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**Staff attributions towards distressed behaviour in
dementia before and after training in psychological
assessment and formulation
& Research Portfolio**

Part One (Part Two bound separately)

Sally McVicar

University of Glasgow

Section of Psychological Medicine

August 2013

**Submitted in partial fulfilment of the requirements of the
degree of Doctorate in Clinical Psychology**



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In loving memory of Stuart and Charlotte

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Chapter 1: Systematic Literature Review

Care staff attributions towards causes of aggressive
behaviour in people with dementia

Sally McVicar¹

Prepared in accordance with requirements for submission to
Aging & Mental Health (see appendix 1.1)

**Submitted in partial fulfilment of the requirements for
the Degree of Doctorate in Clinical Psychology**

1

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Abstract

Introduction: Unmet needs models of understanding individuals with dementia conceptualise aggressive behaviour as the outward expression of an unmet need that the individual is unable to meet or express (Cohen-Manfield, 2000).

Aims: The aim of this paper was to systematic review the quality of the evidence exploring the attributions towards the individual and the causes of aggressive behaviour, held by health and social care staff.

Methods: A computerised search of major health care databases using key terms returned a total of eight studies, all of which were rated as either moderate or high quality using a methodological quality checklist based on appraisals of cross-sectional studies.

Results: There is some evidence that staff considered psychological factors in relation to aggressive behaviour. More experience, having a qualification, and being older were all associated with holding more positive attributions towards individuals with dementia exhibiting aggressive behaviour. Due to methodological limitations, it is not clear whether staff training results in attributional shift or improved service provision.

Conclusions: Research is required to develop a tool to accurately reflect attributions made by support staff, as well as the development of standardised training programmes aimed at developing knowledge and skill regarding the causes of aggressive behaviour within a psychological model.

Keywords: nurs* assistant staff aggress* viol* challen* attri*
belie* attit* dementia

Introduction

This paper addresses the question of how health and social care staff interpret aggressive behaviour in people with dementia and the care or treatment implications of their attributions regarding causes of aggressive behaviour.

Defining aggressive behaviour in dementia

There are conceptual issues when classifying aggressive behaviour in dementia. Some staff consider behaviour aggressive only if they believe there is intention to harm behind the behaviour, whereas others will classify behaviour as aggressive even when global cognitive impairment renders the concept of intention as meaningless for the individual (Patel & Hope, 1993). One could also argue that the assessment of intent is complicated when the idiosyncratic interpretations of the antecedent to the behaviour is not fully understood or considered by those assessing the behaviour. There is also little consensus as to what constitutes aggressive behaviour, with historic classifications of any behaviour from people with dementia that is resistive to care giving as being aggressive (Gibson, 1997). The term 'aggressive behaviour' itself is not particularly helpful as this is often a description based on staff interpretations of overt actions, with no person-centred consideration of the context the behaviour emerges from (Volicer, Bass, & Luther, 2007). However, for the purpose of this paper, the term aggressive behaviour will be used to describe overt actions. These include being verbally or physically aggressive threatening, physically striking out at people or property, overreacting to a situation, or becoming very

agitated as a result of what seems to be a very minor setback or criticism (Alzheimer's Society, 2010). The aim of this paper is to review the literature regarding staff beliefs around the cause of aggressive behaviour, thus it is appropriate to use a generic description of aggressive behaviours commonly reported by staff supporting people with dementia.

'Aggression' in dementia

The development of aggressive behaviour is very common in dementia, and is thought to arise through the individual attempting to signal or fill a currently unmet need (Cohen-Mansfield, 2001). Misinterpretation of environmental cues due to cognitive impairments can result in a wide range of associated behaviours, many of which cause no distress to the individual or to others around them. However, if the person perceives their environment to be negative or threatening, or that their attempts to fulfil their responsibilities are thwarted, then they may well respond in a way that is appropriate to their interpretation of the event, rather than one that is congruent with the actual circumstances, resulting in overt aggressive behaviour.

Historically, aggressive behaviours exhibited by people with dementia were treated pharmacologically by antipsychotic medication (Banerjee, 2009; Brechin, Murphy, James, & Codner, 2013). These medications have limited success and can result in harmful side effects for people with dementia (Banerjee, 2009). Current guidelines in both Scotland and England stipulate that antipsychotic medication should only be

used as a last line intervention, once biomedical factors contributing to distressed behaviour have been identified and appropriate treatments provided; and psychosocial interventions have been exhausted (SIGN, 2006; NICE, 2006). In addition to the use of antipsychotic medication, restraint is often a first line intervention in aggressive behaviour exhibited by people with dementia in Care Home facilities (Hantikainen & Kappeli, 2000). Not only is the experience of restraint distressing – both for staff and for individuals with dementia – it has also been found to be a contributing factor in aggressive behaviour (Ryden, Feldt, Oh, et al., 1999).

James (2011) outlined a non-exclusive list of known factors contributing to emergence of aggressive behaviour in dementia. These are conceptualized under bio-medical, psychological, and social/environmental factors (see James, 2011 for comprehensive list). The list demonstrates the extensive volume of possible underlying causes leading to the individual exhibiting aggressive behaviour. There is no one cause of aggressive behaviour exhibited by people with dementia. Therefore comprehensive assessment, gathering information from a wide variety of sources covering possible biomedical, psychological and social contributing factors is necessary to develop hypotheses regarding causes of aggressive behaviour. Hypotheses can then be tested through evaluation of the effectiveness of appropriate interventions, based on meeting the unmet need identified as a causal factor in overt aggressive behaviour (James, 2011).

Role of staff interactions in aggressive behaviour

Many of the overtly aggressive behaviours exhibited by individuals with dementia are in response to care staff or other residents thwarting attempts to meet an underlying need (Almvik, Rasmussen, & Woods 2006). For example, if an individual has an unmet need for independence, and cognitive impairments have led them to believe that they are much younger, then overt aggressive behaviour is likely when they feel that independence has been taken from them, for example during assistance with self-care. Therefore, by promoting independence, or the sense of independence it is likely that distress would decrease, with subsequent reduction of overt aggressive behaviour. Chrzescijanski, Moyle, and Creedy (2006) found that staff caring for people with dementia did not view anger as a legitimate emotion within the context of the disease process, and therefore did not recognise residents' rights to express anger. An education programme designed to increase awareness and understanding of the person at the centre of the disease was found to reduce aggressive behaviour exhibited by residents through staff identifying and validating early signs of anger, and changing their interaction style appropriately. Staff beliefs regarding the cause of aggressive behaviour are important factors in predicting whether unmet needs are identified and fulfilled (Gilson and Moyer, 2000; Visser, McCabe, Hudgson , et al., 2008).

Psychological interventions for aggression

Psychological interventions for aggression are determined by

identification of the underlying cause for the behaviour. Cohen-Mansfield (2000a) proposed the Unmet Needs model, whereby overt behaviours may be considered as a language, used by the individual with dementia to signal distress caused by an unmet need. By 'listening' to this language it is possible to identify the unmet need, which is then conceptualised within the context of the individual's life experiences and with consideration of levels of cognitive function. Cohen-Mansfield (2000b) discussed an assessment process that determines whether the behaviour is a means of accommodating the need, alleviating discomfort, or communicating an unmet need. Thus interventions are designed to either meet the need or, where the behaviour is designed to accommodate the need, provide a means to accommodate the behaviour. For an intervention to be successful it would need to target the identified unmet need, to be socially acceptable to the individual and consistent with their interests and personality, as well as taking account of physical and cognitive impairments resulting from dementia. Functional analysis also provides a comprehensive means of assessing the function behind behaviour. Functional analysis goes beyond the traditional Antecedent, Behaviour, Consequence (ABC) approach in that it considers the individual within a wider context, rather than purely through analysis of the specific circumstances prior to the behaviour, and the consequences of the behaviour. Therefore functional analysis generates more hypotheses regarding the likely cause of aggressive behaviour, which inform appropriate intervention (Moniz Cook, Swift, James et al., 2012).

There have been a number of systematic reviews regarding the non-pharmacological management of aggressive behaviour exhibited by people with dementia (Enmarker, Olsen, & Hellzen, 2011; Olazaran, Reisberg, Clare, et al., 2010), staff acceptability of non-pharmacological interventions (Robinson, Hutchings, Dickinson, et al., 2007), and the prevalence and impact of aggressive behaviour towards care staff (Zeller et al, 2009). However to date there have been no systematic reviews of care staff attitudes regarding aggressive behaviour exhibited by patients with dementia. As stated previously, staff beliefs regarding the cause of aggressive behaviour impacts on the likelihood of unmet needs being identified and fulfilled, and also on the quality of interactions with patients with dementia. Thus a clearer understanding of the attitudes care staff hold towards the causes of aggressive behaviour and the individual with dementia exhibiting aggressive behaviour would inform training required to promote a comprehensive and person-centred understanding of aggressive behaviour in dementia, facilitating the use of psychological interventions.

Method

Objectives

The aim of this systematic review is to address the questions: In staff supporting people with dementia:

- What are staff attributions towards individuals with dementia and the causes of aggressive behaviour? In addition the

question of whether the causes attributed to aggressive behaviour be categorised into psychological, biomedical, or social/environmental themes, consistent with James (2011), is addressed?

- What associations, if any, are there between characteristics of staff and attributions towards aggressive behaviour?
- What implications are there for the need for training regarding management of aggressive behaviour in dementia?

Search strategy

A number of databases were used to identify potential studies for inclusion in this review. These included the following:

Ebsco host

- PsycARTICLES
- Psychology and Behavioural Sciences Collection
- PsycINFO (1991 - 2013)

Ovid

- MEDLINE (R)without revisions 1996 – 2013
- Health and Psychosocial Instruments 1985 – 2013
- Journals @ Ovid Full Text

Search Terms

The electronic search used 10 key terms to identify potential studies.

The following searches were used:

1. nurs*
2. assistant
3. staff
4. aggress*
5. viol*
6. challen*
7. attri*
8. belie*
9. attit*
10. dementia
11. 1-3 combined with 'or'
12. 4-6 combined with 'or'
13. 7-9 combined with 'or'
14. 10-13 combined with 'and'

Duplicates were removed and searches were then limited to English Language, primary source, humans, and publication year 2000 – 2013. Citation lists of retrieved studies were examined and a hand search of key journals, *Dementia*, and *Aging & Mental Health* between 2008 and 2013 was carried out. Reference lists of identified articles were also reviewed.

Inclusion Criteria

- Quantitative methodology
- Patients with dementia exhibiting aggressive behaviour

- Attitudes of staff groups towards people with dementia exhibiting aggressive behaviour
- Attributions/beliefs of staff groups towards the causes of aggressive behaviour exhibited by patients with dementia
- Articles including data on the above as part of a larger study

Exclusion Criteria

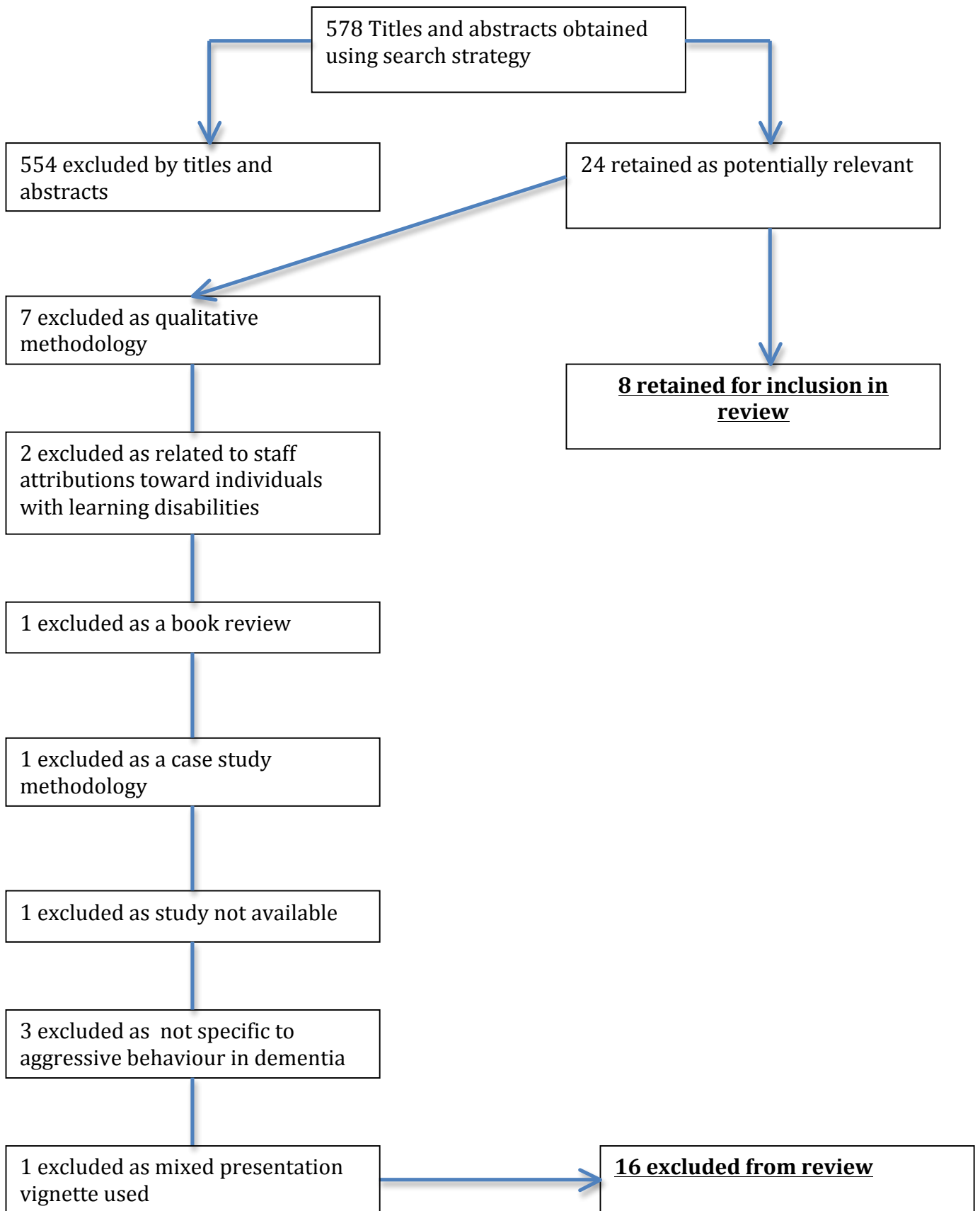
- Qualitative methodology
- Case studies
- Learning Disability population

