpose of measuring the perceived ability to concentrate on the video was to help ascertain if the manipulation is so difficult as to prevent participants from being able to pay any attention to the video or alternatively if the manipulation fails to be cognitively demanding. (See Appendix II)

3.4 Procedure

Cognitive Demand Manipulation

Cognitive demand was manipulated by asking participants in the cognitively busy group to perform an additional cognitive task whilst simultaneously watching a video clip of challenging behaviour. The additional cognitive task involved the participant listening to a tape recorder with pre-recorded questions about their day that they were required to answer out loud immediately. Participants in the non demand condition were just required to view the video. Participants in the cognitive demand condition were asked to watch a video clip and listen to an audio-tape distracter simultaneously and then asked to complete the questionnaire. They were informed that their responses to the

distracter tape will be recorded but that they are also required to pay attention to the video, as they would also be asked questions about what they had observed.

Participants are asked to rate each actor's challenging behaviour in the video clip. For clip one depicting 'George' exhibiting aggression and inappropriate urination participants were asked to make the ratings for aggressive behaviour and inappropriate urination. Video clip two depicted 'Elsie' who was exhibiting aggressive behaviour and wandering at night, which participants were required to rate.

Stage One

Care staff were informed about the study by the chief investigator and were provided with an information sheet regarding the study. The study was presented as research into the way people perceive challenging behaviour in people with dementia. Prospective participants were given time to consider the information and to ask questions before agreeing to participate. Each participant was then asked to complete a demographics questionnaire, GHQ and perceived stress measure.

Participants were then randomly allocated to one of four groups. Participants in Group 1 were in the non-demand condition first; they were asked to watch video clip 1 and simply think about what they notice and observe and were then asked to complete measures of attributions. Similarly participants in group 2 were in a non-demand condition first: they were asked to watch video clip 2. Group 3 were in the cognitive demand condition first and were presented with video clip 1 and audio-taped distracter questions simultaneously and then asked to complete the attribution questionnaires. Similarly Group 4 was in the cognitive demand state first but watched video clip 2. All groups were presented with a brief vignette prior to watching each corresponding video.

Prior to presentation of the video clips, participants were informed that they would be asked a number of questions following the video about what they had just seen. Participants in the cognitively busy condition were also asked to perform an additional cognitive task whilst watching the video. They were required to answer, out-loud, questions presented to them on the tape-recorder about their day and informed that their responses were being recorded.

Stage Two -One week later

Participants in both conditions completed the perceived stress indices once more. Participants in group 1 and 2 underwent the cognitive demand condition first and group 3 and 4 the non-demand condition. All groups were presented with a short vignette, followed by a short video. Once again, participants in the cognitive demand condition performed an additional task of answering questions about their day simultaneously to watching the video. Following the video, participants were asked to complete the corresponding attribution questionnaire, controllability questionnaire and compliance scale. Participants were then debriefed.

3.5 Ethical Approval

Ethical approval was sought from the Hull and East Riding Local Research Ethics Committee (see Appendix I). Due to the fact that the Study would not be taking place within the NHS, and is not a clinical trial of medicinal products for human use, it fell outside the remit of Research Ethics Committees as set out in the Governance Arrangements for NHS Research Ethics Committees (GfREC). However the Chair consented to review the ethics of the research. A proposal of the study was submitted. Key issues considered prior to submission to ethics included the following;

- 1.Details of the study would be provided to all participants for them to provide informed consent. They would also be informed of their right to withdraw their participation and any collected data at any point in the study.
- 2.All personal data would be kept confidential and in a secure place.
- 3.No Deception would be involved and not risk would be imposed upon participants, other than would be expected in everyday life.
- 4.Participants would be debriefed of the studies findings, but not of data individual to themselves as all analysis would be anonymous.

3.6 Consent

Consent was obtained for all participants individually. In no circumstances was it necessary to obtain assent from a third party. An example of both the participant information sheet and consent form can be found in Appendix I.

3.7 Data Analysis Procedure

It has been assumed that there will be no carry-over effects (Jones and Kenward, 1989) from the condition experienced in Stage 1 that might affect the ratings given in Stage 2. For each of the attribution dimensions (Internality, stability and controllability) the difference between the Stage 2 and Stage 1 scores for group 1, 2,, 3 and 4 were compared by a t-test. This is the approach recommended in Jones and Kenward (1989). Stage 1 for the analysis of data employed a cross-over design and tested for differences in mean attribution scores under the two conditions. This is intended to test

hypothesis 2 and therefore hypothesis 1 which makes predictions regarding a relationship between participants' attributional scores and experimental condition.

Stage 2, would examine the correlations between all four dimensions. Correlations between the main attributional dimensions were calculated separately for the two conditions to test hypotheses 3 and 4.

Chapter 4

Results

4.1 Suitability for parametric testing

Before hypothesis testing, the main variables were investigated as to their suitability for parametric analysis. A series of one-sample Kolmogorov-Smirnov test were applied to ascertain whether each variable was normally distributed. Kolmogorov-Smirnov test for normality for the main variables was carried out for the two condition order groups, group 1 (non-demand first-cognitive demand second) and group 2 (cognitive demand condition first-non-demand condition second). The ratings for the two behavioural typologies "aggression" and "other" were considered separately. The differences between time point one and two were calculated then a series of Kolmogorov-Smirnov tests were applied to the data. These tests indicated that the main attributional variables were normally distributed. The results indicated that both groups and ratings for behavioural typologies can be assumed to come from normal distributions. This is one of the three requirements for the use of parametric tests such as the t-test. Tables 3.4-3.14 appendix III show the means, SD and statistical significance of the attributional dimensions (internality, stability, generability, globality and controllability) for the two behavioural classifications (aggression and other) (See appendix III)

4.2 Hypothesis Testing- Data Analysis

It has been assumed that there will be no carry-over effects (Jones and Kenward, 1989) from the condition experienced in Stage 1 that might affect the ratings given in Stage 2. For each of the attribution dimensions (Internality, stability, generability, globality and controllability) the difference between the Stage 1 and Stage 2 scores for group 1 and 2 were compared by a series of independent t-tests. This is the method presented in chapter two of Jones and Kenward (1989). This was intended to test hypothesis 2, & 3 and therefore hypothesis 1 which made predictions regarding a relationship between participants' attributional scores for internality and experimental condition.

The second stage of the analysis examines the relationship between the attributional dimensions. A series of correlations was carried out. Correlations between dimensions were calculated for the whole sample then separately for the two conditions related to presentation order, 1 and 2. This was intended to test hypotheses 4

The secondary analysis investigates the impact of a number of co-variants such as training and GHQ and perceived stress on attributional dimensions.

4.3 The Impact of Cognitive Demand on Attributions of CB

The following section examines the main research questions concerning the impact of cognitive demand on the main causal attributions:

Does cognitive demand influence the causal attributions that carers make (i.e., internality, globality, generality and controllability) about challenging behaviour in people with dementia?

To examine the impact of cognitive demand, the analysis firstly investigated the impact of high levels of cognitive demand on carers' ability to recall factual information presented (situational/contextual and personal) that may influence the behaviour of an individual displaying challenging behaviour when forming a causal attribution (hypothesis 1). Care staff's total recall score under each condition was calculated. The differences between time-point 1 and time-point 2 recall scores were calculated then an independent t-test was applied to the data to ascertain if being under high levels of cognitive demand impairs the ability of care staff to recall internal and situational information.

No support was found for a significant relationship between condition and recall ($t=.425$, $df=28$, $p=0.674$). Comparison of the mean indicated that participants in group 1 recall more correct answers whilst in the cognitive demand condition than in the non-demand condition. For group 2, more correct responses were recalled whilst in the non-demand group than under conditions of high cognitive demand. The means and standard deviations are presented in Table 4.1. Fig 4.1 shows greater differences for participants between recall scores between time-point one and two in group 2 than group 1.

Relationship between condition and perceived concentration- No significant relationship was found between perceived concentration and cognitive demand ($t=2.004$, $df=27$, $P=0.055$). See table 4.2 for the descriptive

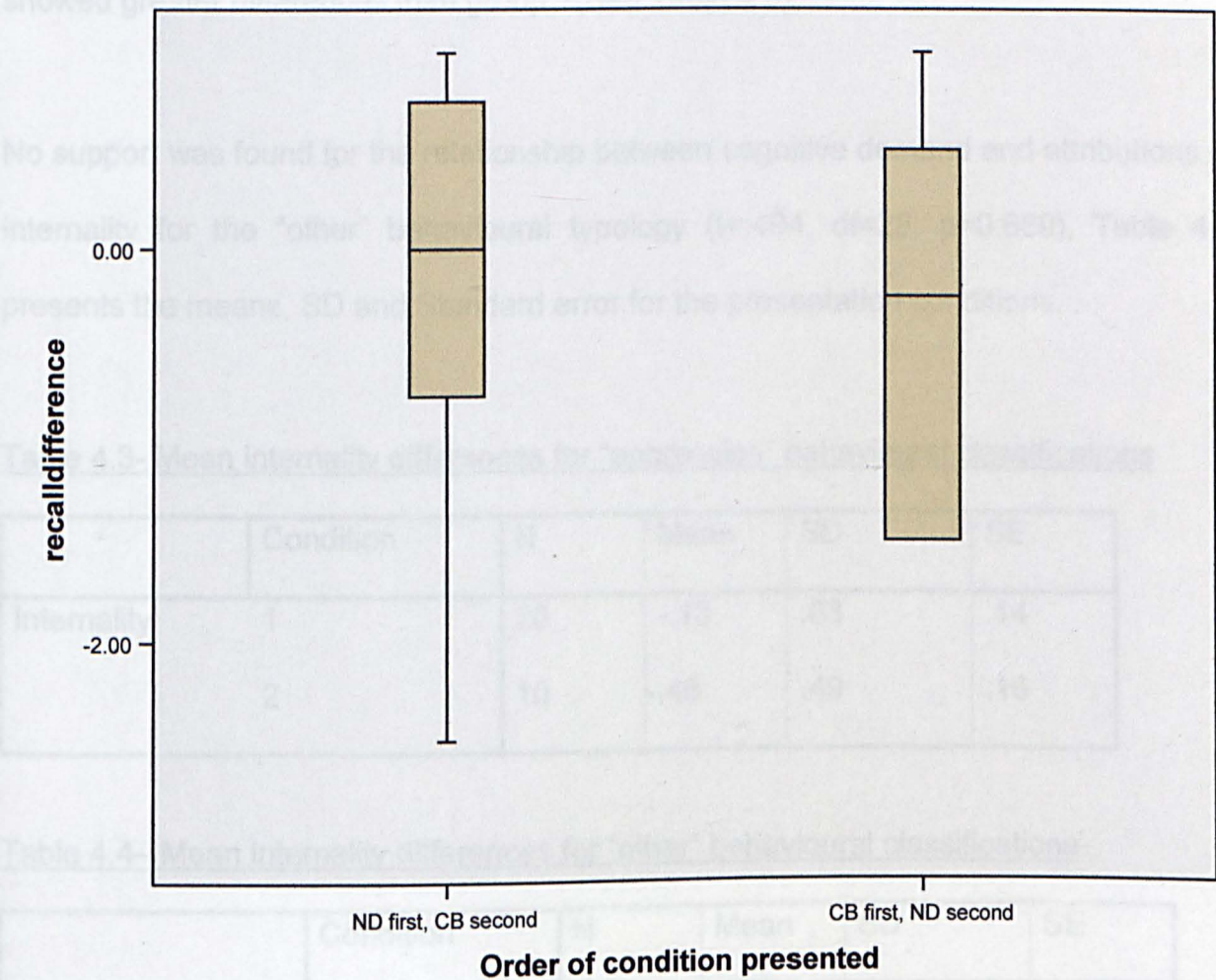
Table 4.1- Mean recall differences between cognitive demand and non-demand conditions

	Condition	N	Mean	SD	SE
Recall	1	20	-.1750	1.09153	.24
	2	10	-.3500	1.00139	.35

Table 4.2- Mean concentration differences between cognitive demand and non-demand conditions

Concentration	Condition	N	Mean	SD	SE
	1	20	.1250	.75	.17
	2	9	-.44	.58	.19

Fig.4.1 Boxplot showing the mean and range of recall score differences between time-point one and two for both groups.



4.4 Relationship between Cognitive Demand and Internality

A comparison of the mean internality differences for non-cognitive demand and cognitive demand conditions for aggression indicated a significant difference between conditions ($t= -2.527, df=28, p=0.017$). There is evidence that more internal attributions are made under cognitive demand conditions, and the estimated average increase is just over half a point on the internality scale. Fig 4.2 displays a box plot of the differences between internality scores in non-demand and cognitive demand conditions separately for group one and two. There is an outlier in group one who showed greater

variability and is counter to the general trend of the group, his/her specific case scoring higher internality scores whilst under non-demand conditions. Participants in group 2 showed greater differences than group 1(See Table 4.3).

No support was found for the relationship between cognitive demand and attributions of internality for the “other” behavioural typology ($t=.494$, $df=28$, $p=0.689$), Table 4.4 presents the means, SD and Standard error for the presentation conditions. .

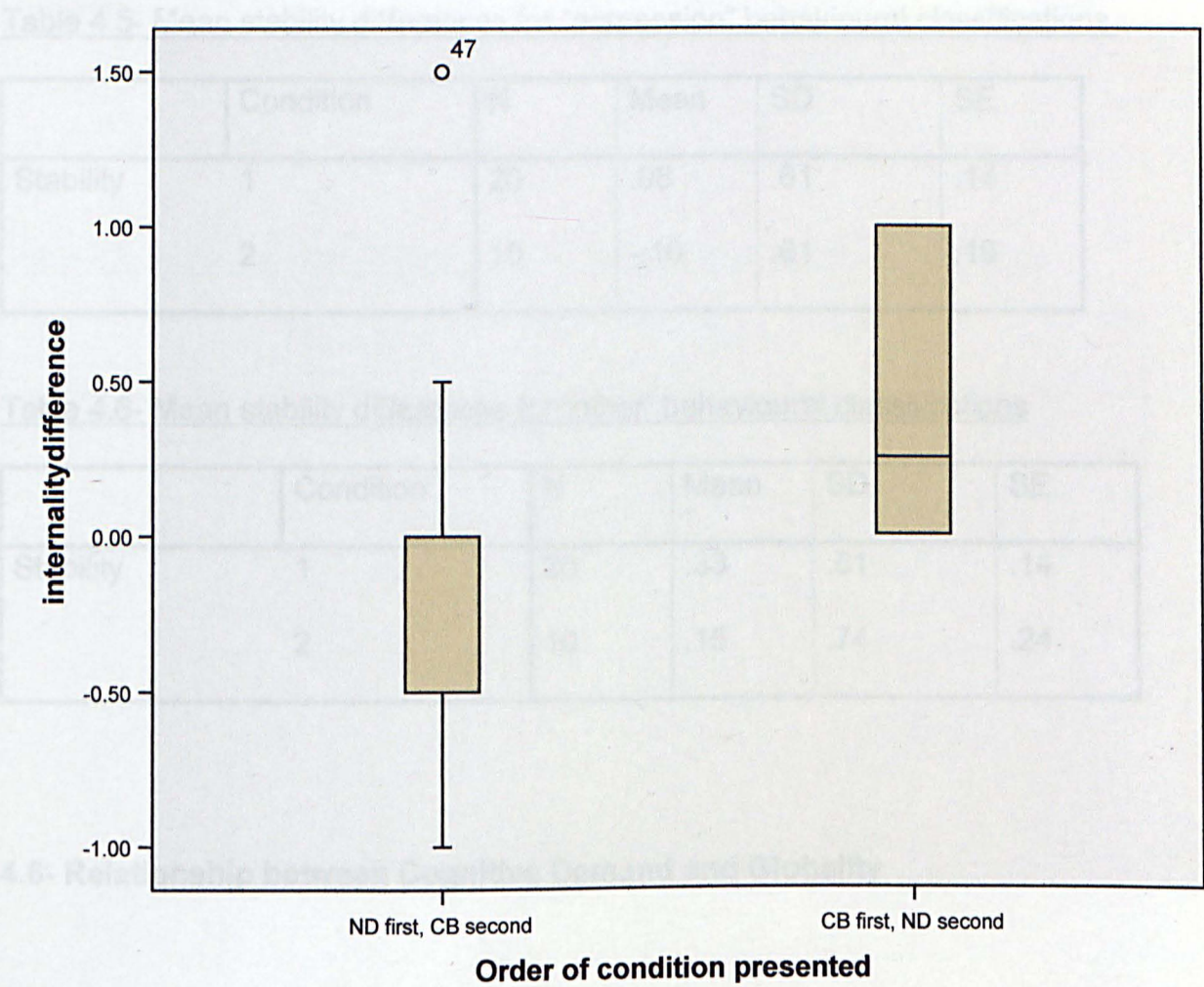
Table 4.3- Mean internality differences for “aggression” behavioural classifications

	Condition	N	Mean	SD	SE
Internality	1	20	-.13	.63	.14
	2	10	.45	.49	.16

Table 4.4– Mean internality differences for “other” behavioural classifications

	Condition	N	Mean	SD	SE
Internality	1	20	-.2000	.92	.20
	2	10	-.3500	1.02	.33

Fig- 4.2 Boxplot showing the mean and range of differences between time-point one and two internalty score- aggression.



4.5 Relationship between Cognitive Demand and Stability.

No relationship was found between cognitive demand and attributions of stability for aggression ($t=.686$, $df=28$, $p=.499$). The descriptives are presented in table 4.5

No support was found for the relationship between cognitive demand and stability for “other” behavioural classifications ($t=.736$, $df= 28$, $p=.468$). Table 4.6 presents the mean, SD and standard error.

Table 4.5- Mean stability differences for “aggression” behavioural classifications

	Condition	N	Mean	SD	SE
Stability	1	20	.08	.61	.14
	2	10	-.10	.61	.19

Table 4.6- Mean stability differences for “other” behavioural classifications

	Condition	N	Mean	SD	SE
Stability	1	20	.33	.61	.14
	2	10	.15	.74	.24

4.6- Relationship between Cognitive Demand and Globality

No support was found for the relationship between cognitive demand conditions and attributions of Globality for aggressive behaviour ($t=.377$, $df\ 27$, $p.709$).Table 4.7 shows the mean, SD and Standard error for the two condition order groups. Fig 4.3 shows that the greater differences between time-point one and two for group 2.

No relationship was found for attributions of globality and cognitive demand ($t=-.475$, df , $p=0.638$) Table 4.8 shows the mean differences between time-point one and two for globality scores. Figure 4.4 shows that greater differences between time-point one and two for group one, while the scores for group two did not differ apart from two cases.

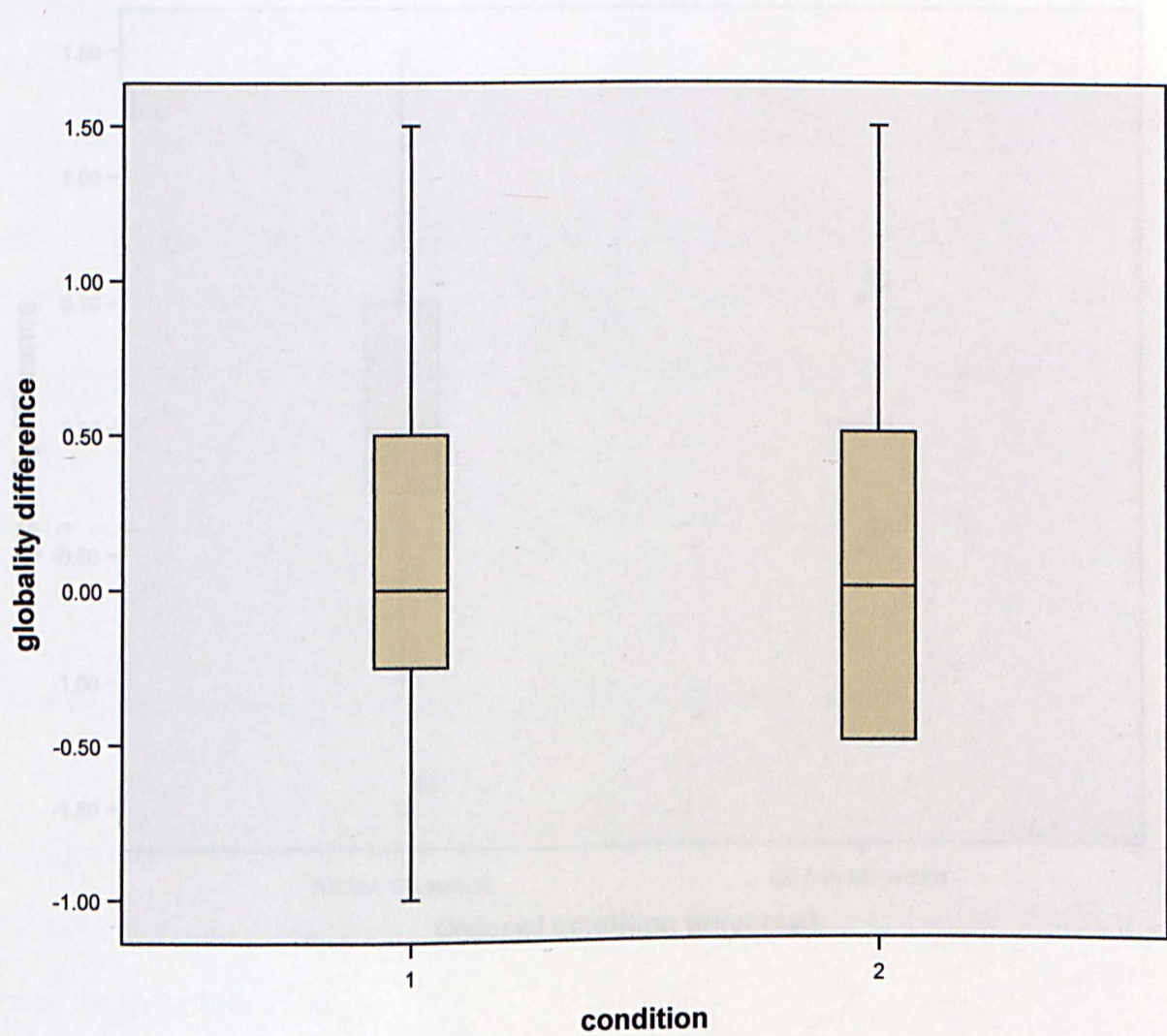
Table 4.7- Mean Globality differences for “aggression” behavioural classifications

	Condition	N	Mean	SD	SE
Globality	1	20	.10	.75	.17
	2	9	.00	.35	.11

Table 4.8- Mean Globality differences for “other” behavioural classifications

	Condition	N	Mean	SD	SE
Globality	1	20	.15	.61	.14
	2	9	.27	.79	.26

Fig- 4.3 Boxplot showing the mean and range of score differences on the globality scale for “aggression” behavioural classifications