Results

Outcome of search process

The electronic database search returned 578 papers. 24 were retained as potentially relevant to the research question on the basis of their titles and review of abstract. Of these 24 papers, 16 did not meet the inclusion criteria (see figure 1). Of the eight retained studies, one (Todd and Watts, 2002) used some qualitative methods to generate data. However, data was transformed to allow for quantitative analysis therefore the study was retained for this review. Hand searches of relevant journals and reference lists of relevant articles did not identify further articles of relevance to the research question.

Figure 1: Article selection flowchart



Characteristics of excluded papers

Papers that adopted qualitative methods were excluded from the study (n=7), as were studies exploring the attributions staff made towards aggressive behaviour in people with Learning Disabilities (n=2). One study was excluded as the abstract identified that the article was a book review, one was excluded as this was a case study, and one article was excluded as it was a letter describing a study, however write up of the study was unavailable. Three studies were excluded from the review as they addressed attributions towards working with people with dementia in general and were not specific to aggressive presentations, nor did they address this as part of their investigations. One further study was excluded as staff attributions regarding aggressive behaviour in dementia was measured using a vignette where the case described had a mixed presentation of chronic schizophrenia and dementia, with the research question focusing more on staff attributions regarding the schizophrenia.

Assessment of methodological quality

The methodological quality of cross-sectional survey based studies was assessed using a rating schedule developed from the STROBE Statement—a checklist of items that should be included in reports of observational studies. An iterative process was adopted where articles were rated using items from the STROBE Statement (see appendix 1) and further rating items were incorporated to extract relevant information to this review. Articles were re-rated according to the modified schedule (see appendix 2). The rating schedule includes items

assessing research aims, design, variables and outcome measures, confounding factors, statistical analysis, and generalisability of findings.

Studies were rated on 36 items, with possible scores ranging from 0-36, and corresponding percentages were calculated. Quality categories were used to convey the overall percentage of quality criteria met:

$\geq 75\%$ = High (all or most of the criteria have been met)

50-74% = Moderate (an adequate number of the criteria has been met)

25-49% = Low (some of the criteria has been met)

$\leq 25\%$ = Poor (very few of the criteria has been met)

Data extraction

Data reflecting the variables described in the inclusion criteria were extracted from each of the included studies. Results of extracted data are presented in Table 1

All 8 articles were rated as either moderate (Bahareethen & Shah, 2000; Chrzescijanski, Moyle & Creedy, 2007; Pulsford, Duxbury & Hadi, 2011) or high (Brodaty, Draper & Low, 2003; Davison, McCabe, Visser, et al., 2007; Nakahira, Moyle, Creedy, et al., 2008; Parker, Clarke, Moniz-Cook, et al, 2012; Todd & Watts, 2005), and were included in the review. No studies were rated as low or poor.

Table 1: Aims of studies, work settings and sample size, study design, and quality rating

| Author (year) | Research aims | Work settings (sample size) | Research methodology | Quality rating |
|--|--|---|---|----------------|
| Baheerthan and Shah (2000) | Attitudes towards patients with dementia exhibiting aggressive behaviour | UK: Two continued care psychogeriatric wards (39 patients) | Convenience sample, cross-sectional design (quantitative) | Moderate (72%) |
| Brodaty and Low (2003) | Attitudes towards patients with dementia exhibiting aggressive behaviour | Australia: Eleven nursing homes (259 staff) | Convenience sample, cross-sectional design (quantitative) | High (88%) |
| Chrzescijansky, Moyle and Creedy (2007) | Use of staff training to reduce aggressive behaviour exhibited by individuals with dementia, and change staff attributions through increasing knowledge and skill in managing aggressive behaviour | Australia: Four for-profit nursing homes (85 staff, 59 patients for ratings of aggression) | Convenience sample, cross-sectional design (quantitative) | Moderate (58%) |
| Davison, McCabe, Visser, Hudgson, Buchanan and George (2007) | Use of staff training to reduce aggressive behaviour exhibited by individuals with dementia, and change staff attributions through increasing knowledge and skill in managing aggressive behaviour | Australia: Two nursing homes (high-level care facilities), two residential homes (low-level care facilities)- (90 staff, 113 patients for ratings of aggression) | Convenience sample, between groups experimental design (2 experimental groups: Training plus peer support group = 29 Training only = 35 Control group = 26) | High (79%) |
| Nakahira, Moyle, Creedy, and Hitomi (2008) | Attitudes of staff towards aggressive behaviour exhibited by patients with dementia Factors associated with staff attitudes towards aggressive behaviour | Japan: Dementia units in mental health and general hospitals Residential units Aged care assessment facilities (675 staff) | Convenience sample, cross-sectional design | High (80%) |
| Parker, Clarke, Moniz-Cook and Gardiner (2012) | Impact of increased cognitive load or 'cognitive busyness' on causal attributions regarding aggressive behaviour made by staff | UK: Three mixed residential/nursing homes – dementia (30 staff) | Cross-over experimental design | High (75%) |
| Pulsford, Duxbury and Hadi (2011) | Attitudes towards causes of aggressive behaviour exhibited by patients with dementia | UK: Six dementia care units within four nursing homes (36 staff) | Convenience sample, cross-sectional design | Moderate (63%) |
| Todd and Watts (2005) | Attributions towards cause of aggressive behaviour exhibited by patients with dementia | UK: 6 settings for people with dementia (51 staff) | Convenience sample, cross-sectional design. Mixed qualitative/quantitative design with quantitative data transformed for quantitative analysis | High (75%) |

Reliability of quality rating

An independent examiner rated the studies included in this review, with 75% (n = 6) agreement according to the category ratings. Variances on category ratings of 2 papers were a result of a one-point and two-point difference, resulting in the overall percentage crossing the category threshold. The author and independent examiner discussed disparity in ratings and agreed on final ratings after a short discussion regarding the items in question.

Review of findings

Studies were reviewed in order of quality rating allocated within the subheadings: attributions made by staff towards causes of aggressive behaviour and individuals – categorised into dimensions of biomedical, psychological, and social/environment; staff characteristics and attributions towards aggressive behaviour exhibited by people with dementia; and changing staff attributions through training. The staff examined included staff working in a range of facilities and care settings including specialised dementia care units within nursing homes, residential homes, and psychiatric and general hospitals (table 1). Although all professional groups supporting people with dementia were included in the search, the majority of studies reported on registered Nurses and Nursing Assistants, with some data gathered from Clinical/Counselling Psychologists and unspecified therapists (see table 2). However, there were few comparisons made between professional groups.

Table 2: Study, professional groups and demographics, staff participant comparisons made

| Author (year) | Professions | Other demographics | Demographic comparisons |
|--|--|---|---|
| Baheerthan and Shah (2000) | No professional breakdown | No staff demographics available | No professional group or demographic comparisons |
| Brodady and Low (2003) | RN = 77 EN = 4 DT = 4 PCW = 116 Missing data = 52 | 49 male, 205 female; mean age = 40.43; median dementia exp. = 5 years | No professional group or demographic comparisons |
| Chrzescijansky, Moyle and Creedy (2007) | No professional breakdown | No staff demographics available | No professional group or demographic comparisons |
| Davison, McCabe, Visser, Hudgson, Buchanan and George (2007) | RN = 44 UPCW = 46 | 9 male, 81 female Mean age = 45 years | No professional group or demographic comparisons |
| Nakahira, Moyle, Creedy, and Hitomi (2008) | RN = 139 EN = 138 CCW = 224 PCW = 90 UPCW = 82 Missing data = 2 | 149 male, 526 female; Mean age = 35.8. Educated high school or lower = 189; diploma = 346; college degree = 84; university and postgraduate = 47. Manager = 57; staff = 615 | Age Education Length of experience supporting people with dementia Professional level No professional group comparisons |
| Parker, Clarke, Moniz-Cook and Gardiner (2012) | RN = 4 UPCW = 26 | 4 males, 26 females Mean age = 34.9 years Mean dementia exp. = 7.1 years | No professional group or demographic comparisons |
| Pulsford, Duxbury and Hadi (2011) | RN = 15 UPCW = 21 | 10 males, 26 female | No professional group or demographic comparisons |
| Todd and Watts (2005) | RN = 25 Clinical/Counselling Psychologist = 26 | 11 male 40 female mean dementia exp. = 11.4 years | Professional group comparisons made Length of experience Supporting aggressive / non-aggressive individuals |

Key: CP = Clinical/Counselling Psychologist CCW = Certified Care Worker DT = Diversional Therapist EN = Enrolled Nurse
 PCW = Personal Care Worker RN = Registered Nurse UPCW = Uncertified Personal Care Worker

Attributions made by staff towards causes of aggressive behaviour and individuals – categorised into dimensions of biomedical, psychological, and social/environment

Causes of aggressive behaviour identified by studies were reviewed. Factors were explored within attributional model (Weiner, 1980; 1985) frameworks (Brodaty, Draper & Low, 2003; Parker et al, 2012; Todd & Watts, 2005) in considering attributions towards behaviour in terms of controllability, stability, and internality. Psychosocial frameworks were also explored, considering behaviour within the context of internal psychological state, environment, and interactions with others (Brodaty, Draper & Low, 2003; Pulsford, Duxbury & Hadi, 2011).

Of the eight studies included in this review, four studies discussed attributions regarding causes of aggression and attributions towards patients (Brodaty, Draper & Low, 2003; Todd and Watts, 2005; Bahareethan and Shah, 2000; Pulsford, Duxbury & Hadi, 2011) (see table 3).

Table 3: Attributions identified regarding the causes of aggressive behaviour and patients exhibiting aggression

| Author (year)/study | Research aims | Outcome measure(s) | Attribution Focus | |
|--|--|---|----------------------|---|
| Bahareethan & Shah (2000) Aggressive behaviour, staff attitude, and staff perceptions of patients on two continuing care psychogeriatric wards | Attitudes towards patients with dementia exhibiting aggressive behaviour | Modified version of the Alienation Scale (MAS) (Morgan & Stanton, 1997) | Biomedical | Deliberate use of symptoms |
| | | | Psychological | Vulnerability, withdrawn, depression |
| | | | Social/Environmental | / |
| | | | Other | Aggression (cause unspecified) |
| Brodaty, Draper and Low (2003) Nursing home staff attitudes towards residents with dementia: strain and satisfaction with work | Attitudes towards patients with dementia exhibiting aggressive behaviour | Swedish Strain in Nursing Care Assessment Scale (SNC) (Hallberg & Norberg, 1995) | Biomedical | Little control over behaviour, unpredictability |
| | | | Psychological | Anxious, lonely, frightened/vulnerable |
| | | | Social/Environmental | / |
| | | | Other | Behaviours deliberate rather than due to dementia (learned behaviour) |
| Pulsford, Duxbury and Hadi (2011) A survey of staff attitudes and responses to people with dementia who are aggressive in residential care settings | Attitudes towards causes of aggressive behaviour exhibited by patients with dementia | Management of Aggression in People with Dementia Attitude Questionnaire (MAPDAQ) (developed for study) | Biomedical | Not being able to understand what staff are trying to do |
| | | | Psychological | / |
| | | | Social/Environmental | Restrictive environment, staff not listening to patient (interpersonal) |
| | | | Other | / |
| Todd and Watts (2005) Staff responses to challenging behaviour shown by people with dementia: An application of an attributional-emotional model of helping behaviour | Attributions towards cause of aggressive behaviour exhibited by patients with dementia | Open questions to elicit causal attributions – rated according to Leeds Attributions Coding System (LACS) (Munton, Silvester, Stratton and Hanks, 1999) | Biomedical | Related to dementia process |
| | | | Psychological | Behaviour reflects patient's negative emotions, patient felt threatened, related to patient's personality |
| | | | Social/Environmental | Behaviour occurs in response to situations (e.g. personal care) |
| | | | Other | / |

There were some methodological limitations when comparing the above studies. There was a lack of homogeneity in terms of the outcome measures used, and variability in terms of the attribution focus measured. Therefore, specific attributions identified by studies will be conceptualised within biological, psychological, and social/environmental dimensions, consistent with James (2011) comprehensive list of known causal factors in the development of aggressive behaviours exhibited by individuals with dementia (see table 3). This will allow for comparison and discussion regarding the findings of the above studies.

Brodaty, Draper and Low (2003) – High

This study examined nursing home staff attributions towards residents with dementia exhibiting aggressive behaviour. Participants were asked to respond to a series of items exploring attitudes held regarding residents with dementia. The most prevalent attitudes towards people with dementia were agreed with by over 88% of respondents:

1. That they [persons' with dementia] are anxious
2. That they have little control over their difficult behaviour
3. That they are unpredictable
4. That they are lonely
5. That they are frightened/vulnerable

The above attitudes towards residents with dementia exhibiting aggressive behaviour can be conceptualised within psychological

factors (anxious, lonely, frightened/vulnerable), or biomedical factors (little control, unpredictable). The scale used in this study (the English version of the Swedish Strain in Nursing Care Assessment Scale, Hallberg & Norberg, 1995) measured staff attitudes towards people with dementia in general, rather than specifically people with dementia exhibiting aggressive behaviour, thus items were limited in that they measure staff attitudes towards internal attributions of people with dementia, rather than consideration of external factors contributing to behaviour exhibited.

Todd and Watts (2005)- High

Content analysis identified the five most commonly described causes of aggressive behaviour:

1. Related to dementia process (62% of respondents)
2. Behaviour reflected client's negative emotion (51%)
3. Client felt invaded/threatened by situation (42%)
4. Occurred in specific situation (e.g. personal care) (29%)
5. Related to client's personality (24%)

The above factors can be conceptualised within the dimensions of biomedical (related to dementia process), psychological (client's negative emotion; client felt invaded/threatened by situation; related to client's personality), and environmental (occurred in specific situation). This study also explored participants' attributions within the dimensions of controllability, stability, internality, and globality as

outlined by Weiner's (1980) cognitive/emotional theory of helping behaviour. Analysis indicated that generally participants tended to make stable, internal, and uncontrollable attributions regarding the behaviours they witnessed. However, mean scores for these dimensions were lower for aggressive behaviours than for other behaviours that challenge such as wandering and excessive verbal behaviour. Friedman chi square indicated that differences were significant, however the authors do not specify significance between variable pairings. Interestingly, participants made more attributions regarding aggressive behaviours being controllable by other people than for either wandering or excessive verbal behaviour. This perhaps reflects a greater consideration of external factors as causal in aggressive behaviour. Furthermore, the authors found that psychologists made significantly more attributions regarding challenging behaviour being controllable by others than nurses did, perhaps reflecting greater appreciation of external causal factors resulting from expert knowledge of psychological models of behaviour.

Bahareethan and Shah (2000) - Moderate

The sample comprised nursing staff working in two continuing care psychogeriatric wards. Patients did not specifically have to have a diagnosis of dementia, however 92% (n=36) had a diagnosis of dementia, with 8% (n=3) having a diagnosis of chronic schizophrenia. Findings indicated that there were significant positive associations between aggressive behaviour and staff attributions related to:

1. Feeling distant from the patient
2. Deliberate use of symptoms by the patient
3. Alienation of the patient
4. Variable mood of the patient.

Attributions 2 and 4 are considered causal factors leading to the developments of aggressive behaviour, and can be conceptualised within the dimensions of biomedical/psychological (deliberate use of symptoms) and psychological (variable mood of the patient). The remaining two attributions are more indicative of the impact aggressive behaviour has on staff attitudes towards the individual, rather than causal factors leading to the development of aggressive behaviour. However, although causal direction was not investigated in this study, it is possible that these staff attributions could have implications for interactions between staff and patient, thus contributing to aggressive behaviour within the dimension of social/environmental factors. A substantial limitation of this study was that participants were recruited from continued care psychogeriatric units that were not specific to meeting the needs of people with dementia. Thus knowledge regarding potential causes of and interventions for aggressive behaviour exhibited by people with dementia is likely to be limited.

Pulsford, Duxbury and Hadi (2011) - Medium

The authors outline that this is the first study reporting specifically on care staff beliefs regarding causal factors in aggressive behaviour. Participants rated their level of agreement to statements ascribed to

either person-centred models or the 'standard paradigm' (Kitwood, 1997) that considers aggressive behaviour as random expressions of neurological damage. Findings indicated that participants made more person-centred attributions than those ascribed to the standard paradigm. The three statements regarding causal factors most agreed with were:

1. Restrictive environments can contribute towards aggression
2. Residents with dementia may be aggressive because they don't understand what staff are trying to do for them
3. If staff do not listen to residents with dementia, they may become aggressive

These attributions all fall within the person-centred model, and can be conceptualised within the broad dimension of social/environmental causes where aggressive behaviour is considered the result of external situational factors and social interactions. Therefore, staff in this study largely viewed aggressive behaviour as interpersonal phenomenon. However, statistical analysis was not performed on data to test for differences between ratings therefore it is not possible to determine whether there were significant differences in causal attributions. Additionally, generalizability of this study is questionable, considering the small sample size (n=36). Furthermore, the authors describe conducting factor analysis on the MAPDAQ, however the sample providing data for factor analysis is not clear. As the MAPDAQ has 20 items, a minimum sample size of 200, allowing for 10 cases per item

(Garson, 2008), would be required to return valid results from factor analysis. Further research exploring care staff attributions regarding specific causes of aggressive behaviour exhibited by people with dementia is required to expand on and clarify the findings of this study.

Staff characteristics and attributions towards aggressive behaviour exhibited by people with dementia

Of the eight studies retained for this review, three considered staff factors in relation to staff attributions towards aggressive behaviour exhibited by people with dementia (Nakahira et al, 2008; Parker et al., 2012; Todd and Watts, 2005) (see table 4).

Table 4: Breakdown of attributional styles associated with professional groups and staff characteristics

| Author (year)/study | Research aims | Outcome measure(s) | Attributions - professional | Attributions – staff characteristics and organisational factors |
|--|---|---|--|--|
| Nakahira, Moyle, Creedy & Hitomi (2008) Attitudes towards dementia-related aggression among staff in Japanese aged care settings | Attitudes of staff towards aggressive behaviour exhibited by patients with dementia Factors associated with staff attitudes towards aggressive behaviour | Demographics inc. professional and practice details Attitudes Towards Aggression Scale (Jansen et al, 2005) | Trained = positive Untrained = negative No other professional differences reported | Older staff = positive Higher positions = positive Younger staff = negative Greater clinical experience = positive Less experience = negative Working within psychiatric hospitals and gerontological units in acute hospitals = negative |
| Parker, Clarke, Moniz-Cook & Gardiner (2012) The influence of ‘cognitive busyness’ on causal attributions of challenging behaviour in dementia: A preliminary study | Impact of increased cognitive demands on causal attributions made regarding aggressive behaviour | Questionnaire developed for study exploring attributions related to vignettes of common presentations of aggressive behaviour exhibited by people with dementia | No demographic or professional comparisons made | Increased cognitive demands (‘cognitive busyness’) = internal attributions towards behaviour No change in stability, controllability, or globality |
| Todd and Watts (2005) Staff responses to challenging behaviour shown by people with dementia: An application of an attributional-emotional model of helping behaviour | Attributions towards cause of aggressive behaviour exhibited by patients with dementia | Open questions to elicit causal attributions – rated according to Leeds Attributions Coding System (LACS) (Munton, Silvester, Stratton and Hanks, 1999) | CP = more attributions (volume of) CP = more controllability (others) RN = more control (individual) | Greater clinical experience = less controllability (individual and others) Supporting aggressive behaviour = less optimism, more ‘emotional’ responses/attributions |

Methodological limitations included there being little consistency in the attributions measured, with a lack of homogeneity in outcome measures and research design. Although all studies reported mixed samples, only one study specifically looked at differences across professional groups (Todd & Watts, 2005), however professional groups were restricted to Registered Nurse and Clinical/Counselling Psychologists. Although one study (Nakahira et al., 2008) provided a comprehensive breakdown of professional groups, comparisons between groups were restricted to levels of experience supporting individuals with dementia and trained/untrained factors. Analysis of attributions made by different professional groups would have allowed for greater understanding regarding appropriate training interventions and targets to facilitate staff knowledge and skill regarding potential causal factors in the development of aggressive behaviour exhibited by individuals with dementia. All studies used convenience sampling from Nursing and Residential Units specific to supporting individuals with dementia and/or aggressive behaviour, however only one study (Nakahira et al., 2008) explored differences in attributions made across support setting.

Nakahira, Moyle, Creedy and Hitomi (2008) – High

The study does not report on ratings for individual items from a questionnaire exploring staff causal attributions (modified Alienation Scale) (MAS; Morgan & Stanton, 1997), rather subscale scores were calculated and reported for analysis. Analysis indicated that staff held both positive and negative attributions towards aggressive behaviour

exhibited by people with dementia, however there were variations across participant characteristics. The findings indicated that organisational factors may also have an impact on attributions held, with participants working in dementia units within psychiatric hospitals and gerontological units in acute hospitals more likely to hold negative attributions towards aggressive behaviour. However, this study did not report comparisons between professional groups so it is unclear what impact profession or level of training has on these findings (see table 2). Negative attributions were also found to be associated with increased use of restraint and medication to manage aggressive behaviours. The authors describe unexpectedly finding that staff holding person-centred or 'positive attributions' were more likely to report the use of medication as a management strategy, while staff that described speaking to patients to ask them to stop the behaviour were more likely to hold negative attributions. However, the authors explain these findings by discussing the possible implication that attributions regarding controllability could be relevant in these findings. Staff members that believe patients have control over their behaviour (negative attribution) would consider asking the person to desist the behaviour as an appropriate intervention, whereas staff that believe the person has no control over their behaviour, but without psychosocial awareness, may consider medication as appropriate.

Parker, Clarke, Moniz-Cook and Gardiner (2012) - High

This study differed from other studies due to using an experimental design. Participants were asked to fill in questionnaires measuring

their attributions with regard to common presentations of aggressive and non-aggressive challenging behaviours depicted through video clips. 'Cognitive busyness' was achieved by presenting video clips in conjunction with an audiotape asking questions regarding common care-delivery tasks. The findings suggested that increased cognitive demands in staff led participants to make more internal based attributions towards aggressive behaviour, i.e. environmental and situational factors were less likely to be considered as causal factors. Furthermore, analysis indicated that cognitive busyness did not impact on participants' ability to recall salient details of the video clips, indicating that participants' disregard of these factors was not explained by reduced attention resulting in failure to store this information for future recall. This has implications for assessment and ultimate intervention as it suggests that internal states of participants may be a key factor in consideration of external causal factors. Further research would perhaps clarify this.

Todd and Watts (2005)

Analysis indicated that more experienced staff held attributions where both the person with dementia and others' around them had less control over their aggressive behaviour than less experienced staff. Perhaps unsurprisingly, staff were more emotional and less optimistic regarding physically aggressive behaviours when compared to non-aggressive challenging behaviour. However, on the whole, significant associations between attributional dimensions of internality, controllability, globality, and stability and staff characteristics of

optimism, willingness to help, or emotional responses were not demonstrated in this study, in relation to aggressive behaviour exhibited by people with dementia. The authors offer the possible explanations that (i) the attributions measured do not reflect actual clinical interactions with people with dementia, and (ii) the lack of statistical significance reflected the true lack of relationships between attributions and the other variables. There was little difference between the professions of registered Nurse (RN) and Clinical/Counselling Psychologist (CP) other than CP's held more attributions regarding 'others' having more control of an individual's aggressive behaviour. This suggests a better awareness of interpersonal and environmental factors contributing to the development of aggressive behaviour, as well as the potential for effective interventions to manage aggression. This is consistent with the psychological knowledge and skill associated with the training and experience of qualified CP's.