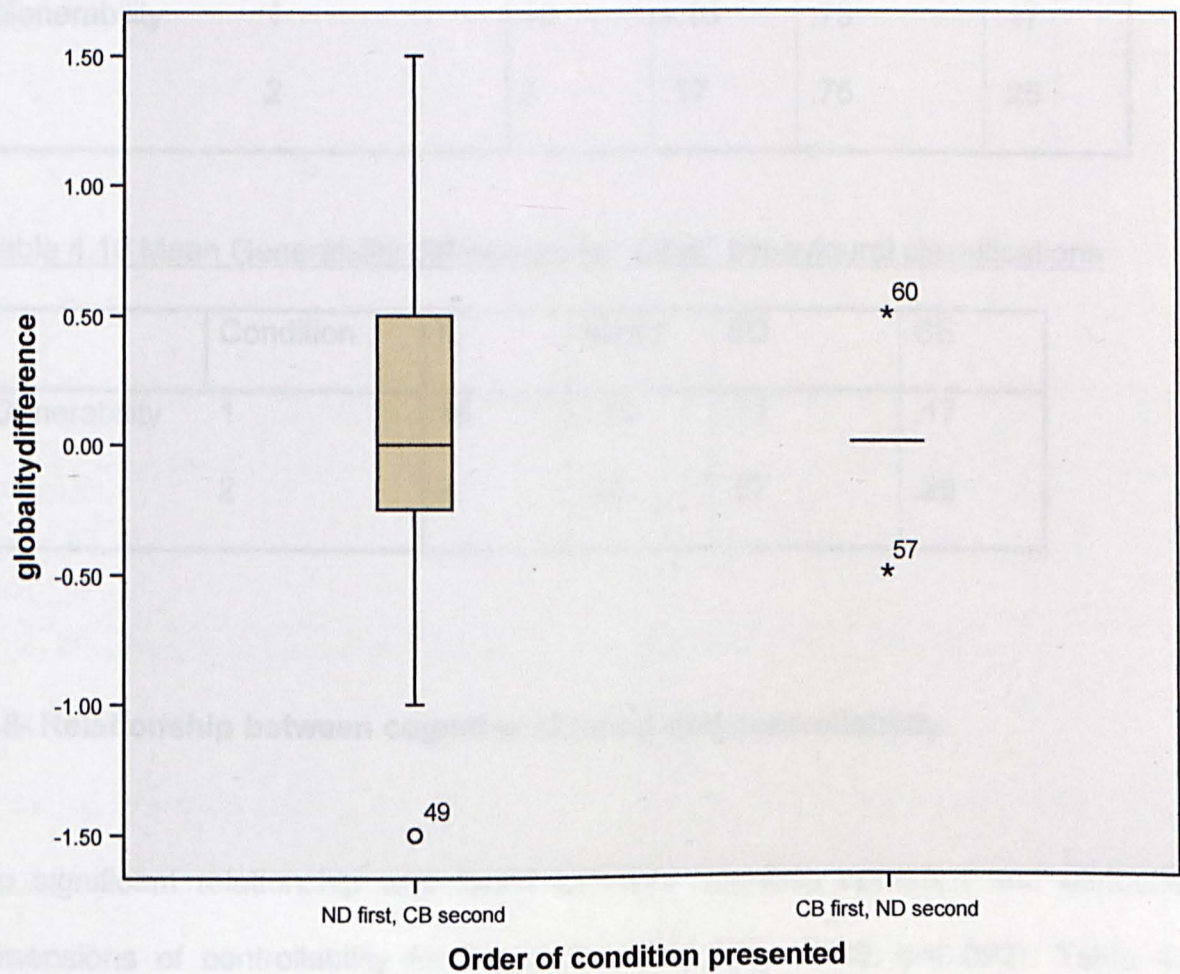


4.7- Relationship between cognitive demand and generability

No relationship was found for generability of globality for aggression and condition ($t=1.17$, $df=25$, $p=0.272$). Table 4.3 presents the group descriptives.

No relationship was found for generability of globality for "other" behavioural classifications and cognitive demand ($t=1.512$, $df=25$, $p=0.145$). Table 4.10 presents the group descriptives.

Fig-4.4 Boxplot showing the mean and range of score differences on the globality scale for “other” behavioural classifications



4.7- Relationship between cognitive demand and generability

No relationship was found for attributions of generability for aggression and condition($t=-1.11$, $df=26$, $p=0.277$). Table 4.9 presents the group descriptives.

No relationship was found for attributions of generability for “other” behavioural classifications and cognitive demand ($t=-1.512$, $df=25$, $p=0.143$) Table 4.10 presents the group descriptives.

Table 4.9 Mean Generability differences for “aggression” behavioural classifications

	Condition	N	Mean	SD	SE
Generability	1	18	-.16	.73	.17
	2	9	.17	.75	.25

Table 4.10 Mean Generability differences for “other” behavioural classifications

	Condition	N	Mean	SD	SE
Generability	1	18	-.19	.71	.17
	2	9	.28	.87	.29

4.8- Relationship between cognitive demand and controllability

No significant relationship was found between cognitive condition and attributional dimensions of controllability for aggression ($t=1.758$, $df=23$, $p=0.092$). Table 4.11, shows the descriptive data.

A Significant relationship was found between cognitive condition and attributional dimension of controllability for “other” behavioural classifications ($t=2.266$, $df=23$, $p=0.033$). Higher controllability attributions were made whilst under cognitive demand conditions. The estimated average increase is just under a point (0.87) on the controllability scale. Table 4.12 shows the descriptive data.

Table 4.11 Mean Controllability differences for “aggression” behavioural classification

	Condition	N	Mean	SD	SE
Control	1	16	.1250	.88	.22
	2	9	-.5000	.79	.26

Table 4.12 Mean Controllability differences for “other” behavioural classification

	Condition	N	Mean	SD	SE
Control	1	16	.38	.97	.24
	2	9	-.50	.82	.28

4. 9- Relationship between attributional dimensions-data analysis

Analysis involved testing for correlations between the five attributional dimensions. Correlations between the dimensions are calculated for the whole sample then separately for the two presentation order conditions one and two.

Stages of analysis:

1. Relationship between variables whilst under non-demand conditions.
2. Relationships between attributional dimensions whilst under cognitive demand conditions.

4.10- Relationship between attributional dimensions whilst under non- demand conditions for aggression.

The attributional variable internality was positively correlated with stability($r=.651, n=36, p=.000$) globality ($r=.474, n=36, p=.004$) and generability. Stability had a significant positive relationship with globality ($r=.603, n=36, p<0.001$) and generability ($r=.461, n=34, p=.006$) Globality was positive correlated with generability ($r=.340, n=23, =0.045$). No relationship was found between controllability and internality ($r=-.256$) stability($r=-.200$) generability($-.157$)or globility ($r=-.300$) Table 4.12 shows the correlations for the main variables under non-demand condition.

Table 4. 13 - Results of correlations between key attributional variables under non-demand conditions- aggression

		1	2	3	4	5
1.internality	Pearson	1	.651(**)	.474(**)	.421(*)	-.256
	Correlation					
	Sig. (2-tailed)					
	N					
2.stability	Pearson		1	.603(**)	.461(**)	-.200
	Correlation					
	Sig. (2-tailed)					
	N					
3.globality	Pearson			1	.340(*)	-.300
	Correlation					
	Sig. (2-tailed)					
	N					
4.generability	Pearson				1	-.157
	Correlation					
	Sig. (2-tailed)					
	N					
5.controllability	Pearson					1
	Correlation					
	Sig. (2-tailed)					
	N					

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

4.11- Relationship between attributional dimensions whilst under cognitive-demand conditions for aggression.

Internality was found to be positively correlated with stability($r=.600$, $n=39$, $p<0.001$). stability was found to be positively with globality($r=.339$, $n=38$, $p=.037$) and generability($r=.445$, $n=38$, $p=.004$). A significant positive relationship was found between globality and generability($r=.384$, $n=38$, $p=0.017$). A significant negative relationship was found between generability and controllability($r=-0.334$, $n=35$, $p=0.05$). No relationship was found between internality and globality ($r=.365$, $n=39$, $p=.107$) globality($r=.296$, $n=38$, $p=.072$) or controllability($r=-.289$, $n=36$, $p=.087$). No relationship was found between stability and control($r=-.289$, $n=36$, $p=.087$) or between globality and control ($r=-.182$, $n=35$, $p=.296$)

Table 4. 14 - Results of correlations between key attributional variables under cognitive-demand conditions- aggression

		1	2	3	4	5
1. internality	Pearson	1	.600(**)	.265	.296	-.289
	Correlation					
	Sig. (2-tailed)					
	N					
2. stability	Pearson	39	39	38	38	36
	Correlation					
	Sig. (2-tailed)					
	N					
3. globality	Pearson		1	.339(*)	.455(**)	-.267
	Correlation					
	Sig. (2-tailed)					
	N					
4. generalbility	Pearson			38	38	35
	Correlation					
	Sig. (2-tailed)					
	N					
5. controllability	Pearson				1	-.334(*)
	Correlation					
	Sig. (2-tailed)					
	N					

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

4.12- Secondary analysis- The relationship between Stress and attributions

To examine the relationship between perceived stress and attributions. The initial analysis involved presenting the differences graphically to see if the scores differ significantly. A t-test was then applied to the data set. To examine the impact of cognitive demand condition, the analysis firstly investigated the impact of high levels of cognitive demand on carers' perceived stress. The second stage of the analysis involved correlation analysis to establish if there is a relationship between perceived stress and attributional dimensions.

Figure 4.5 presents the differences between time-point 1 and time-point two perceived stress. Graphically this shows that perceived scores did not differ greatly. Greater differences were observed in group 1 than 2. An independent t-test was applied to the data which found no significant relationship between cognitive demand condition and perceived stress ($t=.419$, $df\ 24$, $P0.679$) (see table 4.14 for group descriptives)

Correlational analysis investigated the relationship between perceived stress and attributional dimensions. No relationship was found between perceived stress at time point one and attributional dimensions. Table 4.15 shows the correlations. No support was found for a relationship between perceived stress at time point one and attributional dimensions. Or time point two (see Table 4.16 for correlations).

For the whole sample GHQ scores ranged 38 points, the mean was 15.18. For group 1 scores ranged 36 points, the mean was 17.1. For group 2 the GHQ scores ranged 26 points, the mean was 12.1 points

Table 4.15 Mean Perceived stress differences

	Condition	N	Mean	SD	SE
PS1	1	17	.32	1.26	.31
	2	9	.11	1.17	.39

Fig 4.5 Boxplot showing the mean and range of perceived differences scores

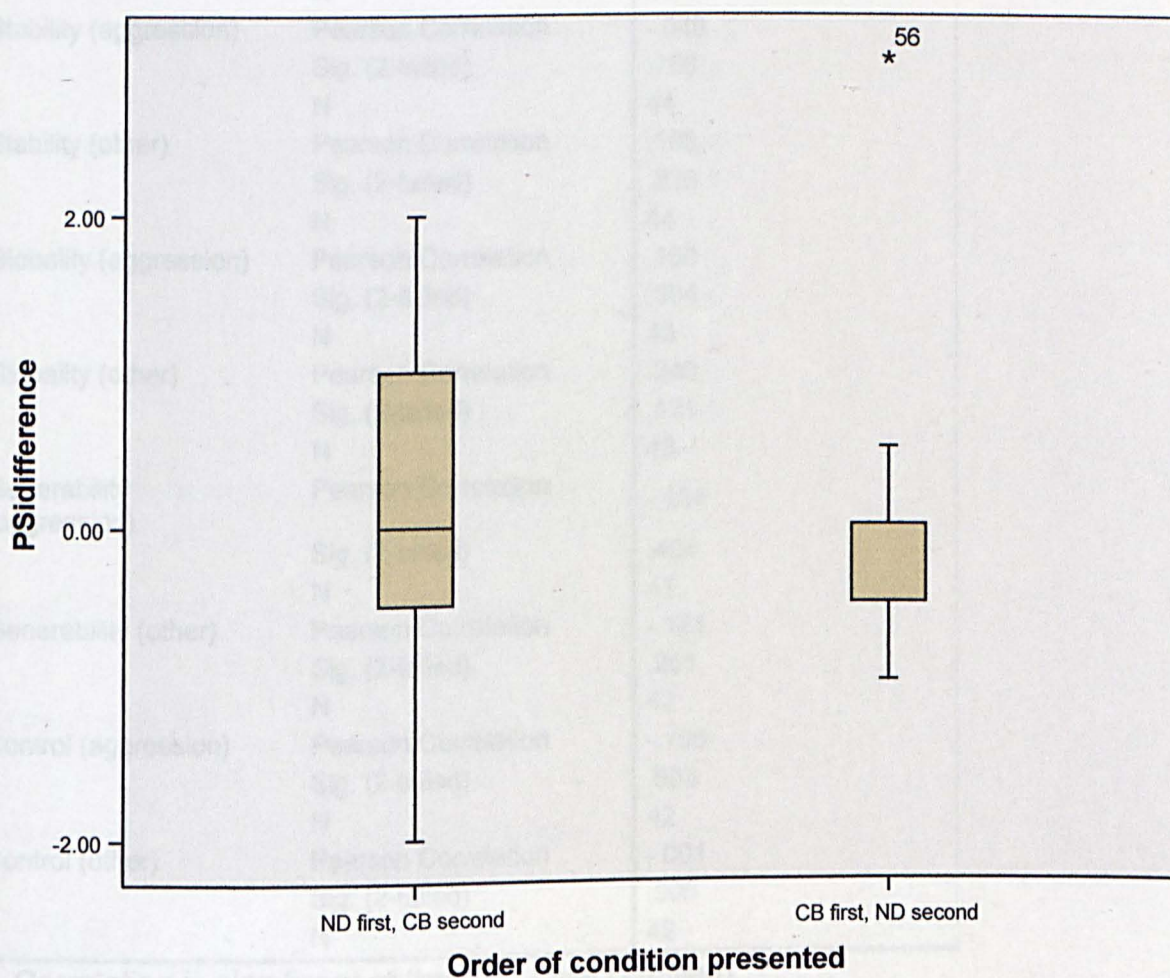


Table 4.16 Correlations between perceived stress at time-point one and attributional dimensions

		perceived stress TP1
perceived stress TP1	Pearson Correlation	1
	Sig. (2-tailed)	
	N	44
internality (aggression)	Pearson Correlation	-.037
	Sig. (2-tailed)	.814
	N	44
Internality (other)	Pearson Correlation	.003
	Sig. (2-tailed)	.984
	N	44
Stability (aggression)	Pearson Correlation	-.048
	Sig. (2-tailed)	.756
	N	44
Stability (other)	Pearson Correlation	.188
	Sig. (2-tailed)	.223
	N	44
Globality (aggression)	Pearson Correlation	.160
	Sig. (2-tailed)	.304
	N	43
Globailty (other)	Pearson Correlation	.240
	Sig. (2-tailed)	.121
	N	43
Generability (aggression)	Pearson Correlation	-.134
	Sig. (2-tailed)	.404
	N	41
Generability (other)	Pearson Correlation	-.181
	Sig. (2-tailed)	.251
	N	42
Control (aggression)	Pearson Correlation	-.105
	Sig. (2-tailed)	.508
	N	42
Control (other)	Pearson Correlation	-.001
	Sig. (2-tailed)	.996
	N	42

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4.17 correlations between perceived stress at time-point two and attributional dimensions.

		perceived stress TP2
perceived stress TP2	Pearson Correlation	1
	Sig. (2-tailed)	
	N	27
Internality (aggression)	Pearson Correlation	.215
	Sig. (2-tailed)	.281
	N	27
Internality (other)	Pearson Correlation	.099
	Sig. (2-tailed)	.624
	N	27
Stability (aggression)	Pearson Correlation	-.266
	Sig. (2-tailed)	.180
	N	27
Stability (other)	Pearson Correlation	-.068
	Sig. (2-tailed)	.737
	N	27
Globality (aggression)	Pearson Correlation	.115
	Sig. (2-tailed)	.567
	N	27
Globality (other)	Pearson Correlation	.108
	Sig. (2-tailed)	.592
	N	27
Generability (agression)	Pearson Correlation	.147
	Sig. (2-tailed)	.464
	N	27
Generability (other)	Pearson Correlation	.152
	Sig. (2-tailed)	.449
	N	27
Control (aggression)	Pearson Correlation	.239
	Sig. (2-tailed)	.261
	N	24
Control (other)	Pearson Correlation	-.005
	Sig. (2-tailed)	.980
	N	24

** Correlation is significant at the 0.01 level (2-tailed).
 * Correlation is significant at the 0.05 level (2-tailed).

4.13 – Psychometric Properties of the Attributional Scales

This section will report on the internal consistency of the attributional measures.

Internal consistency of the attributional questionnaire was established. This was assessed using Cronback Alpha for main attributional questions in the attributional questionnaire (internality, stability, globality and generability). The Cronback alpha was calculated for the full scale under non demand conditions for group one (standardized neutral = .910) and for group two (standardized neutral =.895) the Cronback alpha was also calculated for the full scale under cognitive demand conditions for group one(standardized neutral = .737) and group two (.931) .

The analysis suggest that there is a reasonable high degree of internal consistency for the whole attributional scale. The questions within the attribution questionnaire were found to be very highly correlated. A figure greater than 0.7-0.8 was found indicating that the items are not distinct and independent within the questionnaire from each other. This indicates that each of the attributional questions measure the same construct and not the distinct attributional dimension, internality, stability, generability, and globality.

Due to the small number of items on the controllability questionnaire it was not possible to examine the internal consistency. Dagnan (2004) report on the reliability and validity of the scale from which the questions were taken. .

4.14 Summary of results

No significant relationship was found between condition and recall. Comparison of the mean indicated that participants in group 1 recall more correct answers whilst in the cognitive demand condition than in the non-demand condition., For group 2, more correct responses were recalled whilst in the non-demand group than under conditions of high cognitive demand. Therefore no support was found to support the notion that an individual under high demand has an impact upon their ability to recall salient external factors.

No significant difference between cognitive demand and perceived ability to concentrate was found.

Support was found for hypothesis one - there is evidence that more internal attributions are made under cognitive demand conditions and the estimated average increase is just over half a point on the internality scale. No support was found for "other" behavioural classifications. More weighting was given in the interpretations for aggression as the content of the videos was considered to be more matched in terms of behavioural typologies.

Partial Support was found for the role of cognitive demand on attributions of controllability. A significant relationship was found between cognitive condition and attributional dimension of controllability for "other" behavioural classifications. Higher controllability attributions were made whilst under cognitive demand conditions. The estimated average increase is just under a point (0.87) on the controllability scale.

However no significant support was found for the relationship between cognitive condition and attributional dimensions of controllability for ratings of aggression. No support was found for the role of cognitive demand on the other main attributional dimensions (stability, generability, and globality) for either "aggression" or "other" behavioural classifications.

Under non-demand conditions all of the attributional dimensions were found to be positively related excluding controllability. Internality was found to be positively correlated with stability. Stability was found to be positively with globality and generability. A significant positive relationship was found between globality and generability. A significant negative relationship was found between generability and controllability. No relationship was found between internality and globality or controllability. No relationship was found between stability and control or between globality and control.

No support was found for an influence of stress on any of the attributional dimensions.

Chapter 5

Discussion

5.1 Overview of discussion

The study sought to expand Gilbert's attributional framework of attribution formation by exploring the effect of high levels of cognitive demand on the formation of staff attributions of challenging behaviour. The hypothesised model predicts that cognitive demand reduces the ability of care staff to use situational information that may influence the behaviour of an individual displaying challenging behaviour despite being able to recall such situational information. It was hypothesised that carers who were under conditions of high cognitive demand would make fewer external causal attributions and more internal attributions regarding the cause of observed challenging behaviour. It was also hypothesised that a significant relationship would be found between the dimensions of internality, stability, globality, generability and controllability. Carers under a high cognitive demand were predicted to attribute higher levels of control, globality and stability to the cause of observed behaviour than whilst under non-demand conditions.

In general, the hypothesised model in the current study was found to be partially supported as results suggest that cognitive demand does have a role in determining staff's attributions of internality. There is evidence that more internal attributions are made under cognitive demand conditions for aggressive behaviour. No support however was found for "other" behavioural classifications. More weighting was given in the interpretations for aggression as the content of the videos was considered to be

more matched in terms of behavioural typologies. Partial support was found for the role of cognitive demand on attributions of controllability. A significant relationship was found between cognitive condition and attributional dimension of controllability for “other” behavioural classifications. The results indicate that participants attribute higher levels of controllability whilst under cognitive demand conditions than whilst under non-demand conditions. However, no such support for a relationship between cognitive condition and attributional dimensions of controllability for ratings of aggression. Gilberts model was not found to be generalised to the other attributional dimensions identified within Weiner’s model.

This chapter will consider:

- The findings of the study set against underlying theoretical models that were used to develop the research;
- The findings related to theory and previous empirical findings in the field;
- The clinical implications that emerge;
- The methodological and theoretical strengths and weaknesses of the study;
- Areas of future research.

5.2 Links with underlying theoretical models

It was suggested that cognitive demand may play a primary role in explaining the way in which staff form causal attributions about an individual's behaviour. An important part of the background to this finding can be found in cognitive approaches to attention. When we attempt to perform several operations at once then this often results in the failure of the least automatic (most effortful) operation. It has been suggested that

social inferences (i.e. the process by which traits are inferred from behaviour) is such a decomposable process. A rationale for cognitive demand on attributions is based on the notion that people go through a two-stage process when making attributions (Gilbert, 1989, 1991). Perceivers firstly draw character inferences (internal) for behaviour and then correct those inferences with information about the context (situational/external) in which the behaviour occurred. Hence, firstly people assume that a person's behaviour is something to do with their disposition (internal factors) before an attempt is made to explain their attributions externally and accordingly taking into account external factors Gilbert et al (1998) contend that, in general, characterization requires less conscious attention (or fewer cognitive resources than does correction) (see also Winter & Uleman, 1984, Winter, Uleman, et al 1985; cf. Bassili & Smith, 1986). As a result, the addition of another resource-consuming task is predicted to impair the latter but not the former operation. In the present study participants were asked to make attributional ratings regarding an actor who was displaying challenging behaviour.

To investigate the effect of cognitive demand on participant ability to recall, gather situation information, the attribution questionnaire used embedded factual questions to measure participant's recall. This was employed to control for any memory bias so that any observed differences may not be attributed to a failure to recall salient information. It was assumed that the effect of cognitive busyness occurs at the attributional stage rather than at the preceding behavioural identification stage (cf Trope, 1986). That is, busy perceivers and non-busy perceivers are assumed to perceive behaviour equally well e.g. in terms of severity and ability to recall situational factors that may be influencing the behaviour. As predicted, based on previous work (Gilbert 1989), no such memory biases were observed as no support was found for a relationship

between cognitive demand and recall of situational and personal factual information presented. The results indicated that cognitive demand does not play a central role in influencing the subject's ability to perceive situational factors. Indeed, participants who were presented with the non-demand condition first then cognitive demand condition second were found to have better recall whilst under conditions of high cognitive demand.

The results of this study offer support for these ideas as they indicate that the staff, despite being under non-optimal conditions, remained able to pay attention to factors that were influencing behaviour. Participants were also required to complete a very brief measure of their subjective ability to concentrate on the video during the experiment. The purpose of measuring the perceived ability to concentrate on the video was to help ascertain if the manipulation was so difficult as to prevent participants from being able to pay any attention to the video alternatively if the manipulation fails to be cognitively demanding. Despite not being statistically significant the trend in the data results suggested that participants perceived it to be harder to concentrate whilst under conditions of cognitive demand indicating that the cognitive demand manipulation was impacting upon cognitive demand. The results from the recall task indicate that the cognitive demand task was not so difficult as to prevent participants being able to pay attention to the video.

Partial support was found for hypothesis 2 regarding the role of cognitive demand and attributions of internality. Cognitive demand was found to influence attributions of internality when ratings were related to aggression but not when related to other behavioural typologies. More weighting is given for the aggression typologies as the

videos were matched in terms of behaviour displayed whilst the other classification refers to behaviour of different types.

The present study was found to be consistent with previous work (Gilbert et al, 1998). Gilbert, (1989) illustrated the impact of cognitive demand with a variety of busyness inducing tasks, such tasks being designed to be experimental mimics of the many resource-consuming tasks of ordinary life. When interacting with others, for example, one must pay considerable attention to the regulation of one's own thoughts, feelings and actions. These self-regulatory efforts, in turn impair one's understanding of those whom one is observing/interacting with. In the present study, support was found for hypothesis one and two which made predictions regarding the impact of high levels of cognitive demand on the ability of care staff to use situational constraint information. The results also support hypothesis three indicating that more blaming, internal attributions are made whilst under cognitive demand conditions and that higher levels of control are attributed to the behaviour. No such support was found for the relationship for the role of cognitive demand on the other attributional dimensions. Therefore the results were found to replicate Gilbert's model of internality within a residential care setting. They also support the notion that the model may be generalised to the attributional dimension of control but may not be applied to other dimensions identified by Weiner (1986). Therefore Gilbert's model may be applied to attributions of challenging behaviour and there is tentative support to suggest that Gilbert's and Wiener's models may be integrated.