Changing staff attributions through training

Out of the eight studies retained for this review, two studies reported on the effectiveness of staff training as an intervention for aggressive behaviour exhibited by people with dementia (Chrzescijansky, Moyle, and Creedy, 2007; Davison, et al., 2006). See table 5.

Table 5: Staff training as an intervention to reduce aggressive behaviours and change staff attributions

| Author (year)/study | Research aims | Outcome measure(s) | Summary of training | Impact of training on aggressive behaviour |
|--|--|--|---|---|
| <p>Chrzescijanski, Moyle & Creedy (2007)</p> <p>Reducing dementia-related aggression through a staff education intervention</p> | <p>Staff attitudes towards their care management of the person with dementia</p> <p>Impact of staff training on reducing aggressive behaviour</p> | <p>The BAGS Aggression Scale (Queen Elizabeth Geriatric Centre, 1992)</p> <p>Mini Mental State Examination (MMSE) (Folstein et al, 1975)</p> <p>Attitude to Elderly and Severely Mentally Infirm Care Scale (Humphries & Turner, 1989)</p> | <p>Evidence based training programme of 40 minute video presentation aimed at increasing staff understanding of the emotions and needs of a person with dementia (Emotional Responses as Quality Indicators - ERIC) (Commonwealth Department of Health and Aged Care, 1999).</p> | <p>No change in attributions following training. Positive attributions expressed prior to and following training</p> <p>Reduction in measures of aggressive behaviour following staff training</p> |
| <p>Davison, McCabe, Visser, Hudgson, Buchanan & George (2013)</p> <p>Controlled trial of dementia training with a peer support group for aged care staff</p> | <p>Impact of staff training in management of aggressive behaviour exhibited by people with dementia in changing attitudes towards patients</p> <p>Further impact of facilitating group peer support sessions on reducing aggressive behaviours/changing attributions</p> | <p>Maslach Burnout Inventory (Maslach et al, 1996)</p> <p>The Self-Efficacy of Dementia Care (developed for study)</p> <p>The Scale of Nursing Performance – Adapted (Battersby & Hemmings, 1991)</p> <p>The Cohen-Mansfield Agitation Inventory (Cohen-Mansfield et al, 1989)</p> | <p>8 sessions of 60-90 minutes duration focussed on skills to use when caring for people with dementia exhibiting aggressive behaviours. Delivered through didactic and experiential learning techniques</p> <p>Group peer support sessions available for experimental group following training</p> <p>Unclear if training was a standardised, evidence based programme, or developed for the study</p> | <p>No reduction of aggressive behaviours</p> <p>Self-reported increases in skill and knowledge from staff trained</p> <p>Managers/supervisors report increased skill and knowledge from staff trained</p> <p>No difference found in either attributions or levels of aggressive behaviour in peer support group</p> |

Again, there were some methodological limitations. Although one of the training programmes was a standardised, evidence based programme (Chrzescijansky et al, 2007), it was unclear whether the remaining study in this section used an evidence based training package (Davison et al, 2013). In addition, this second study did not adequately describe the training programme; therefore it is not possible to either comment on the model the training is based on or replicate this study. As with other studies in this review, there was a lack of homogeneity regarding outcome measures and attribution focus measured.

Chrzescijansky, Moyle, and Creedy, (2007) – Medium

Analysis indicated that there was no significant difference in attributions towards patients with dementia exhibiting aggressive behaviour following participation in the training programme. However, participants held positive attributions prior to attending training so the lack of increase in positive attributions following training is likely to be an artefact of baseline measures. Interestingly, the results indicated that a highly positive attitude towards work did not necessarily equate to a sensitive understanding of the needs of the individual with dementia. Observations of staff/patient interactions found that even following training, staff continued to attempt care tasks despite clear indications from patients' regarding imminent aggressive behaviour, suggesting that for many staff training did not impact on clinical behaviour. The authors argue that not only does this potentially place the staff member in danger, but there is also the potential for serious

consequences for the patient, including the use of medication and/or restraint to manage aggressive behaviours. Despite these observations, the study reports an overall significant reduction in measures of aggressive behaviour following staff attending training. However, it is not clear whether training changed the reporting of aggressive behaviour, but had little impact on staff behaviour. Furthermore, it is also possible that the process of observing patients increases social interaction between participants and patients, thus inadvertently addressing unmet needs for social interactions and/or activity, resulting in a reduction of aggressive behaviour exhibited by patients.

Davison, McCabe, Visser, Hudgson, Buchanan and George (2006) – Medium

Analysis indicated that although there was no significant reduction in aggressive behaviour exhibited by patients with dementia, participants reported higher self-efficacy regarding their knowledge and skill in caring for patients with dementia exhibiting aggressive behaviour. Furthermore, managers and supervisors of participants rated their knowledge and skill higher following training. There was no difference between participants who attended training and the control group in feelings of depersonalisation towards residents, emotional exhaustion, or feelings of personal accomplishment among staff. The content of training is not clear; however descriptions refer to providing participants with skills in management of aggressive behaviour. It is possible that the training facilitated understanding regarding reactive interventions without addressing causal factors, thus incidences of

aggressive behaviour persist and staff negative attributions are maintained. Furthermore, although participants reported greater levels of skill and knowledge, they did not benefit in terms of job satisfaction, perhaps making it unlikely that increased self-efficacy will be experienced over time. It is possible that higher participant and supervisor ratings are explained by them providing socially desirable responses following participation in the study. More importantly, it was not demonstrated that the person with dementia benefited from staff attending training.

Discussion

The purpose of this paper was to systematically review the literature on staff attributions towards aggressive behaviour exhibited by people with dementia. The specific aims were to consider studies examining staff attributions towards causes of aggressive behaviour, staff characteristics and their impact on attributions towards aggressive behaviour, and implications of training aimed at changing attributions. An additional aim was to consider any identified causal attributions within the dimensions of biomedical, psychological, and social/environmental factors. It is surprising that despite the high prevalence of aggression in dementia, the increasing numbers of individuals living with dementia and the subsequent implications for economic cost that the number of articles found for this review is relatively very small. This is an area that requires further research.

Due to the lack of research in this area, the current systematic review

considered any quantitative research looking specifically at attributions of staff towards aggressive behaviour exhibited by people with dementia. In this review, research that demonstrated sound methodological design with appropriate outcome measures were rated high, however the lack of published outcome measures specific to this area resulted in the lack of homogeneity described previously. Many of the studies either developed outcome measures specifically for the research, or adapted outcome measures from other clinical areas.

Although all the studies included were rated as either moderate or high, the variance in the methodological designs and theoretical background of the studies resulted in a wide range of outcomes and little consensus regarding the attributions held by staff supporting people with dementia. Although this is likely to be an artefact of the lack of research in this area, future reviews in this area should consider more sophisticated rating systems allowing for greater cohesion of findings. It is likely that the publication of a scale measuring staff attributions towards aggressive behaviour, within the context of the current unmet needs paradigm, would facilitate future research in this area, allowing for more conclusive systematic reviews.

The findings from the studies indicated that staff made causal attributions that could be conceptualised as falling within the broad dimensions of biomedical, psychological, and social/environmental factors. However, the considerable variation in the methodologies used across the studies may have impacted on the opportunity for

participants to express salient attributions regarding causal factors of aggressive behaviour, thus potentially limiting results and impacting on generalisability of findings. This further highlights the need for future research to better understand staff attributions towards potential causal factors regarding aggressive behaviour exhibited by people with dementia. Factor analysis of identified causal attributions made by staff would facilitate the development of a comprehensive and structured tool to measure staff attributions.

Three papers were identified as investigating staff characteristics in relation to attributions made towards aggressive behaviour exhibited by people with dementia. Although these papers were all rated as of high quality, there was little consistency across the studies in terms of participating professional groups and support settings recruited from.

There was more consistency regarding the characteristics of attributions measured, with all three considering attributions within the context of stability, internality, globality, and controllability, according to attributional theory (Weiner, 1980; 1985). Two of these studies were concerned with applying attributional theory to helping behaviour in nursing staff supporting people with dementia exhibiting aggressive behaviour (Nakahira et al., 2008; Todd and Watts, 2005). The remaining study (Parker et al., 2012) explored the impact of increased cognitive demands or 'cognitive busyness' on participants' attributions towards aggressive behaviour. This is the only study that adopted an experimental design, however no comparisons between

professional groups were made in this study.

The findings suggest that increased age and experience, as well as higher occupational position are associated with more positive attributions regarding aggressive behaviours exhibited by people with dementia. In contrast, younger age and less experience were associated with increased use of physical restraint and pharmacological management of aggressive behaviour.

Cognitive busyness was found to result in staff making more attributions regarding personal control over overt aggressive behaviour, although busyness did not impede participants ability to attend to situation factors in aggressive behaviour. This finding has particular relevance considering the demands placed on nursing and support staff working with people with dementia.

In addition, results indicated that staff managing aggressive behaviours were less optimistic and more emotional regarding patients. According to Wiener's model, high levels of emotional responses and attributions where the person has control over their behaviour would result in overall negative attributions and decreased helping behaviour, thus highlighting the role of education regarding causes of aggressive behaviour in changing attributions.

The findings that increased clinical experience was associated with more positive attributions further support the role of training and education in assessment and management of aggressive behaviours

exhibited by people with dementia.

Two of the eight studies reviewed explored the use of staff training to reduce aggressive behaviours and change staff attributions. One of these studies (Chrzescijanski, Moyle & Creedy, 2007) was rated as being of moderate quality, while the other study (Davison et al, 2013) was rated as high quality. The main difference between these studies was that the latter study adopted a three way experimental design where peer support was available to one of two groups receiving the training; with a control group that did not receive training for comparison. However, neither of the studies adequately described the training, and it is unclear whether either of the training programmes were evidence based psychological interventions.

The results of these studies reported mixed effects following training. One study (Chrzescijanski, Moyle & Creedy, 2007) reported significant reduction in aggressive behaviours, however demonstrated that the training perhaps increased confidence but not actual skill for some staff, potentially placing them in danger and increasing the likelihood of physical and pharmacological restraint for aggressive behaviour that could potentially have been avoided.

The other study (Davison et al, 2013) did not demonstrate significant reductions in aggressive behaviours, however staff confidence in their knowledge and skill regarding working with people with dementia exhibiting aggressive behaviour had improved. Again, this has

implications for the purpose of training in that training should be effective in improving quality of life for the person with dementia as well as increasing knowledge and skill for staff.

Chrzescijansky et al. (2007) described increasing staff abilities in recognising emotional responses in patients with dementia, within the context of identifying potential clues to imminent aggressive behaviour. It could be argued that training is limited in that it is reactive rather than proactive as it does not consider potential causal factors in the development of aggressive behaviours, rather it facilitates the identification of imminent aggressive behaviour. Considering findings that cognitive busyness can impact on the ability of care staff to consider situational factors in aggressive behaviour, it is reasonable to hypothesise that ability to recognise clues to imminent aggressive behaviour may be impaired by competing cognitive demands.

Davison, et al. (2006) did not describe the content of training beyond stipulating that 8 sessions between 60-90 minutes would be delivered, facilitating the development of skills to 'use in caring for residents with dementia-related behaviours'. Thus it is not possible to comment on the quality of training delivered.

Methodological limitations

There were a number of methodological limitations in the included studies. First and foremost, although most studies used mixed samples incorporating different staff groups involved in supporting individuals

with dementia, only one of the eight studies explored differences between staff groups. It is therefore unclear if results can be generalised across staff groups. The studies all administered different outcome measures to gather information on attributions regarding aggressive behaviour exhibited by individuals with dementia. However, this is perhaps less of a methodological limitation than indicative of the general lack of research in this area. Research is required to develop a tool allowing for the measurement of staff attributions regarding the causes of aggressive behaviour and towards individuals living with dementia.

Conclusions

The findings from this review suggest that participants made a wide range of attributions regarding supporting people with dementia exhibiting aggressive behaviour. Participants made more causal attributions relating to psychological factors than biomedical and social/environmental factors, perhaps reflecting the growing understanding regarding person-centred and psychological aspects of the experience of dementia. However, there were few attributions related to social/environmental factors suggesting a lack of appreciation of the potential for people with dementia to be adversely affected by situational and environmental factors. Within the context of the results, it is also possible that increased psychological attributions reflected internal attributions where participants considered the cause of aggressive behaviour to be within the individual rather than external to them. Further large-scale research supporting factor analysis would

be appropriate to determine the reliability of these constructs and to clarify these findings. Additionally, future research should aim to address the heterogeneity of outcome measures used by research to date, perhaps through the development of a comprehensive tool measuring causal attributions towards aggressive behaviour exhibited by people with dementia. It could be argued that without considering the underlying causes of aggressive behaviour, neither proactive nor reactive interventions are likely to be effective beyond chance, thus increasing the likelihood of the use of physical restraint and medication to manage aggressive behaviour, and the maintenance of negative attributions towards the individual exhibiting aggressive behaviour. There is considerable evidence regarding the effectiveness of psychological interventions for aggressive behaviour exhibited by individuals with dementia (Enmarker et al., 2011; Olazaran et al., 2010; O'Neill et al., 2011). However this evidence is largely based on interventions administered as part of the research process, thus it is important to explore the potential blocks to psychological assessments and formulations being used in clinical practice. Staff members holding more positive attitudes towards aggressive behaviour has been associated with increased person-centred care and the likelihood that behaviour is considered within the context of unmet needs (Abderhalden et al. 2002; Gilson and Moyer, 2000). Thus, the way in which support staff view the person with dementia and the causal attributions for aggressive behaviour have implications for the range and model of interventions available to the individual. By developing a greater understanding of the attributions that staff members hold

regarding both the causes of aggressive behaviour and towards individuals living with dementia, appropriate and comprehensive training can be developed to increase knowledge and skill, and awareness of potential causes of aggressive behaviour.