5.3 The clinical implications

The current results indicate that Gilbert's work on the formation of social attributions may be applied to attribution formation of challenging behaviour within a residential care setting. The results indicated that the model may be applied to internality and controllability. Relatively little is known about how care-staff come to form attributions. For instance, how current situational factors shape the formation of attributions of instances of challenging behaviour. The present study is of significance as it enhances our understanding of the attributional process and helps to make predictions as to the situational factors that may shape how causal beliefs influence behaviour. Further research into the process of attribution formation may facilitate the development of effective interventions and training packages for carers. The study also has significant implications for care home environments and the kind of supervisory support provided to staff.

Staff training has been regarded as a method for improving the care that staff provide. However mixed outcomes have been observed (Cohen-Mansfield et al 1997; McCallion et al 1999; Moniz-Cook et al 1998). The findings from the current study offer insight into the factors that prevent knowledge gained from experience and training from being directly transferable to practice when there is a basic assumption that beliefs shape behaviour. There is considerable evidence within social psychology that people's beliefs are moderately good predictors of their behaviour (Ajzen & Fishbein 1977). In addition, behavioural analysis has discussed the importance of understanding the relationship between what people say and do (e.g. Israel 1978). There is the assumption implicit in the literature on challenging behaviour, and in much staff training, that the beliefs about the cause of challenging behaviour can play a central role in

determining what people do. Firstly, behavioural interventions are increasingly becoming based on hypotheses about the causes of the behaviour, Secondly, professional training for unqualified care staff often includes a substantial amount of information on models of causation of challenging behaviour.

It may be hypothesised from the current findings that, despite increased knowledge regarding how to manage challenging behaviour, this may not transfer directly into staff behaviour. Although training may temporarily change care staff members' perception of dementia and challenging behaviour broadly, it may not fundamentally alter the way they think about the causes of a person's behaviour in situ as it unfolds alongside other aspects of the situation and how they subsequently respond in vivo. The results of this study could suggest that care staff may be unable to apply this knowledge due to high levels of cognitive demand. It may be hypothesised that, as cognitive demand impairs care staffs' ability to use contextual/situational information when forming attributions of internality, it may therefore be argued that cognitive demand impairs their ability to draw upon their knowledge gained from experience and training. The study demonstrates the stages of attribution formation from more automatic processes to more attentionally demanding processes. It is possible that busy care staff in situ respond in ways that are automatic rather than making a considered response. The brain performs a number of automatic mental shortcuts to manage the large array of inputs that it receives. Research suggests that the attributional process may be riddled with errors and biases (Heider, 1958). For example, the 'fundamental attributional error' occurs when behaviour is attributed to internal and enduring states, such as personality variables, rather than environmental influences that may actually be producing the behaviour (Heider, 1958). These biases may be observed in the care setting. People. The results suggest that for learnt behavioural knowledge to be applied in a constructive way then

care staff must be able to reflect about the behaviour that they witness and this could be dependent on the level of cognitive demands they face in their everyday role.

Cognitive busy perceivers often fail to use information about the situational context in which the behaviour occurred and therefore risk misinterpreting those with whom they are interacting. Although the role of emotions was not investigated in the present study, a number of studies have identified internal attributions to be strongly related with feelings of disgust and anger and have also been linked with individual's propensity to offer less help (e.g. Standen and Standen 2002). The present study indicated that cognitive demand did not play a central role in the amount and type of contextual/situational information recalled. It may be argued that busy perceivers failed to correct their characterizations because they were too busy to use information about the situational context, but not because they failed to notice, gather, or recall that information. If this is true, then busy perceivers who fail to correct their characterizations whilst they are busy should be perfectly able to do so at some later time (Gilbert & Osbourn 1989). Gilbert & Osbourn (1989) experimentally investigated if formally busy perceivers were able to correct their mistaken impressions retrospectively; such retrospective corrections were found but not inevitable. They would not correct their characterization of the target unless those subsequent tasks specifically encouraged corrective thinking about the target. Hence correction does not occur spontaneously and requires reflection and attention. Their results suggested that the failure to correct can be reversed if the formerly busy perceivers do the very sort of corrective thinking that busyness prevented in the first place. In addition busy perceivers were able to correct their original impressions retrospectively. However, they were still unable to correct subsequent information that had been biased by those original impressions. As such, perceivers were occasionally able to overcome the

primary, but not subsidiary, effect of cognitive busyness. Therefore the uncorrected impression itself may be undone by a few minutes of thought, but this does not mean that the subsidiary effects of this impression are equally easy to eradicate. For example, if busy perceivers erroneously conclude that another person is dispositionally aggressive, then this erroneous belief may colour the perceiver's subsequent reading of neutral or ambiguous information.

It may be argued that if training of care staff could include education regarding the types of attributional errors that may be made whilst busy then they may be particularly willing to discard the beliefs they form under such suboptimal conditions and they may be more willing to rethink these conclusions at a later time. Given that dispositional attributions are associated with negative effect then any process of correcting these would be beneficial to both the carer and individual within their care. Therefore the present study highlight the potential benefits of making staff aware of the types of attributional errors that they might make whilst busy. Training staff to become more mindful of the formation of unhelpful attributions when busy could facilitate their ability to use situational information to correct automatic, internal attributions of behaviour and this could help staff to cope more effectively with challenging behaviour and respond to it constructively. However we must be mindful as Gilbert and Osbourne (1989) have highlighted, that corrective thinking may well be seen to repair the original misperception but, because that misperception has already contaminated subsequent information processing, a complete cure may be unattainable.

The findings of the current study, have a number of significant implications for care home and staff supervisory arrangements. The findings indicate that retrospective correction of attributions may be facilitated through the use of supervision, reflection

time and training to facilitate thought about the individuals displaying challenging behaviour.

The development of PCC, has led to a “new Culture of Care” in the way we look at the needs of people with dementia. This includes the way we understand dementia, support people with dementia and how care is organized. Historically dementia has sat within the fields of medicine and psychiatry which led to an over-emphasis on the “treatment” of people with dementia. This included focusing on the physical changes that are happening in the brain and how best to “manage” the symptoms related to these cognitive changes. PCC emphasizes the influence of society and physical environment on a person with dementia. Current research offers insight into the factors that shape staff beliefs and behaviour that have, in some instances, been identified as influencing and encouraging the maintenance and development of challenging behaviour .Hastings and Remington (1994). PCC on the other hand, seeks to view the person with dementia as a whole and how the person is influenced by factors beyond the physical changes in the brain. The framework highlights the influence of the care environment on the wellbeing of the individual and so is of relevance.

5.4 The methodological and theoretical strengths and weaknesses of the study

Procedural strengths and weaknesses

The strengths of the current research include its involvement of care staff who worked on a daily basis with individuals with dementia and challenging behaviour, thus giving ecological validity and so allowing greater generability of findings.

When developing the measures, consideration was given regarding the length of the procedure that participants were required to undertake. The use of a shortened version of the measures helped reduce the length of the procedure. According to the feedback from participants, many found it to be an enjoyable experience. For many participants it was often noted that they wished to talk further regarding their experiences and the videos that they had observed. The experience of taking part in the procedure was found to be therapeutic being seen as an opportunity to reflect on their practice and experience. Many commented on feeling validated by being given the opportunity to take part in the research in that their opinions were important. The use of the cross-over design also allowed for smaller number of participants for the study to gain statistical power to test the effect. The full participant number was recruited.

Participants were also required to complete the questionnaires whilst on shift within the home. While this was designed to reduce disruption caused to staff and management and to maximise recruitment numbers this posed some limitations. All participants completed the questionnaire whilst within the home. However the time of completion varied from before, during and after their shift. Every attempt was made to reduce distractions through the use of a private office but some distractions were unavoidable. This was found to be problematic as participants were frequently interrupted or were distracted by the activity within the home. For participants completing the questionnaire whilst on shift there is also the complication that they may be under cognitive demand as they are pre-occupied by activities needing completion within the home. Therefore participants who were intended to be completing the questionnaires under non-demand conditions may have been cognitively busy. Participants were however required to indicate how stressed they felt at that current moment and so It is possible that the

perceived stress indices picked this up. This indicated that there was not a significant relationship between perceived stress and attributions.

Whilst staff completed the experiment a researcher was present throughout to assist with completion of the questionnaires and ensure standardisation of procedure. The instructions indicated that there were no right or wrong answers so as to reduce demand characteristics and prevent socially desirable responses. It was noted that some individuals commented on being torn between the “correct” response based on training or knowledge and how they would respond in situ.

Participants were required to complete the experimental procedure and the questionnaires at two time points with a minimal time lapse of one week to prevent practice effects. The use of this design posed some difficulties. For example one home withdrew their consent for their staff to participate due to staff shortages and time constraints. This resulted in a number of participants being unable to complete the study fully and so it was not possible to analyse their responses. There were differences in time periods in-between stage one and two-variations due to care shift pattern and work demands. Within the homes there were also high staff turnover rates which resulted in a significant drop out rate.

5.5 Experimental Design-strengths and weaknesses

As far as we aware, this is the first experimental study of the formation of causal attributions amongst professional care staff involved in dementia care. Only one other study, Rose & Rose (2003) has employed a hypothesised attributional model that integrates Gilberts' (1988) and Weiners' (1986) attributional dimensions. Their study

differed significantly as it was set within the learning disabilities field and alternatively investigated the role of stress on attributions as opposed to cognitive demand. The current study allowed for the role of cognitive demand to be manipulated systematically and the role to be empirically tested experimentally. The methodology employed allowed cognitive demand to be manipulated systematically as opposed to observing the phenomena within the setting where it naturally occurs and allows for predictions to be made.

The failure of cognitive busy perceivers to correct their characterization has been documented with a variety of busy-induced tasks such as rehearsing word strings (Gilbert, 1988) or numbers (Gilbert & Osbourne 1989). Such tasks are merely experimental mimics of many resource-consuming tasks of ordinary life. Cognitive demand in the present study was manipulation using an audiotape of pre-recorded questions concerned with the working day. Participants were required to answer each question out loud as they watched the video clip thus dividing their attention temporarily and as an attempt to simulate the demands that the participants might face daily in their work. The present study used simultaneous auditory and visual modalities which some participants reported to be very difficult. Both the stimuli were auditory in terms of sound on the video and listening to the questions. The nature of how sensory information is coded and retrieved has been investigated which shows some limitation on capacity (Cherry 1953). Despite some reported complaints at being unable to concentrate the results from the recall task indicate that staff were able to divide their attention accordingly as the cognitive demand condition was not found to impair their ability to attend to and recall situational information. Previous research has manipulated cognitive demand using a variety of tasks which lack ecological validity. For example, Gilbert & Osbourne (1989) required participants to rehearse an eight-digit number whilst

watching a video tape. They were given 25 seconds prior to the start of the video clips to learn the eight-digit number and were instructed to hold the number in memory until the experiments asked them to recall it later. The question and answers were assumed to simulate thought processes similar to that in everyday life. However, on reflection the study may have employed alternative cognitive manipulation tasks that employ different sensory modalities for example rehearsing numbers and word strings (Gilbert 1988; Gilbert & Osbourne 1989). Other manipulations that have not previously been used that have more ecological validity may be practical tasks such as folding bed linen.

Participants were required to give their answers out loud immediately. No delay was given so as to prevent burdens on short-term memory. It may seem that a more appropriate control condition would have been one in which subjects were given no thinking-aloud task. Unfortunately, it is likely that some subjects in such a condition would spontaneously engage in corrective thinking and others would not, thus rendering it impossible for any prediction of the subject's subsequent impressions (Gilbert & Osbourne 1989). – thus by asking participants to say out loud the answers to their questions it ensured that participants were engaging with the extra demand task..

The present study employed a cross-over design which controls for the effect of individual factors. The cross-over design allows for a relatively small total number of participants because it removes the effect of factors that are stable over time but differ between individuals and that might be associated with the scores. Demographic data was collected for the sample such as previous experience and age to check their influence as co-variants of the basic attributional score. Unfortunately due to the cross-over design this would involve separating the sample into subgroups of participants, e.g. attributional scores just in cognitive demand-conditions first. Because of the small

sample size and design employed it was difficult to test this statistically and so this was not covered within the study.