There is some evidence from the reviewed studies that person-centred or 'positive attributions' towards people with dementia exhibiting aggressive behaviour does not always transfer to clinical practice (Chrzescijansky et al., 2007; Davison et al., 2006; Parker et al., 2013; Nakahira et al., 2008; Todd and Watt, 2005). This further supports the importance of staff education and training programmes regarding the potential causes of aggressive behaviour exhibited by people with dementia. However, training and educational programmes should focus on biopsychosocial models of assessment, formulation and intervention to ensure a holistic approach to management of aggressive behaviour, within the paradigm of person-centred care. Finally, such programmes should ensure the assessment of clinical impact and monitor change in staff clinical practice and outcomes specific to managing aggression as an integral component of such programmes.

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Chapter 2: Major Research Project paper

Staff attributions towards distressed behaviour in dementia
before and after training in psychological assessment and
formulation

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Lay Summary

'Stress and distress in dementia' is a term used to describe what is traditionally known as 'behaviour that challenges', 'challenging behaviour' or 'behavioural and psychological symptoms of dementia'. This can therefore refer to numerous behaviours or presentations that are observed to be distressing to the individual or to cause stress/distress in others (James, 2011).

Common distressed behaviours in dementia include aggression, pacing, repeating questions frequently, shouting and other vocalisations, sexual disinhibition, hoarding, self injurious behaviour, apathy, and agitation (Turner, 2005). Psychological models explaining the causes of distressed behaviour consider behaviour to be in response to unmet needs that the individual is unable to express or to meet independently. Therefore comprehensive assessment with consideration to biomedical (e.g. physical and health conditions, the impact of the dementia, hunger, pain, tiredness etc.), psychological (e.g. anxiety, depression, fear, anger, personality, loneliness, etc.), and social/environmental (e.g. external temperature, noise, light, interpersonal relationships, etc.) factors is advocated. This will in turn help develop an understanding of the unmet needs the person is likely to be experiencing and can inform interventions specifically tailored to the individual.

The attributions that health and social care staff supporting individuals with dementia hold regarding the causes of distressed behaviour can impact on the interventions available to the individual. The present

study aims to explore these attributions both before and after a two-day intensive workshop developed to enhance participants' knowledge and skill in psychological assessment, formulation, and intervention for distressed behaviour in dementia.

Attributions of health and social care staff supporting individuals with dementia were measured using the Challenging Behaviour Attribution Scale – Dementia (CHABA-D) that was specifically developed for the workshop from the CHABA (Hastings, 1997) which was developed to measure attributions of staff supporting people with Learning Disabilities. As a newly adapted measure, a secondary aim of the current research was to assess the internal reliability of the CHABA-D. The findings of the current study found that health and social care staff supporting people with dementia made more causal attributions regarding psychological factors than any other, both before and after attending the workshop.

However, there was no change in how much of a difference there was following training, indicating that the workshop did not increase the number of psychological attributions made by staff. The findings also indicated that participants made more causal attributions related to learned behaviour, physical environment, and activity and stimulation following training, consistent with the training ethos of promoting comprehensive assessment and understanding of distressed behaviour.

Causal attributions regarding biomedical factors did not change following training. This was initially surprising, however biomedical understanding of distressed behaviour has been the dominant paradigm for a number of decades, thus although the training does include biomedical factors as potential causes of distressed behaviour, it is unlikely that the training has provided new information to participants, all of whom were highly experienced in supporting people with dementia.

The internal reliability of the CHABA-D was found to be moderate to high. However, the sample size was not large enough to be able to perform factor analysis. This would have allowed for better clarification regarding the validity of the separate factors of the CHABA-D as reflective of the causal attributions regarding distressed behaviour made by staff supporting individuals with dementia.

Overall, the current study found that the workshop produced some changes in participants' consideration of the potential causes of distressed behaviour, consistent with the content of the workshop. Participants were already considering the causes of distressed behaviour within a psychological framework prior to training, and psychological attributions remained high following training.

Further research looking at the impact the workshop has on clinical practice is on going, with a particular focus on investigating the effects

on potentially reducing the prescribing of anti-psychotic medication as a first line treatment for distressed behaviour.

Abstract

Aims: The current research explores the impact psychological training has on attributions held by health and social care staff regarding the causes of distressed behaviour exhibited by individuals with dementia.

Method: Participants attended a two-day formal training workshop aimed at developing knowledge and skills regarding assessment, formulation, and interventions for distressed behaviours within a psychological model (James, 2011). Attributions made by participants were measured before and after training using the Challenging Behaviour Attribution Scale – Dementia (CHABA-D), adapted from the CHABA (Hastings, 1997) and findings examined in the context of attributional shift post-training. Additionally the internal reliability of the CHABA-D was measured using Cronbach's alpha.

Results: The scale was found to have good internal reliability and analysis indicated that participants made more psychological attributions regarding the cause of distressed behaviour both before training and on course completion, although there was no increase in the number of psychological attributions made following training. Additionally, participants demonstrated increased awareness of learned behaviour, physical environment, and activity and stimulation as causal factors in the development of distressed behaviour in individuals with dementia following training.

Future directions: Further research is on-going to evaluate the effects of training on clinical practice, focusing on evaluating the impact on prescribing of anti-psychotic medication for distressed behaviour exhibited by individuals with dementia.

Introduction

Stress and distress in dementia

'Stress and distress in dementia' is a term used to describe what is traditionally known as 'behaviour that challenges', 'challenging behaviour' or 'behavioural and psychological symptoms of dementia'. This can therefore refer to numerous behaviours or presentations that are observed to be distressing to the individual or to cause stress/distress in others (James, 2011). Common distressed behaviours in dementia include aggression, pacing, repeating questions frequently, shouting and other vocalisations, sexual disinhibition, hoarding, self injurious behaviour, apathy, and agitation (Turner, 2005).

Historic interventions for distressed behaviour in dementia

Historically, distressed behaviour in dementia has been considered within a biological model and treated pharmacologically with antipsychotic medication (Banerjee, 2009; Brechin, Murphy, James, & Codner, 2013). However these medications are of limited use and can cause serious side effects in people with dementia. Thus the potential usefulness of these medications as a first line intervention is often argued to be outweighed by the potential harm they can cause (Banerjee, 2009). Restraint is also commonly used in the management of distressed behaviours (Hantikainen & Kappeli, 2000). However this has been found to contribute to, and exacerbate, aggressive behaviour in dementia (Ryden et al., 1999). These interventions reflect a traditional model of care focused on, and limited to, meeting basic needs for nutrition and shelter. However, research has indicated that

the needs of people with dementia do not differ from those of the cognitively intact, rather their ability to articulate and fulfil their needs independently decreases as the disease progresses (Cohen Mansfield & Mintzer, 2005), and compounded further by multi-factorial physical, cognitive and emotional difficulties associated with disease progression.

Causes of distressed behaviour in dementia

There are a number of theories regarding the cause of distressed behaviour in an individual with dementia. Biological models consider distressed behaviour as a consequence of internal physiological states, for example attributing behaviour to the dementia due to neurological or structural changes in the brain, or to pain or infections. For example, it has been proposed that pain in persons' with impairments of abstract thinking and language may present as distressed behaviours such as increased vocalisations, distress at being touched culminating in verbal and/or physical aggression and restlessness (Cohen-Mansfield & Lipson, 2008). There has been some reported success in the use of behavioural modification interventions, based on learning theories as a treatment for distressed behaviour exhibited by people with dementia (Allen-Burge, Stevens, & Burgio, 1997; Moniz-Cook et al., 2012). Environmental models consider behaviour as a response to environmental stimuli, and psychological models consider distressed behaviour to be the outward indication of negative internal states. There are limitations to each of these models when considered in isolation. James (2011) has outlined a non-exclusive list of common

causes of distressed behaviour, highlighting the complexity of possible interactions between biological, psychological, and social/environmental factors, emphasising the need for comprehensive assessment gathering information from a variety of sources (see James (2011) for a comprehensive list).

Biopsychosocial understanding of distressed behaviour

There is an increasing evidence base for conceptualising distressed behaviour within biopsychosocial models (Enmarker, Olsen, & Hellzen, 2011; Olazaran, Reisberg, Clare, et al., 2010; O'Neill et al., 2011). Neurodegeneration can significantly impact on a person's ability to make sense of the world. Additionally, people with dementia will very often experience time distortions, leading them to believe themselves to be much younger than they actually are (James, 2011). Therefore, interpretations regarding their environment and interactions with others are made within the context of their roles and responsibilities as a younger adult, in a way that is incongruent with the external reality. Thus, a woman with dementia may be responding to her internal reality whereby she has to be home for her children. When someone prevents her from this responsibility, she becomes anxious and frustrated, and hostile towards the person who is preventing her from caring for her children. Without fully understanding the context within which distressed behaviour exists, it is less likely that staff caring for the individual will use the most appropriate intervention to reduce distress, subsequently causing additional stress to staff as they struggle to

manage the distressed behaviour exhibited by the person with dementia.

Distressed behaviour has been conceptualised within an Unmet Needs model (Cohen-Mansfield, 2001). In the example above, the woman's distressed behaviour emerges as an attempt to fulfil the need to be involved in caring for her children, a role that incorporates both responsibility and activity. Thus, by developing an intervention designed to target both these needs, the distress exhibited by the person with dementia can be reduced (James, 2011). People with severe dementia will often have significant language difficulties impacting on their ability to express their needs, thus distressed behaviour may indicate that there is an underlying unmet need driving the behaviour, either through signalling distress or attempts to fulfil the need (Cohen Mansfield, 2000). Premorbid mental health problems as well as personality, life experiences, and physical conditions also add to the complexity of understanding potential underlying causes of distressed behaviour. For example, it may be that another individual triggers a traumatic memory from the past, or that a person has a predisposition to depression or social anxiety. The Newcastle Clinical Model (James, 2011) provides a framework for systematic assessment and information gathering from care-staff and family. In addition to information gathered, functional analysis facilitates the development of person-centred psychological formulations and intervention plans. This model incorporates premorbid information as well as present factors to develop a deeper understanding of the individual, generating

testable hypotheses regarding the underlying unmet need(s) driving distressed behaviour. The assessment is then shared with all people involved in care, and interventions are agreed based on the identified unmet needs of the individual.

The role of staff attitudes in distressed behaviour

Attribution theories of emotion and motivation, and helping behaviour (Weiner, 1980, 1985) imply that beliefs regarding the cause of behaviours in others, coupled with emotional responses to behaviours, predict the likelihood of helping behaviour (Dagnan, Trower & Smith, 1998). Causal attributions vary across three main factors: 'internality' (the extent to which the cause of a behaviour is considered internal to the individual); 'stability' (the extent to which a behaviour is considered to indicate future behaviour); and 'controllability' (the extent to which the person is considered to have control over their actions). Thus if behaviour is considered to be due to factors within the individual (e.g. cognitive impairments caused by the dementia), that are unlikely to change, there may be a risk that beliefs about the behaviour will include 'nothing can be done' to change behaviours and reduce distress. Overall consideration of the individual may be negative, potentially impacting on the likelihood of helpful, supportive behaviour towards the individual. The interaction between aggressive behaviour and staff perceptions of clients has been researched in the field of Intellectual Disability. Jahoda and Wanless (2005) found that staff held a number of negative attitudes to clients who had exhibited aggressive behaviour towards them. Around two thirds of staff members felt that aggressive

behaviour was directed to them personally, with half reporting that they had not been treated with respect. Attribution theories would predict that this would impact on helping behaviour and indeed, from the quotes provided, it was clear that participants did not respond objectively to the aggressive behaviour, with many reporting thoughts regarding retaliation during such episodes. However, this study found that participants did not engage in retaliation behaviours, rather professional duties and responsibilities took precedence. However, it is not clear what impact negative attributions towards the individual had on the quality of interactions with the individual, as well as levels of staff stress and burnout.