Previous experiments have permitted participants to examine the particular measures that they would later be asked to complete. For example, Gilbert and Osbourne (1989), informed participants of the nature of the judgements that they would be making. In the present study participants were not allowed to view the questionnaires prior to the video. The rationale behind this was that it would prevent reflection (corrective thinking) whilst watching the video. However, a number of staff experienced difficulties with the structure of the questionnaires taken from the ASQ. For example it frequently had to be explained what the numbers corresponded to. The structure also changes from the attribution questionnaire to the controllability questionnaire which was found to cause further difficulties. In a sense, the questionnaires were intended to access "Hot Cognitions", i.e. those cognitions formed immediately following the event, but difficulties in filling out the questionnaire may have resulted in a delay and attribution changes. The questionnaire format has previously been used for example (Sharrock 1990; Dagnan 1998; Standen & Standen 2000 & Rose and Rose 2003) with no reported problems and is reported to have good reliability and validity (Shape, 2001). On reflection it may have been less problematic to have a period whereby participants become familiar with the questionnaire prior to administration.

5.6 Methodological issues in the measurement of causal attributions

Making attributions about behaviour on its own which is essentially what vignette methods ask study participants to do, is more difficult than making attributions about an

actual person's behaviour. As Fritz Heider (1958), an influential figure in the development of attributional theory, stated :

....a person reacts to what he thinks the other person is perceiving, feeling and thinking in addition to what the other person is doing (P.1 the psychology of inter-personal Relations.)

Studies in this area have been criticized because of reliance on vignettes as means of investigating staff reaction (Wanless & Johoda 2002). These vignettes provide scant information about the episode of challenging behaviour presented by an individual and fail to take account of personal contextual factors (Grey et al 2002). In an attempt to determine how staff reactions in relation to vignette methodology differ from how staff react to actual incidents of challenging behaviour, Wanless & Johoda (2002) examined two conditions, First, participants were asked to rate their responses to vignettes; second, workers were asked to rate real incidents of aggression involving someone they work with. Incidents involving a real person evoked stronger emotions from the participants. Moreover, staff perceptions of the aggressive client, rather than their perceptions of the behaviour per se, were more strongly linked to their cognitive and emotional responses to aggression. Hence, research has indicated that care staff responses are stronger to real life incidents than their perceptions based on vignettes but are constant with each other..

The vignettes were employed as they controlled the type of information presented to participants. For each of the vignettes the amount of situational and dispositional information was balanced and the content of the two equivalent vignettes was considered to be matched. The embedded questions were also balanced – care staff

were asked equal questions regarding dispositional and situational factors. Based on staff's verbal responses it was noted that staff tended to base their judgements on knowledge of their own residents that they had experienced. According to Kelley's (1972) analysis, the spontaneous attributions that are evoked in the absence of even implicit contextual information may be qualitatively different from the deliberative attributions that are made when the staff member develops knowledge of the person and their behaviour over time. The process of attributions is likely to be complex and dynamic, with attributions being shaped and consolidated in light of ongoing experience with the person. The use of vignettes may be justified on the basis of maintaining experimental control. The majority of studies have employed this methodology for this reason – they did not measure real life instances of challenging behaviour. Attempts were made to provide staff with a degree of background information in the vignettes regarding the individual such as their previous occupation, interests and that they had dementia. Additional to the vignette, a video accompanied the vignette descriptions. The study employed the use of case vignettes and videos that had not been previously used. These depicted brief episodes of challenging behaviour performed by actors who played the roles of the people with dementia who were described in the accompanying vignettes. The video clips involved 'demonstrations' of different types of challenging behaviour. Based on Todd and Watts (2005) findings that participants were more emotional regarding aggression, both of the clips to be used in the study contained physical and verbal aggression. Standen and Standen (2000) also identified that the perceived level of dependence was of significance. Hence the videos were also matched in terms of dependence and level of functioning. Equivalence of the videos was assessed on their face value by two clinical psychologists and a trainee clinical psychologist. The videos were selected for their content and the behaviours displayed. Both videos displayed aggression and other behavioural typologies. Differences still

existed between the videos for example the gender of the actor, cognitive ability and situational factors that may be shaping their behaviour. The design that was employed made it difficult to ascertain the equivalence statistically. The use of videos within attributional work is relatively novel and so there are important considerations here relating to the validity of using videos in experimental work – it may be hypothesised that attributions of the behaviour of well-known residents might follow a different process and so further work is warranted.

Types of questions used in the cognitive manipulation tape needed to be tailored for different homes- for example in one home carers were not assigned to be key workers for any specific resident. Some of the questions therefore were not relevant and participants were unable to answer.

5.7 Measures - strengths and weaknesses

Jones & Hasting 2003 adopted a measure designed to focus on attributions of a single event that included multiple items to measure key attributional dimension. The internal constancy of the attributional measures was examined - this indicated that the questions within the questionnaire were measuring the same basic concept instead of distinct and suggested that the attributional dimensions being measured were not dissimilar as all of the measures were found to correlate highly with each other. Responses tended to be the same throughout the questionnaire. For example scores of 4 on the measures were often observed. It is possible that the attributional measure is measuring the same concept. It was noted that a number of carers had difficulties in understanding the format of the Likert scale and so respondents frequently responded in the middle. The measures have been employed previously e, g Sharrock, 1990,

Dagnan 1998, McKenzie et al 2000). The basic structures have also been reported to have good validity and reliability as highlighted above difficulties may have been experienced as the questionnaire used a combination of questions taken from a number of well established measures.

A more general methodological point is that, although some measures of reliability for the rating scale were available and there is relevant data on aspects of the validity of the video stimuli, a full picture of reliability and validity of measures within the study is not available. Thus, the lack of support for predicted relationships between variables could be related, for example, to measurement error within the study. The problem is not unique, but applies generally to research on cognitive-emotional research with staff - further attention to development of reliable and valid measurement in this field is a priority for future research.

The present study established knowledge of dementia by assessing the types of training staff have previously received. On reflection this method creates difficulties in quantifying knowledge due to the differences in quality and content of the training. Alternatively the dementia quiz may be administered before hand instead of assessment of training to establish the level of knowledge of dementia (Moniz-Cook et al 2000). This is a 17-item staff rated questionnaire, adapted by Moniz-Cook from an earlier scale developed by Gilleard and Groom (1994).

5.8 Further work

Future work is necessary within the field to help clarify the relationship between cognitive demand and attribution formation regarding challenging behaviour. The

research needs to address further: How must demand affect other attributions? The present study has highlighted a number of methodological flaws and limitations that may be adapted for future study. Partial support for the application of Gilbert's model within a residential care setting has been found within Weiner's attributional framework and there are several ways in which the model may be expanded further.

The present study solely investigated the role of cognitive demand in influencing the main attributional dimension. The role of emotion, helping behaviour and optimism was not investigated. The current study only focused on primary attributions and not expectancy of outcome, emotion and willingness to help as is more closely related to Gilbert's model outlining the influence on attributions of internality. Weiner's model suggests that the amount of variance of helping behaviour is directly accounted for by attributions of controllability as opposed to emotional responses. This will partly depend on the emotions arousing properties of the situation - thus causal attributions may be viewed as the primary influence on emotions that then shape behaviour. Hence as a preliminary study it has attempted to investigate just the attributional dimension which he proposes to be most influential in determining emotions and subsequent helping behaviour. Future studies may investigate the application of Weiner's model with a bigger sample. Pathway analysis may be employed to establish the fit with Weiner's model. Future studies employing greater numbers and modified methodology may investigate further the integration of Gilbert's and Wiener's models. To assess the application of Gilbert's framework to Wiener's model the following measures may also be used:-

- Measurement of emotions- ERCB Emotional Responses to Challenging Behaviour Scale (Mitchel & Hasting 2001)
- Optimism and willingness to help may be assessed using a Likert scale

- (Standen and Standen, 2000) ratings from 1-9 (1=strongly disagree, 9=strongly agree)
- Optimism for change- Sharrock (1990).
- Willingness to offer extra help- seven point Likert scale used by Weiner, (1980); Sharrock (1990)

Future work may investigate the role of cognitive demand on Wiener's full model. However the present results only found a role of cognitive demand on attributions of internality and controllability. It may be that Gilbert's model may not be generalised to the other attributions. An effect was found for attribution of controllability- the current study employed a shortened version of the controllability Questionnaire (Dagnan 2004). Future research may wish to use the whole of the controllability questionnaire - internality and control may be more closely linked to attribution formation than the other dimensions.

It has been demonstrated that busy perceivers fail to correct their characterizations because they are too busy to use information about situational context, but not because they fail to notice, gather, or recall that information – it may be argued that busy perceivers who fail to correct their characterisations while they are busy should be able to do so at a later time. The present study supported Gilbert and colleagues' work in that participants were able to recall situational information but appeared not to use this information when forming attributions whilst under conditions of extra demand. The present study did not attempt to test whether busy perceivers were able to correct their attributions to take into account situational factors retroactively. Future exploration may wish to test these predictions within the field of challenging behaviour. This would have

significant clinical applicability for training and supervisory arrangements previously discussed above.

The present study attempted to control the type of information presented to care staff in terms of situational and dispositional information. Future research may examine how the information presented to care staff affects attributions. For example the case vignette highlighted that the individual has dementia. Standen and Standen (2000) identified that the level of self-directed and dependence to be of significance. It is possible that knowledge about an individual exhibiting challenging behaviour would impact on attribution formation and so it would be interesting to investigate this experimentally through manipulation of information provided. Attributions may also be influenced by the stage of dementia at which an individual is presenting.

Support has been found for the applicability of Gilbert's (1989) attributional framework for understanding how staff cognitive demand influences staff attributions of challenging behaviour in a residential setting for individuals with challenging behaviour. The present study presented an elderly individual displaying early-mid stage signs of dementia. Future research may investigate if the model is still of relevance for individuals in the late stages of dementia and how this differs for more able individuals.

5.9 Conclusion

The study set out to test the applicability of Gilbert's (1989) attributional framework for understanding how staff cognitive demand influences staff attributions of challenging behaviour in a residential care setting and with reference to Weiner's (1986) attributional dimensions. The hypothesised model in the current study was found to be

supported, as results suggest that cognitive demand does have a primary role in determining staff attributions of internality and controllability. The model was not found to be generalised to the other attributional dimensions identified within Weiner's model apart from partial support for the influence on control.

In conclusion cognitive demand was found to impair care staffs' ability to use contextual/situational information when forming causal attributions regarding an individual with dementia displaying challenging behaviour.

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Appendix I

Ethics

28 June 2007

Miss S Bailey
Trainee Clinical Psychologist
Department of Clinical Psychology
Hertford Building
University of Hull
Cottingham Road
HULL HU6 7RX

Dear Miss Bailey

**Study Title: Does staff demand influence staff attribution of dementia and
Challenging behaviour in care homes**

I am writing to inform you that your research proposal was considered by the Executive Group of the Postgraduate Medical Institute on Friday, 15 June 2007 when ethical approval was granted.

Yours sincerely



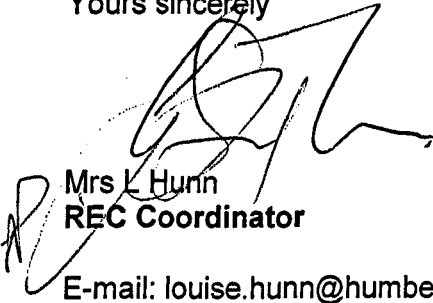
Jane Kitson (Mrs)
PA to Professor N D Stafford

Professor Nicholas D Stafford MB FRCS
Director - Postgraduate Medical Institute
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Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

Yours sincerely

A handwritten signature in black ink, appearing to be 'L. Hunn', written over the printed name and title.

Mrs L. Hunn
REC Coordinator

E-mail: louise.hunn@humber.nhs.uk

REC office
HMHT NHS Trust HQ
Willerby Hill Business Park
Willerby
HU10 6ED

Tel: 01482 389246
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2 March 2007

Ms Susannah Bailey
Trainee Clinical Psychologist
Dept of Clinical Psychology
The Hertford Building
University of Hull
Cottingham Road
Hull
HU6 7RX

Dear Susannah,

Study title: Does Staff Demand Influence Staff Attribution of Dementia and Challenging Behaviour in Care Homes

The Chair of the Research Ethics Committee reviewed the information you provided regarding the above study.

It was noted that as this research will not be taking place within the NHS, and is not a clinical trial of a medicinal product for human use, it falls outside the remit of Research Ethics Committees as set out in the Governance Arrangements for NHS Research Ethics Committees (GAfREC).

However, the Chair was happy to review the ethics of the research on a voluntary basis and to offer the following opinion.

Ethical opinion

Regarding the information sheet and consent form

- It is advised that these documents be presented on appropriate headed paper
- Participants must be informed in the information sheet exactly what is expected of them during their participation in the study.
- A template for the information sheet and consent form is available on the COREC website at www.corec.org.uk you may find these templates useful in design

Documents reviewed

The documents reviewed by the Chair are:

- Study Protocol -- undated

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

Yours sincerely

Mrs L Hunn
REC Coordinator

E-mail: louise.hunn@humber.nhs.uk



DOES COGNITIVE DEMAND INFLUENCE STAFF ATTRIBUTIONS OF CHALLENGING BEHAVIOUR IN CARE HOMES?

Information about the Research

My name is Susannah Bailey, I am a post-graduate trainee clinical psychologist at the University of Hull and I am currently studying towards a Doctorate in Clinical Psychology. As part of the course requirements I am carrying out a research project into factors that affect the way that care staff think about challenging behaviour in people with dementia. Your residential home is being invited to take part in this research study. Your contribution would be invaluable. It would take approximately no more than 30 minutes of your staff members' individual time in total and this can be arranged at a mutually convenient time.

I work within strict confidentiality guidelines and therefore all information accessed will be kept confidentially and anonymously and has been ethically approved by the Hull Local Research Ethics Committee.

Before you decide if your home would be willing to participate, it is important for you to know why the research is being done and what it will involve. Please take the time to read the following information provided, and discuss it with anyone you wish to. My name and address are at the end of this sheet if there is anything that you are not clear about or if you would like further information. I have enclosed an information sheet that will be provided to care staff which tells you more about the research. Also enclosed are a consent form and a stamped addressed envelope, to be returned if you consent to participate. Your home's contribution would be invaluable.

Should your home agree to participate I would like to approach the care staff working within the home at a mutually convenient time. I will provide them with information regarding the study and ask them to agree to participate. The study requires that basic details are taken for participants who wish not to participate or withdraw their involvement.

I will contact you by phone two weeks after you receive this pack, to give you the opportunity to ask me questions or answer queries that you may have about this research. If you do not wish to be contacted, then simply complete and return the consent form indicating that you have declined to participate in this research.

Thank you for your time and your patience and I look forward to speaking to you soon.

With Regards,

Susannah Bailey BSc
(Trainee Clinical Psychologist)

Under the supervision of
Dr Chris Clarke
Clinical Tutor University of Hull
Professor Esme Moniz-Cook
Humber Mental Health
Teaching NHS Trust



Consent Form

Please complete the following information and return in the stamped addressed envelope provided.

Please indicate the name of your home.....
Your Position within the home is.....

I have read and understood the information provided.

Please circle one of the two statements specifying if you wish to participate.

- 1. I consent for my home to be involved in the study and understand that I will be contacted to contacted to arrange a mutually convenient time seek care staffs consent within your home
- 2. I do not consent to participate and wish not to be contacted.

Signature.....Date.....
Name.....



Information Sheet

You are being invited to take part in a research study which is trying to investigate factors that affect how care staff think about challenging behaviour in people with dementia. Please take the time to read the following information and feel free to ask me any questions if you need further clarification.

What is the purpose of the study?

There has been an increase in the number of people with dementia (sometimes called "senile dementia") in private and authority residential and care homes as a result of an aging population. Dementia is a degenerative disorder associated with changes in thinking, behaviour and emotions. It is estimated that over half of people with dementia may show behavioural disturbances. These behavioural problems can have a negative impact not only on the quality of life for care staff but also the individual within their care.

The beliefs held by care staff about challenging behaviours have been found to shape the way that they cope. The study aims to establish if different environments influence the way in which care staff think about challenging behaviour. It is hoped that this will help develop more effective training packages being offered to staff, as current training has not been found to be very effective in produce broad and lasting change.

The study relies on the help of care staff working with individuals with dementia within a care setting to collect the information necessary. Your contribution would be invaluable. By taking part in this research you will be helping us to develop our understanding of how best to help staff manage challenging behaviours in dementia.

Why have you been chosen?

Your home, along with a number of homes within the area, has been selected as you look after people with dementia. I am asking every member of the care staff if they would like to be included.

Do we have to take part?

NO! If you decide to take part you will be asked to sign a consent form. You do not need to answer all of the questions and you are free to withdraw at any time. Your home however has agreed to provide some details about participants who wish not to participate or withdraw their involvement. These details will be anonymous and will include the following: age, gender, job role and length of time in post.

What will happen to me if I agree to participate and what will I need to do?

Initially you will be asked short questions about some simple details such as how long you have worked as a carer and your job role.

You will then be asked to fill in a questionnaire about how you are feeling generally at the current time. Following completion of the questionnaires you will be asked to read a short description of an elderly individual who exhibits challenging behaviour which will be followed by a video clip of an actor playing the part of the person in this description. You may also be asked to answer some simple questions about your day



whilst simultaneously watching the video clip. You will then be asked to complete a short questionnaire regarding what you have just observed on the video. The study is in two stages and will involve two sessions one week apart. It will take approximately 30 minutes of your time in total.

What are the possible disadvantages of taking part?

The study will need approximately 30 minutes of your time in total.

What are the possible advantages of taking part?

It is hoped that the research will further our understanding of the factors that affect the way in which care staff cope with challenging behaviour. It is believed that this will aid the development of training packages for carers which will have a positive impact on the quality of life of carers and residents within their care.

What if problems arise during the studies that require further input?

It is believed that the study is no more stressful than what you experience in your everyday life as a carer.

Will taking part in the study be confidential?

YES! All data and questionnaires will be made anonymous. You will be allocated a participant number to protect your identity. However, confidentiality will be broken in the event that it becomes evident that a resident is at risk of harm. In this case you will be informed and the appropriate action will be taken. This study also involves a simple measure of your well being. Should this highlight major problems for you at this time, you will be given the opportunity to discuss this with your researcher who will give you further advice on how to seek help.

Will I be able to withdraw at any point?

Yes! You will be allowed to cease your involvement in the study at any point without any penalty.

What will happen at the end of the research?

Upon completion of the study your involvement will not be needed again, unless you wish to receive the results. In this case, you can let me know at the time the study is conducted. A summary of the findings will be sent to your home manager automatically.

Who will review the study?

Hull and East Riding Local Research Ethics Committee.

Contact information

Susannah Bailey
Tel-07814871487
Address: University of Hull
Department of Clinical Psychology
Hartford Building
Cottingham Road
Hull



If you do have any queries please do not hesitate to contact me. Whether or not you decide to take part in this research project, I would like to thank you for taking the time to read this information.

With Regards
Susannah Bailey
(Trainee Clinical Psychologist)

Under the supervision of
Dr Chris Clarke
Clinical Tutor University of Hull
Professor Esme Moniz-Cook
Humber Mental Health
Teaching NHS Trust

Appendix II

Measures

Demographics Questionnaire

Please read and answer the following questions carefully.

Please indicate how stressed you feel at the present moment. (Please circle the corresponding number)

Completely Relaxed

012345678910

Extremely stressed

Please indicate your age (it will be kept confidential)

Please specify your gender? (Please circle)

- Male
- Female

Please specify your job title?.....

How long have you worked in your current position?

How long have you worked as a carer in total?.....

Please specify any previous training and qualification specific to this job role that you have and when you received them? e.g. NVQ, out of house training etc.

.....

.....

.....

.....

.....

.....

Vignette 2 (George)

George is 83 year old and has dementia. He moved into the Laurels, just five weeks ago. He is finding the change difficult and is very unhappy as he wishes to go home. He cannot understand why he has not gone home yet as he believed that the care home was a temporary arrangement. George has spent his whole working life on the railways as an engine driver. He was a very independent and proud man who enjoyed socialising with friends and family.

George has become incontinent since entering the home. Care staff have reported difficulties with George's behaviour; he has become verbally and physically aggressive towards staff. He has also become withdrawn from any social involvement with other residents.

Vignette 1 (Elsie)

Elsie is a 67 yr old lady who suffers from dementia. Elsie was a house wife and brought up a family of two daughters and a son. She has lived with her eldest daughter, Margaret, since the death of her husband 5 years ago when she was unable to live independently.

Her daughter has reported finding her behaviour increasingly difficult to manage. Elsie is finding it difficult to sleep at night and is searching for lost possessions from the past; this is causing disruption not only within the home but also causing friction with the neighbours.

Q1) Please write down one main cause for Elsie's aggression.....

Q2) Please write down one main cause for Elsie's wandering.....

Q3) Who does Elsie currently live with? (Please circle one)

- 1) Husband
- 2) Daughter

Q4) is the cause of Elsie's aggression due to something about her or due to something about other people or the situation? (Circle one number)

Totally due to other people or the situation

1 2 3 4 5 6 7

Totally due to the Elsie

Q5) Where did the man in the video live? (Please circle)

- 1) He lived with Elsie
- 2) He lived next door

Q6) Is the cause of Elsie's wandering due to something about her or due to something about other people or the situation? (Circle one number)

Totally due to other people or the situation

1 2 3 4 5 6 7

Totally due to the Elsie

Q7) What did Elsie do to the lady in the video clip?

- 1) Hit her
- 2) Spit at her

Q8) In the future, will the main cause for Elsie's aggression that you identified above be present again? (Circle one number)

The cause will never be present again

1 2 3 4 5 6 7

The cause will always be present

Q9) Where was Elsie? (Please circle)

- 1) In the corridor/ landing
- 2) In the street

Q10) In the future will the main cause that you identified above for Elsie's' wandering be present again? (Circle one number)

The cause will never again be present

1 2 3 4 5 6 7

The cause will always be present

Q11) What time did the man in the video say it was?

- 1) 5.30 AM
- 2) 12.30 PM

Q12) Will Elsie be aggressive in other settings? (Circle one number)

Will not show aggression

Will be aggressive in all settings

1 2 3 4 5 6 7

Q13) What was Elsie looking for?

- 1) Money
- 2) Photograph

Q14) Will Elsie wander in other settings (circle one number)

Wandering will never be present

Will always wander in other settings

1 2 3 4 5 6 7

Q15) What was Elsie wearing?

- 1) Night dress
- 2) Dressing gown

Q16) Is the main cause for Elsie's aggression something that just influences her behaviour in this situation or does it also influence other areas of her life?

Influences just this particular area

Influences all situations

1 2 3 4 5 6 7

Q17) What did the lady in the video say to Elsie regarding what she was looking for?

- 1) They will turn up sooner
- 2) You haven't had them for years

Q18) Is the main cause for Elsie's wandering something that just influences her behaviour in this situation or does it also influence other areas of her life?

Influences just this particular area

Influences all situations

1 2 3 4 5 6 7

Q19) What did Elsie used to do?

- 1) House wife
- 2) Secretary

Q20) Please indicate how able you were to concentrate on the video (please circle a number)

Unable to Concentrate

Completely

1 2 3 4 5 6 7

Q1) Please write down one main cause for Georges aggression?

.....

Q2) Please write down one main cause for Georges inappropriate urination?

.....

Q3) How long has George been in the Laurels? Please circle the correct answer?

- A. 1 year
- B. 1 month

Q4) Is the cause of Georges' aggression due to something about George or due to something about other people or the situation? (Circle one number)

Totally due to other people or the situation

Totally due to the George

1 2 3 4 5 6 7

Q5) What was the carer doing in the video? Please circle the correct answer

- 1) Feeding another resident
- 2) Sorting linen out

Q6) Is the cause of Georges' inappropriate urination due to something about George or due to something about other people or the situation? (Circle one number)

Totally due to other people or the situation

Totally due to the George

1 2 3 4 5 6 7

Q7) What did George do to the carer?