There often exists a disparity between reports of distressed behaviour from different care staff regarding the same person with dementia, suggesting that the person with dementia responds differently to different care staff (Everitt, Fields, Soumerai, et al., 1991). This supports theories that the behaviour is not intrinsic to the person with dementia; rather it is the result of a complex interaction between internal and external factors present for both the patient and individual staff members. Nakahira, Moyle, Creedy et al. (2008) found that negative attributions were more common in younger, less experienced staff, with an associated increased use of antipsychotic medication and restraint to manage aggressive behaviour in this staff group. In contrast, staff members holding more positive attitudes toward distressed behaviour have been found to increase person-centred care and the likelihood that behaviour is considered within the context of

unmet needs (Abderhalden, Needham, Friedli, et al., 2002; Gilson & Moyer, 2000). Thus, the way in which care staff view the person with dementia and the causal attributions for distressed behaviour have implications for the range and model of interventions available to the individual.

Staff training to reduce distressed behaviour

Training programmes designed to educate staff regarding the causes of distressed behaviour and to promote empathy by placing the focus on the person rather than the behaviour have had mixed results. Some studies have demonstrated significant reductions in distressed behaviour in people with dementia (Chrzescijanskil, Moyle, & Creedy, 2007; Wilkinson, 1999; Maxfield, Lewis, & Cannon, 1996). Other studies have demonstrated increased skill and knowledge regarding dementia in staff, but were unable to demonstrate reductions in distressed behaviour in residents (Cohen-Mansfield, & Werner, 1997; Davison, Rawana, & Capponi, 2006; Magai, Cohen, & Gomberg, 2002). The inconsistency regarding the impact that staff education in dementia has on the frequency of distressed behaviour perhaps reflects the individual nature of promoting change through changing attributions. In contrast, training aimed at developing skills in psychological assessment and intervention promotes a collaborative and consistent approach to the management of distressed behaviour exhibited by individuals with dementia. Furthermore, training incorporating psychological factors embeds distressed behaviour within an evidence based assessment and intervention model, and has been shown to

subsequently reduce prescribing of antipsychotic medication and the use of restraints as a first line intervention (Fossey, et al., 2006).

A national training programme (Thurlby & Whitnall, 2013) was developed in Scotland in response to the Promoting Excellence: a framework for all health and social services staff (Scottish Government, 2011) document by NHS Education for Scotland to meet the commitment to respond better to distress in dementia, as part of the Scottish Dementia Strategy. The national training formed a 'training for trainers' model as this could be disseminated within local areas sustainably. The training aims to develop skills in assessing distressed behaviour within a biopsychosocial framework, and incorporates clinical assessment, use of ABC charts and functional analysis in accordance with the Newcastle Model. ABC charts differ from traditional methods as they include information on facial and vocal expressions to establish emotional state at time of overt distressed behaviour, highlighting cognitive and emotional factors as causal. Assessment training further emphasises the importance of considering the behaviour within biomedical, psychological, and environmental factors, and includes comprehensive history taking from reliable sources. The course then provides training and experience in formulating based on an unmet needs model. Information sharing sessions with family and care staff are used as a tool for guided discovery to develop a shared formulation to inform person-centred interventions. As well as training participants in formulation and intervention, the course also aims to develop understanding and

empathy of the experience of dementia through discussions and video presentations. It was anticipated that greater understanding of the experience of distress in dementia would promote better understanding of the potential causes of distress. The present study explored staff understanding of the causes of distressed behaviour exhibited by individuals with dementia through measuring causal attributions made before and after attending training.

Aims of current study

The current study explored the causal attributions made by experienced health and social care staff towards distressed behaviour exhibited by people with dementia. Staff attributions as to the causes of distress in dementia were measured before and after attending the training. The Challenging Behaviour Attribution Scale (CHABA) (Hastings, 1997) measures attributions in relation to five causal factors: *Learned behaviour, medical/biological, emotional, physical environmental, and self-stimulation* all of which can be considered under the three factors identified by the Newcastle Clinical Model. The CHABA-D was developed specifically for the described training programme to examine staff attributions towards distressed behaviour in people with dementia as such a tool did not exist for this purpose. As the CHABA-D has not previously been used to measure attributions towards distressed behaviours exhibited by people with dementia, a specific aim of this research was to investigate the internal reliability of the scale.

Aims and hypotheses

Aims

1. Examine the internal reliability of the Challenging Behaviour Attribution (CHABA) Scale (Hastings, 1997), adapted for use with dementia populations (CHABA-D)
2. Examine the attributions held by health and social care staff working with people with dementia prior to undertaking training in psychological assessment and intervention.
3. Measure and describe attributional shift, if any, following training
4. Discuss the findings and implications for future training assessment outcomes, directions and research

Hypotheses

1. Analysis will show the CHABA-D to have good internal reliability as a measure of causal attributions made towards causal factors of distressed behaviour exhibited by people with dementia.
2. There will be a greater increase in attributions relating to cognitive/emotional factors than biomedical attributions following training, consistent with the focus on promoting an understanding of distressed behaviour within a psychological framework.
3. There will be a reduction in scores on the CHABA-D item 33 ('Because she has dementia and that's what happens')

Exploratory analyses will also explore changes in attributions from pre-post training on the other factors (Learned Behaviour, Physical Environment, and Stimulation and activity). It is possible that there will be increases in endorsement of items in these factors as people consider a wider range of potential causes of distressed behaviour.

Methodology

Participants

184 health and social care practitioners attended a 2-day formal training workshop designed to enhance knowledge and skill regarding assessment and intervention for distressed behaviour in dementia. All participants supported people with dementia, and work environments included community mental health teams, residential care facilities, and in-patient assessment units across an NHS Health Board area (NHS Lanarkshire, population above 56,000). The largest sub-group of participants were practicing nurses (n=80), with 47 delegates holding positions as Senior Staff in residential care facilities, and 34 Senior Social Carers / Unit Managers. In addition, there were 7 Occupational Therapists (OT), 6 Psychiatrists, 6 Health Care Assistants (HCA), and 4 Ward Managers trained in this approach. Although the training was aimed predominantly at qualified staff, Health Care Assistants working directly within assessment units for individuals with dementia were included due to the high intensity of one-to-one interventions they provide. Participants were asked to complete the CHABA-D and other questionnaires measuring subjective knowledge and skill prior to attending training, and again on completion of the course. Data was

returned for 137 participants. At the start of training participants were provided with training packs that included their participant number on pre and post-training questionnaires, thus data regarding professional background was not attached to specific data sets returned. Not all questionnaires were returned fully completed, with some missing entire questionnaires, and others missing items from questionnaires. 96 fully completed CHABA-D questionnaires were obtained at baseline, and 76 obtained post-training.

Measures

CHABA and CHABA-D

The CHABA (Hastings, 1997) was developed primarily for measuring staff attributions towards challenging behaviour exhibited by people with Learning Disabilities. The questionnaire consists of 33 items, which can be separated into five sub-scales measuring the causal factors of learned behaviour, biomedical, physical environment, emotional, and self-stimulation. Responders read a vignette describing a common presentation of Challenging Behaviour exhibited by someone with Learning Disability, and are asked to rate each of the items in terms of how likely they consider the item to be a contributing factor in the presentation. Ratings range from Very Unlikely (VU); Unlikely (UL); Equally likely/unlikely (E); Likely (L); and Very Likely (VL). Ratings are assigned a score ranging from -2 (VU) to 2 (VL). Thus an overall mean positive or negative causal attribution score can be calculated for each of the five sub-scales, indicating the likelihood of participants making causal attributions based on individual factors (see Hastings, 1997, for

details regarding scale development and reliability). The CHABA-D was developed specifically for the described training programme to examine staff attributions towards distressed behaviour in people with dementia. The CHABA-D maintains the same format as the CHABA, with some items re-phrased to increase relevance to causal attributions commonly made towards distressed behaviour in dementia. Decisions on re-phrased items were agreed by a focus group consisting of Older Adult Clinical Psychologists and health and social care staff experienced in working with people with dementia. The items and sub-scales for both the CHABA and CHABA-D are shown in table 1, with the altered items identified. The vignette used in the CHABA-D is provided below.

Elizabeth is a 70 year old woman who has Alzheimer's Disease. Sometimes Elizabeth is aggressive towards the people who care for her in the nursing home. She will punch and kick people, pull their hair and physically push them when they are trying to attend to self-care tasks. Sometimes she takes off her clothes in the day room in front of the other residents when visitors are there and repeatedly shouts out.

Training acceptability scale (TARS) and intended learning outcomes

Participants were also asked to complete training acceptability rating scales (Davis et al, 1989) at the end of training. This provided important feedback regarding the training process allowing for an iterative approach to maximise the acceptability of the programme. In

addition, an intended learning outcome measure was completed to provide feedback regarding perceived content of the training programme. The data generated by the TARS and the intended learning outcome measures allow for regular updates regarding training delegates perceptions of both the content and the process of training. Although the present study has no hypotheses specific to these measures, the acceptability of the training will be discussed briefly.

Table 1 The CHABA and CHABA-D items, sub-scales, and altered items

| Item and number (CHABA) | Sub-Scale | Item and number (CHABA-D) | Sub-Scale |
|---|-----------|--|-----------|
| 1. Because she/he is given things to do that are too difficult for her/him* | L/LN | 1. Because she is in pain** | BM |
| 2. Because she/he is physically ill | BM | 2. Because she is physically ill | BM |
| 3. Because she/he does not like bright lights* | PE | 3. Because she is tired | BM |
| 4. Because she/he is tired | BM | 4. Because she cannot cope with high levels of stress | C/EM |
| 5. Because she/he cannot cope with high levels of stress | EM | 5. Because the day room is too crowded with people | PE |
| 6. Because her/his house is too crowded with people* | PE | 6. Because she is bored | ST |
| 7. Because she/he is bored | ST | 7. Because of the medication she is given | BM |
| 8. Because of the medication that she/he is given | BM | 8. Because she is unhappy | C/EM |
| 9. Because she/he is unhappy | EM | 9. Because she has not got something she wanted | LB |
| 10. Because she/he has not got something that she/he wanted | L/LP | 10. Because she lives in unpleasant surroundings | PE |
| 11. Because she/he lives in unpleasant surroundings | PE | 11. Because she enjoys it | ST |
| 12. Because she/he enjoys it | ST | 12. Because she is in a bad mood | C/EM |
| 13. Because she/he is in a bad mood | EM | 13. Because high humidity makes her uncomfortable | PE |
| 14. Because high humidity makes her/him uncomfortable | PE | 14. Because she is worried by something | C/EM |
| 15. Because she/he is worried about something | EM | 15. Because of infection** | BM |
| 16. Because of some biological process in her/his body* | BM | 16. Because her surroundings are too cold/hot | PE |
| 17. Because her/his surroundings are too warm/cold | PE | 17. Because she wants something | LB |
| 18. Because she/he wants something | L/LP | 18. Because she feels threatened** | C/EM |
| 19. Because she/he is angry | EM | 19. Because she is angry | C/EM |
| 20. Because there is nothing else for her/him to do | ST | 20. Because there is nothing for her to do | ST |
| 21. Because she/he lives in a noisy place | PE | 21. Because she lives in a noisy place | PE |
| 22. Because she/he feels let down by somebody* | EM | 22. Because she is handled poorly by some carers** | PE |
| 23. Because she/he is physically disabled* | BM | 23. Because she is sexually promiscuous** | BM |
| 24. Because there is not very much space in her/his house to move around in | PE | 24. Because there is not much space for her to move around | PE |
| 25. Because she/he gets left on her/his own | ST | 25. Because she is left on her own | ST |
| 26. Because she/he is hungry or thirsty | BM | 26. Because she is hungry or thirsty | BM |
| 27. Because she/he is frightened | EM | 27. Because she is frightened | C/EM |
| 28. Because somebody she/he dislikes is nearby | L/LN | 28. Because somebody she dislikes is nearby | LB |
| 29. Because people do not talk to her/him very much* | ST | 29. Because she believes she can wash herself** | C/EM |
| 30. Because she/he wants to avoid uninteresting tasks* | L/LN | 30. Because she does not get outdoors much | PE |
| 31. Because she/he does not go outdoors very much | PE | 31. Because she is rarely given activities to do | ST |
| 32. Because she/he is rarely given activities to do | ST | 32. Because she wants attention from others | LB |
| 33. Because she/he wants attention from other people | L/LP | 33. Because she has dementia and that's what happens** | BM |

(L/LN) learned behaviour negative; (L/LP) learned behaviour positive; (BM) biomedical; (EM) emotional (PE) physical environment; (ST) stimulation

* Items not included in CHABA-D

(LB) learned behaviour; (BM) biomedical; (C/EM) cognitive/emotional; (PE) physical environment; (ST) stimulation

** Items modified for and specific to CHABA-D

Results

Hypothesis 1 *Analysis will show the CHABA-D to be a reliable measure of causal attributions made towards causal factors of distressed behaviour exhibited by people with dementia*

The baseline CHABA-D was split into sub-scales representing the five causal attributional factors of *cognitive/emotional, learned behaviour, biomedical, physical environment, and stimulation/activity* (see table 1 for valid and missing data (N = 137), and median scores). Tests of distribution suggested normally distributed data, therefore internal reliability of the CHABA-D was assessed using Cronbach's alpha applied to each of the sub-scales. Cronbach (1951) suggested that if several factors exist then the formula should be applied to sub-scales as the formula only tests uni-dimensionality, i.e. internal reliability across one underlying factor. Thus, if the questionnaire is considered to have a number of underlying factors, as in the CHABA, and CHABA-D, then it is appropriate to test internal reliability of sub-scales representing factors. The values of alpha for each of the sub-scales suggest acceptable to good levels of internal reliability (see table 1).