- 1) Grabbed her and shook her
- 2) Punched her

Q8) In the future will the main cause for George's aggression that you identified above be present again? (Circle one number)

The cause will never again be present again

The cause will always be present

1 2 3 4 5 6 7

Q9) Where was George?

- 3) Corridor?
- 4) Dinning room?

Q10) In the future will the main cause that you identified above for George's inappropriate urination be present again? (Circle one number)

The cause will never again be present

The cause will always be present

1 2 3 4 5 6 7

Q11) What did George's carer suggest he do?

- 1) calm down
- 2) watch TV

Q12) Will George be aggressive in other settings (circle one number)

Aggression Will never be present

Will be aggressive in all situations

1 2 3 4 5 6 7

Q13) Where does George wish to live?

- 1) at the Laurels
- 2) at home

Q 14) Will George's inappropriate urination be present in other settings (circle one number)

Will never be present

Will be present in all settings

1 2 3 4 5 6 7

Q15) Who did George's carer say he was going to visit next week?

- 1) His daughter
- 2) His sister

Q16) Is the main cause that you identified above for George's aggression something that just influences his behaviour in this situation or does it also influence other areas of his life.

Influences just this particular area

Influences all situations

1 2 3 4 5 6 7

Q17) What response did the carer give to George for his stay in the home?

- 1) whist repairs are completed on his home
- 2) this is his home now

Q18) Is the main cause for Georges inappropriate urination that you identified above something that just influences his behaviour in this situation or does it also influence other areas of his life?

Influences just his particular area

Influences all situations

1 2 3 4 5 6 7

Q19) How was George described?

- 1) Independent man
- 2) Dependent man

Q20) Please indicate how able you were to concentrate on the video (please circle a number)

Unable to concentrate

Completely

1 2 3 4 5 6 7

Controllability Questionnaire

Please read the following statements relating to George's behaviour and rate your agreement.

George is being aggressive deliberately

Agree Strongly Agree Slightly Untrue Disagree Slightly Disagree Strongly

George is urinating deliberately

Agree Strongly Agree Slightly Untrue Disagree Slightly Disagree Strongly

George has no control over his aggressive behaviour

Agree Strongly Agree Slightly Untrue Disagree Slightly Disagree Strongly

George has no control over his inappropriate urination.

Agree Strongly Agree Slightly Untrue Disagree Slightly Disagree Strongly

Controllability Questionnaire

Please read the following statements relating to Elsie's behaviour and rate your agreement.

Elsie is being aggressive deliberately

Agree Strongly Agree Slightly Untrue Disagree Slightly Disagree Strongly

Elsie is wandering deliberately

Agree Strongly Agree Slightly Untrue Disagree Slightly Disagree Strongly

Elsie has no control over her aggressive behaviour

Agree Strongly Agree Slightly Untrue Disagree Slightly Disagree Strongly

Elsie has no control over her wandering behaviour

Agree Strongly Agree Slightly Untrue Disagree Slightly Disagree Strongly

Appendix III

Table 3.4 One-Sample Kolmogorov-Smirnov Test for normality distribution of internality ratings regarding aggression.

Condition-order of presentation		Internality
1	N	20
	Normal	Mean
	Parameters(a,b)	-.1250
		Std. Deviation
	Most Extreme Absolute	.62566
	Differences	.229
		Positive
		.221
		Negative
		-.229
2	Kolmogorov-Smirnov Z	1.025
	Asymp. Sig. (2-tailed)	.244
	N	10
	Normal	Mean
	Parameters(a,b)	.4500
		Std. Deviation
	Most Extreme Absolute	.49721
	Differences	.317
		Positive
		.317
		Negative
		-.266
	Kolmogorov-Smirnov Z	1.003
	Asymp. Sig. (2-tailed)	.266

a Test distribution is Normal.

b Calculated from data.

Appendix III

Table 3.4 One-Sample Kolmogorov-Smirnov Test for normality distribution of internality ratings regarding aggression.

Condition-order of presentation		Internality
1	N	20
	Normal	
	Mean	
	Parameters(a,b)	-.1250
	Std. Deviation	.62566
	Most Extreme Absolute	
	Differences	.229
	Positive	.221
2		
	Negative	-.229
	Kolmogorov-Smirnov Z	1.025
	Asymp. Sig. (2-tailed)	.244
	N	10
	Normal	
	Mean	
	Parameters(a,b)	.4500
	Std. Deviation	.49721
	Most Extreme Absolute	
	Differences	.317
	Positive	.317
	Negative	-.266
	Kolmogorov-Smirnov Z	1.003
	Asymp. Sig. (2-tailed)	.266

a Test distribution is Normal.

b Calculated from data.

Table 3.5 One-Sample Kolmogorov-Smirnov Test for normal distribution of stability ratings regarding aggression

Condition order of presentation	– of		Stability Score Difference
1		N	20
		Normal	
		Mean	-.0750
		Parameters(a,b)	
		Std. Deviation	.61291
		Most Extreme Absolute	.201
		Differences	
		Positive	.201
		Negative	-.199
		Kolmogorov-Smirnov Z	.900
		Asymp. Sig. (2-tailed)	.392
2		N	10
		Normal	
		Mean	.1000
		Parameters(a,b)	
		Std. Deviation	.61464
		Most Extreme Absolute	.242
		Differences	
		Positive	.158
		Negative	-.242
		Kolmogorov-Smirnov Z	.767
		Asymp. Sig. (2-tailed)	.599

a Test distribution is Normal.

b Calculated from data.

Table 3.6 One-Sample Kolmogorov-Smirnov Test for normal distribution of globality ratings regarding aggression

condition-order of presentation		Globality score difference
1	N	20
	Normal	Mean
	Parameters(a,b)	-.1000
		Std. Deviation
	Most Extreme Absolute	.75394
	Differences	.197
		Positive
		Negative
	Kolmogorov-Smirnov Z	.197
	Asymp. Sig. (2-tailed)	-.153
2	N	.882
	Normal	Mean
	Parameters(a,b)	.418
		Std. Deviation
	Most Extreme Absolute	.35355
	Differences	.278
		Positive
		Negative
	Kolmogorov-Smirnov Z	.278
	Asymp. Sig. (2-tailed)	-.278

a Test distribution is Normal.
b Calculated from data.

Table 3.7 One-Sample Kolmogorov-Smirnov Test for normal distribution of generability ratings regarding aggression

Condition-order of presentation		generability
1	N	16
	Normal	
	Mean	
	Parameters(a,b)	-.1250
	Std. Deviation	.88506
	Most Extreme Absolute	
	Differences	.244
	Positive	.131
2	Negative	-.244
	Kolmogorov-Smirnov Z	.975
	Asymp. Sig. (2-tailed)	.298
	N	9
	Normal	
	Mean	
	Parameters(a,b)	.5000
	Std. Deviation	.79057
	Most Extreme Absolute	
	Differences	.167
	Positive	.167
	Negative	-.167
	Kolmogorov-Smirnov Z	.500
	Asymp. Sig. (2-tailed)	.964

a Test distribution is Normal.

b Calculated from data.

3.8 One-Sample Kolmogorov-Smirnov Test for normal distribution of controllability ratings regarding aggression

Condition-order of presentation		Controllability score difference
1	N	16
	Normal	
	Parameters(a,b)	Mean -.1250
		Std. Deviation .88506
	Most Extreme Absolute	
	Differences	.244
		Positive .131
		Negative -.244
	Kolmogorov-Smirnov Z	.975
	Asymp. Sig. (2-tailed)	.298
2	N	9
	Normal	
	Parameters(a,b)	Mean .5000
		Std. Deviation .79057
	Most Extreme Absolute	
	Differences	.167
		Positive .167
		Negative -.167
	Kolmogorov-Smirnov Z	.500
	Asymp. Sig. (2-tailed)	.964

a Test distribution is Normal.

b Calculated from data.

Table 3.10 One-Sample Kolmogorov-Smirnov Test for normal distribution of controllability ratings regarding “other” behavioural typologies

Condition-order of presentation		Internality score difference
1	N	20
	Normal	
	Mean	
	Parameters(a,b)	.2000
	Std. Deviation	.92338
	Most Extreme Absolute	
	Differences	.186
	Positive	.186
2		
	Negative	-.164
	Kolmogorov-Smirnov Z	.831
	Asymp. Sig. (2-tailed)	.495
	N	10
	Normal	
	Mean	
	Parameters(a,b)	.3500
	Std. Deviation	1.02875
	Most Extreme Absolute	
	Differences	.236
	Positive	.196
	Negative	-.236
	Kolmogorov-Smirnov Z	.747
	Asymp. Sig. (2-tailed)	.632

a Test distribution is Normal.
b Calculated from data.

Table 3.11 One-Sample Kolmogorov-Smirnov Test for normal distribution of stability scores regarding “other” behavioural classifications.

Condition-order of presentation		Stability difference
1	N	20
	Normal	
	Mean	
	Parameters(a,b)	-.3250
	Std. Deviation	.61291
	Most Extreme Absolute	
	Differences	.202
	Positive	.165
2	Negative	-.202
	Kolmogorov-Smirnov Z	.904
	Asymp. Sig. (2-tailed)	.388
	N	10
	Normal	
	Mean	
	Parameters(a,b)	-.1500
	Std. Deviation	.74722
	Most Extreme Absolute	
	Differences	.280
	Positive	.192
	Negative	-.280
	Kolmogorov-Smirnov Z	.884
	Asymp. Sig. (2-tailed)	.415

a Test distribution is Normal.

b Calculated from data.

Table 3.12 One-Sample Kolmogorov-Smirnov Test for normal distribution of globality scores for ratings regarding “other” behavioural classification.

Condition-order of presentation		Globality score difference
1	N	20
	Normal	
	Mean	
	Parameters(a,b)	-.1500
	Std. Deviation	.60914
	Most Extreme Absolute	
	Differences	.197
	Positive	.153
2	Negative	-.197
	Kolmogorov-Smirnov Z	.882
	Asymp. Sig. (2-tailed)	.418
	N	9
	Normal	
	Mean	
	Parameters(a,b)	-.2778
	Std. Deviation	.79495
	Most Extreme Absolute	
	Differences	.192
	Positive	.164
	Negative	-.192
	Kolmogorov-Smirnov Z	.577
	Asymp. Sig. (2-tailed)	.894

a Test distribution is Normal.

b Calculated from data.

Table3.13 One-Sample Kolmogorov-Smirnov Test for normal distribution of generability scores for ratings regarding “other” behavioural classification.

Condition-order of presentation		Generability score difference
1	N	18
	Normal	
	Parameters(a,b)	.1944
	Std. Deviation	.70999
	Most Extreme Absolute	
	Differences	.225
	Positive	.163
	Negative	-.225
	Kolmogorov-Smirnov Z	.956
	Asymp. Sig. (2-tailed)	.320
2	N	9
	Normal	
	Parameters(a,b)	-.2778
	Std. Deviation	.87003
	Most Extreme Absolute	
	Differences	.181
	Positive	.153
	Negative	-.181
	Kolmogorov-Smirnov Z	.542
	Asymp. Sig. (2-tailed)	.930

a Test distribution is Normal.

b Calculated from data.

Table 3.14 One-Sample Kolmogorov-Smirnov Test for normal distribution of controllability scores for ratings regarding “other” behavioural classification.

Condition-order of presentation		Controllability score difference
1	N	16
	Normal	
	Parameters(a,b)	Mean -.3750
		Std. Deviation .97468
	Most Extreme	Absolute .212
	Differences	Positive .163
		Negative -.212
	Kolmogorov-Smirnov Z	.849
	Asymp. Sig. (2-tailed)	.467
2	N	9
	Normal	
	Parameters(a,b)	Mean .5000
		Std. Deviation .82916
	Most Extreme	Absolute .278
	Differences	Positive .278
		Negative -.167
	Kolmogorov-Smirnov Z	.833
	Asymp. Sig. (2-tailed)	.491

a Test distribution is Normal.

b Calculated from data.