Table 1 Valid and missing data (N = 137), median scores, number of scale items, and Cronbach's alpha

| Sub-scale | Valid data | Missing | Number of items | Median | Cronbach's alpha |
|------------------------|-------------------|----------------|------------------------|---------------|-------------------------|
| Cognitive / emotional | 99 | 38 | 8 | .88 | .816 |
| Learned behaviour | 102 | 35 | 4 | .38 | .695 |
| Biomedical | 96 | 41 | 8 | .25 | .750 |
| Physical environment | 96 | 41 | 8 | .38 | .840 |
| Stimulation / activity | 98 | 39 | 5 | .20 | .702 |

In addition, 'scale if item were deleted' analysis was performed post hoc. This provided individual alpha scores for each item on the sub-scale, indicating what alpha would be were that item deleted. This analysis indicated that the deletion of no one item would cause a substantive decrease in alpha, consistent with the overall internal reliability of the scale.

Baseline causal attributions

Data generated by the CHABA-D was analysed using non-parametric statistical models. Although the data is represented as a scale, it is generated by subjective ratings. Additionally, as an adapted scale, it has not been subjected to standardisation. Therefore it is appropriate to consider the data as ordinal rather than interval as subjective ratings do not represent absolute values where a rating of 2 can be considered twice that of a rating of 1, thus violating assumptions of parametric models. SPSS 19 was used for statistical analysis.

Friedman's ANOVA indicated that there were significant differences between the sub-scales of the CHABA-D at baseline, $X^2(4)=90.2$, $p<.001$. Wilcoxon tests were used to follow up this finding. A Bonferroni correction was applied, and so all effects are reported at a .005 level of significance. Ratings of cognitive/emotional causal attributions were found to be significantly higher than learned behaviour ($T=400.5$, $r=-.61$, $p<.001$), biomedical ($T=296.5$, $r=-.67$, $p<.001$), physical environment ($T=394$, $r=-.53$, $p<.001$), and also stimulation/activity ($T=209.5$, $r=-.74$, $p<.001$). These results indicate that participants made

more cognitive/emotional causal attributions than any of the other factors at baseline, suggesting participants were more likely to attribute psychological factors as potential causes of distressed behaviour prior to attending the workshop. Ratings of physical environment causal attributions were found to be significantly higher than stimulation/activity ($T=923.5$, $r=-.42$, $p<.001$). The effect sizes (using correlation effect size, r) calculated for significant differences suggest medium to large effect sizes for all differences. (See table 1 for valid and missing data ($N = 137$), and median scores; see figure 1 for baseline medians; see table 2 for significant differences and effect sizes across factors). Effect sizes were also calculated for non-significant results and are reported in table 2.

Figure 1 Baseline attributional median scores

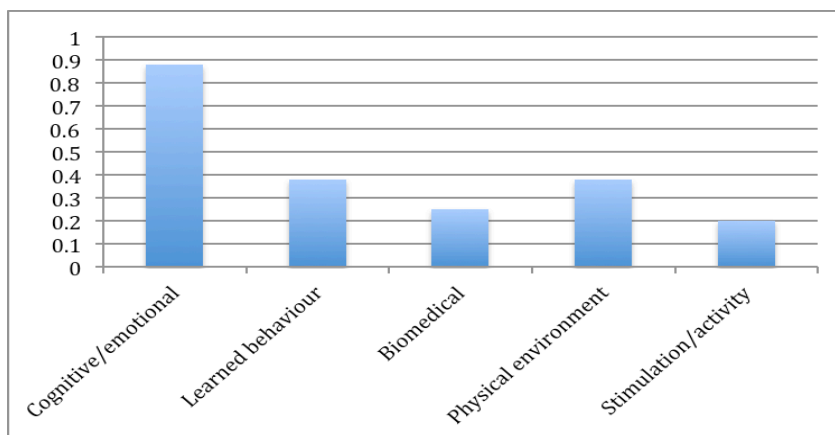


Table 2 Significant differences and effect sizes across factors at baseline

| | Cognitive emotional | Learned behaviour | Biomedical | Physical environment | Stimulation activity |
|----------------------|----------------------|-------------------|-------------|----------------------|----------------------|
| Cognitive emotional | | | | | |
| Learned behaviour | Significant (r=-.61) | | | | |
| Biomedical | Significant (r=-.67) | NS (r=-.09) | | | |
| Physical environment | Significant (r=-.53) | NS (r=-.15) | NS (r=-.21) | | |
| Stimulation activity | Significant (r=-.74) | NS (r=-.24) | NS (r=-.11) | Significant (r=-.42) | |

Post training causal attributions

Friedman's ANOVA indicated there was a significant difference between the sub-scales of the CHABA-D post training, $X^2(4)=85.3$, $p<.001$. Wilcoxon tests were used to follow up this finding. A Bonferroni correction was applied, and so all effects are reported at a .005 level of significance. Ratings of cognitive/emotional causal attributions were found to be significantly higher than learned behaviour (T=295, $r=-.51$, $p<.001$), physical/environment (T=397, $r=-.53$, $p<.001$), and for stimulation/activity (T=210, $r=-.71$, $p<.001$). Furthermore, learned behaviour causal attributions were significantly higher than biomedical factors (T=539, $r=-.42$, $p<.001$). Physical/environmental causal attributions were significantly higher than biomedical factors (T=464, $r=-.54$, $p<.001$), and also stimulation/activity factors (T=587.5, $r=-.48$, $p<.001$). Results indicate that cognitive/emotional causal attributions continue to be highest following training, and that learned behaviour and physical/environment causal attributions are made above those of biomedical factors following training. (See table 3 for valid and missing data (N = 137), and median scores for the five sub-scales post training;

see figure 2 for post training attribution median scores depicted as a graph; see table 4 for significant differences and effect sizes across factors).

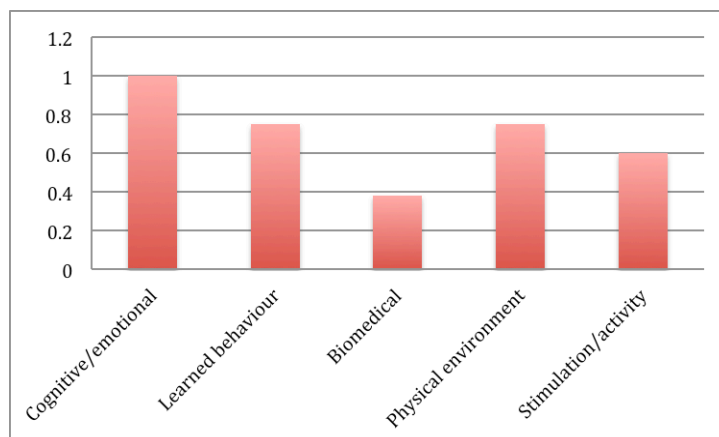
Table 3 Valid and missing data (N = 137) for the five sub-scales post training

| Sub-scale | Valid data | Missing | Median |
|------------------------|------------|---------|--------|
| Cognitive / emotional | 76 | 61 | 1.00 |
| Learned behaviour | 80 | 57 | .75 |
| Biomedical | 77 | 60 | .38 |
| Physical environment | 80 | 57 | .75 |
| Stimulation / activity | 78 | 59 | .60 |

Table 4 Significant differences and effect sizes across factors following training

| | Cognitive emotional | Learned behaviour | Biomedical | Physical environment | Stimulation activity |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Cognitive emotional | | | | | |
| Learned behaviour | Significant (r=-.51) | | | | |
| Biomedical | Significant (r=-.82) | Significant (r=-.42) | | | |
| Physical environment | Significant (r=-.53) | NS (r=-.06) | Significant (r=-.54) | | |
| Stimulation activity | Significant (r=-.71) | NS (r=-.27) | NS (r=-.12) | Significant (r=-.48) | |

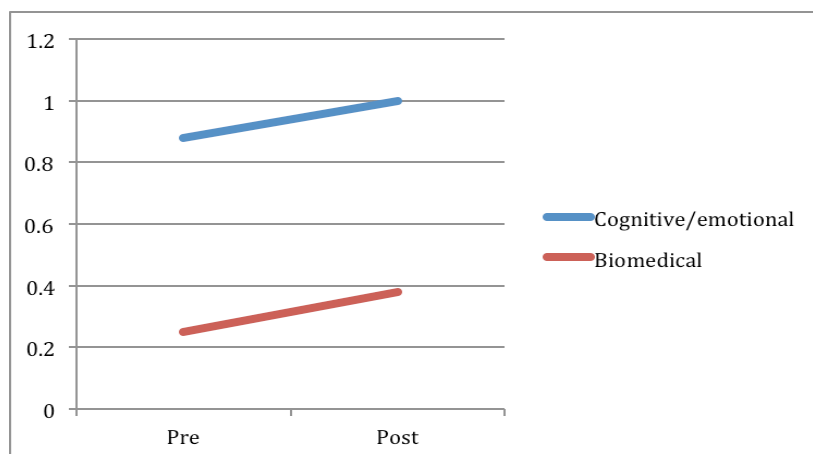
Figure 2 Post training median attribution scores



Hypothesis 2 *There will be a greater increase in attributions relating to cognitive/emotional factors than biomedical attributions following training, consistent with the focus on promoting an understanding of distressed behaviour within a psychological framework.*

Biomedical scores were subtracted from cognitive/emotional scores at baseline and again following training (see figure 3 for median scores for cognitive /emotional and biomedical factors before and after training). This was to calculate the difference between these scores to allow for analysis exploring whether there was a greater difference between the two factors following training when compared to pre-training. Wilcoxon signed rank indicated that there was no significant difference ($T=719.5$, $r=-.1$, $p=ns$) in the magnitude of difference between cognitive/emotional attributions made in relation to biomedical attributions following training, in comparison to before training. Thus hypothesis 2 was rejected.

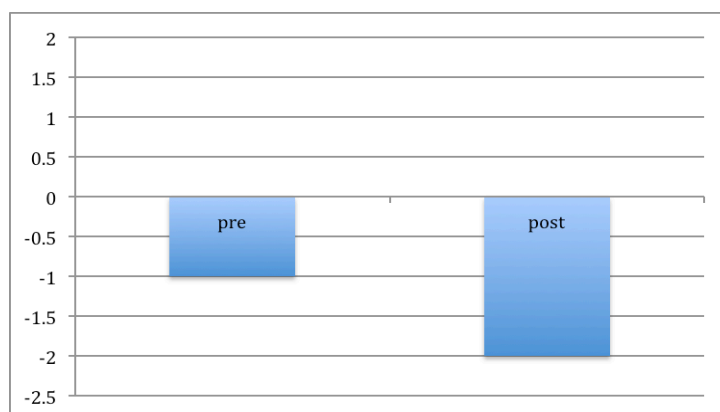
Figure 3: Median cognitive/emotional and biomedical factors scores prior to training and on course completion



Hypothesis 3 *There will be a reduction in scores on the CHABA-D item 33 ('Because she has dementia and that's what happens')*

Wilcoxon signed rank indicated that there was a significant reduction in scores on item 33 following training ($T=117.5$, $r=.35$, $p<.005$). Therefore hypothesis 3 was upheld, indicating that following training participants demonstrated less affiliation with the attribution that distressed behaviour is a direct result of dementia (see figure 4).

Figure 4: Median attributions for item 33 (*Because she has dementia and that's what happens*) pre training and following training

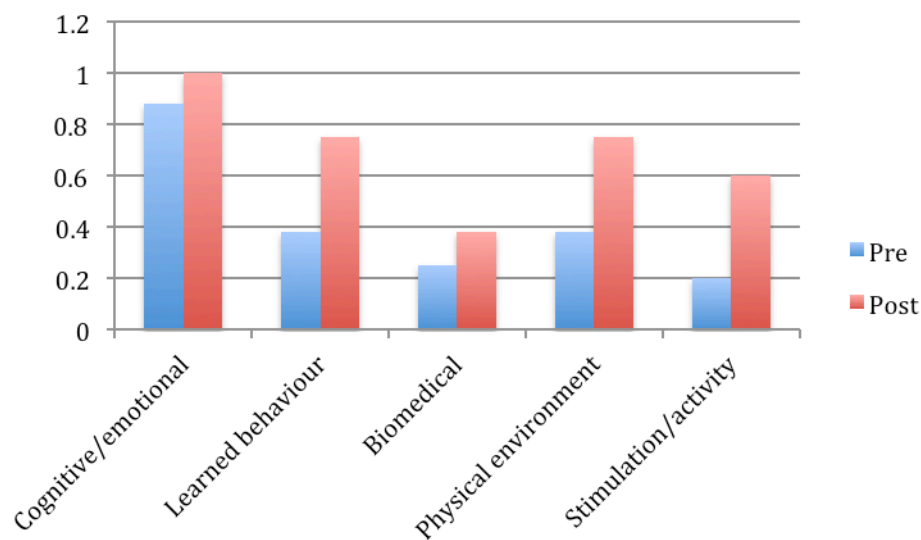


Changes in causal attributions following training

Wilcoxon signed-rank tests were used to measure change in causal attributional factors from baseline to post course. There was no difference in cognitive/emotional causal attributions made by participants following training ($T=631.5$, $r=-.25$, $p=ns$). Biomedical causal attributions were no different following training ($T=618.5$, $r=.26$, $p=ns$). However, there was a significant increase in the likelihood of participants making learned behaviour causal attributions towards the distressed behaviour described in the vignette ($T=537$, $r=-.34$, $p=.003$),

in physical environment attributions ($T=415$, $r=-.42$, $p<.001$) and in stimulation/activity attributions ($T=414.5$, $r=-.39$, $p=.001$) (see figure 5 for median attribution scores pre and post training). Thus participants gave more consideration to factors related to learned behaviour, physical environment, and stimulation/activity following training, consistent with training highlighting the potential for these factors to contribute to the development of distressed behaviour.

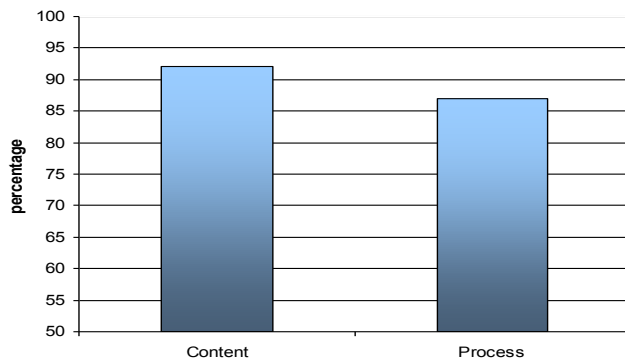
Figure 5 Median attribution scores pre and post training



Training acceptability

Completed TARS data was only available for 64 participants. Percentages are reported to allow comparison between the subscales of training content and process as these subscales do not have the same total scores, thus comparing means would be misleading. Descriptive analysis indicated that both training content and process were rated above 80% acceptability, with mean score percentages of 92% (SD 8.8%) and 87% (SD 13.1%) respectively (see figure 6).

Figure 6 Mean TARS percentages for content and process scores



Discussion

The primary aims of this research were two-fold. Firstly, to measure the internal reliability of the Challenging Behaviour Attributions Scale for Dementia (CHABA-D) in measuring attributions made by practitioners supporting people with dementia towards the causes of distressed behaviour. Secondly, to explore and describe the causal attributions made by health and social care practitioners towards the causes of distressed behaviour, and to measure change, if any, after taking part in a two-day formal training workshop developed to enhance and cultivate skill in psychological assessment, formulation, and intervention.

The first hypothesis, that analysis would show the CHABA-D to be a reliable measure of causal attributions made towards distressed behaviour exhibited by people with dementia was upheld. The alpha value generated for the five sub-scales of the CHABA-D indicated that estimates of theoretical internal reliability lay between 'acceptable' and

'good' (George & Mallery, 2003). Although Cronbach's alpha is widely used to assess internal reliability of questionnaire data using Likert scales (Zumbo & Rupp 2004), there are some potential limitations given that coefficient alpha measures are based on Pearson's correlation matrices, which have parametric assumptions. Zumbo, Gadermann, and Zeisser (2007) found that Cronbach's alpha tends to lower estimates of internal reliability with ordinal compared to interval data. Furthermore, the magnitude of Cronbach's alpha may be artificially reduced in scales with less than 5 items (Gelin, Beasley, & Zumbo, 2003; Zumbo, et al., 2007), which applied to the Learned Behaviour scale, which has four items. Thus it is perhaps reasonable to conclude that the results in the present study that ranged from acceptable to good represent conservative estimates of the internal reliability of the scales.

The second hypothesis that participants will make more attributions relating to cognitive/emotional factors than biomedical following training compared to before training, consistent with the focus on promoting an understanding of distressed behaviour within a psychological framework was rejected. Although this finding was initially surprising, analysis of baseline and post course data indicated that participants demonstrated greater consideration of psychological factors than biomedical prior to attending training, as well as following training, although the magnitude of the difference did not change. The main aim of the training is to develop skills and knowledge regarding assessment, formulation, and intervention for distressed behaviours, within an evidence based psychological model. It is particularly

encouraging that participants viewed cognitive/emotional factors as potentially more likely causes of distressed behaviour consistently both prior to and following training as this suggests participants were already considering distressed behaviour within psychological frameworks, and continued psychological attributions following training implies fidelity to the model.

The third hypothesis that there will be a reduction in scores on the CHABA-D item 33 ('Because she has dementia and that's what happens') was upheld. Participants demonstrated low levels of affiliation with this attribution prior to training, however this reduced further on course completion. This finding is consistent with the course ethos regarding promoting awareness that distressed behaviour in dementia is not an inevitable outcome of the disease progress.

Exploratory analysis found that participants were significantly more likely to make causal attributions related to the physical environment, and stimulation and activity following training. However, there was no difference in the likelihood of making biomedical or cognitive/emotional attributions.

The finding that cognitive/emotional attributions did not change was initially surprising as the training was aimed at increasing knowledge and understanding of the distressed behaviour exhibited by people with dementia within a psychological model. However, baseline data indicated that participants already rated cognitive and emotional

factors as likely causes of distressed behaviour prior to training. When considering that the training is aimed at senior health and social care staff already experienced in supporting people with dementia, it is perhaps less surprising to find that cognitive and emotional causal attributions towards distressed behaviour exhibited by people with dementia were evident prior to training. This perhaps reflects on-going developments and progression in dementia care over the past two decades following the work of Tom Kitwood, emphasising the individual experience of dementia rather than the pathology of the disease (Kitwood, 1997).

However, it should also be highlighted that the explicit psychological focus of training may potentially have biased participants to respond in a socially desirable manner and to change their actual attributions in the questionnaire to demonstrate their competence and/or acceptability of psychological factors to please trainers.

The finding that biomedical causal attributions did not change following training was surprising as an integral component of the assessment model taught during the two-day workshop is information gathering regarding biomedical factors such as pain, physical conditions, and current medication. It is emphasised early in the training that unmet needs related to biomedical factors should be ruled out before considering psychological factors, as the former would have a different intervention process. For example, it would not be appropriate to use psychological interventions to address an unmet need for better pain

management. In terms of the current training, it is possible that participants focussed on the psychological elements of the training rather than on biomedical components of the course. Additionally, the majority of participants were from nursing backgrounds and likely to be more confident in their abilities to identify and address biomedical needs, thus resulting in some disregard of biomedical components of the training as this represented familiar information. Given that the biomedical model has historically been the model professionals have focused on, this is perhaps less surprising. In contrast, psychological aspects of the training were perhaps more interesting to participants due to its unfamiliarity.

The increased likelihood of making causal attributions related to physical environment, and situation and activity is consistent with the training emphasis on these as potential factors contributing to the unmet needs underlying distressed behaviour in dementia. Indeed, much of the intervention section of the training encouraged discussion regarding identifying appropriate meaningful activities for people with dementia, regardless of whether they are exhibiting distressed behaviour or not.

Additionally, the training promoted consideration of the impact that environmental factors such as temperature, noise, poor delineation between living areas, lighting, patterns, and locked doors can have on increasing frustration, anxiety, and disorientation to place and time for an individual with dementia. In addition, there has been an increased

interest and awareness in psychological interventions, not only in dementia but also across all aspects of mental health. The findings that participants were more likely to make causal attributions related to psychological factors over biomedical ones could also be an artefact of increased general awareness of the efficacy of psychological interventions. Data from the current study indicated that participants considered a number of factors as potential causes of distressed behaviour exhibited by people with dementia prior to training.

Analysis indicated that participants were significantly more likely to make causal attributions related to cognitive and emotional factors prior to attending the 2-day workshop, as well as on course completion. There was little variance between the likelihood of causal attributions regarding learned behaviour, biomedical, physical environment, and stimulation and activity regarding the cause of distressed behaviour described in the vignette prior to attending training. Following training, attributions regarding cognitive and emotional factors remained most likely considerations of the cause of distressed behaviour. There was more variance between the other factors, with biomedical attributions being less likely than attributions based on learned behaviour or physical environment. Activity and stimulation attributions were less common than those considering physical environment factors. The increased likelihood of physical environment and stimulation and activity factors being considered as causes was also encouraging as this suggests that the training increased awareness of

the importance of these factors when considering unmet needs driving distressed behaviour.

Participants rated the training highly in terms of both content of training and process. Content was rated slightly higher, and comments provided by participants were generally very positive. This suggests that the content of the course was relevant and interesting, as well as the process being appropriate to facilitate an enjoyable learning experience.

Research Limitations

There are a number of methodological limitations to this research. The CHABA-D was adapted for use with dementia populations from the CHABA that was developed for use in learning disability populations. As such, it would have been appropriate to apply factor analysis to the CHABA-D to measure interdependency between variables, thus ensuring the integrity of the five subscales. There are a number of rules of thumb regarding the sample size required for factor analysis, however Comrey and Lee (1992) argued that 100 was poor, 200 was fair, 300 was good, 500 was very good and 1000+ was excellent. As the data generated was below 100, the results of factor analysis would have been questionable. Therefore it was considered inappropriate to carry out this analysis, as the results would not have been valid. However, confirmatory factor analysis could have been used as an alternative to traditional factor analysis, using the hypothesis that the subscales indeed measured the constructs described. Additionally, by using the

priori assumption that the five subscales represent distinct factors, confirmatory factor analysis would require less data.

Although the data generated was normally distributed, non-parametric tests were used in analysis. This is due to data being ordinal rather than interval. Parametric analysis provides increased power to the analysis, whereas non-parametric analysis allows for potential violations of assumptions of parametric tests with ordinal data. However, given the effect sizes reported, this study was not underpowered. Although not reported, parametric analysis were carried out following non-parametric analysis, and the findings were consistent using both methods.

The CHABA and the CHABA-D both require participants to read a short vignette designed to represent a common presentation of distressed behaviour in learning disabilities or dementia. Although it is necessary for all participants to consider the same case to ensure internal reliability of the questionnaire, it is possible that participants may provide some socially desirable responses. Furthermore, attribution theories rely on an element of subjectivity when describing how attributions are formed (Weiner, 1980; 1985) therefore it is also possible that participants would consider different causal factors if they were personally involved in the situation described in the vignette.

A significant limitation of this research is the lack of data from distinct professional groups. This would have provided invaluable information

regarding attributions made by different professional groups regarding the causes of distressed behaviour and would have informed future training needs.

There is some evidence that professional duty and responsibilities may outweigh negative attributions held regarding distressed behaviour in Learning Disability populations (Jahoda & Wanless, 2005), thus attribution style may not be a reliable indicator of clinical practice. Further research regarding attributional style and actual clinical practice is warranted to better understand these interactions.

Conclusions and future directions

The results of this study indicate that the CHABA-D is a reliable measure of causal attributions made by experienced health and social care staff regarding distressed behaviour exhibited by people with dementia. However further research is required to obtain a sample size large enough to enable factor analysis to ensure the integrity of the subscales identified in the questionnaire. Alternatively, confirmatory factor analysis could be used to test correlations between the subscales.

Furthermore, the results of this study suggest that following formal 2-day training in psychological responses to stress and distress in dementia, experienced health and social care staff supporting people with dementia demonstrated a greater awareness of the complexity of assessing distressed behaviour in terms of the consideration of compounding factors within a psychological model. However future

research should incorporate a measurement of attributions made by distinct professional groups to allow for better understanding of the differences between professions and to inform future training needs.

Additionally, a more sophisticated vignette or case study developed to maximise a professional affiliation with the described situation could elicit more naturalistic attributions made by health and social care staff. Similarly, the development of a number of short vignettes describing common presentations of distressed behaviour in dementia could also maximise the measurement of attributions made by health and social care staff towards the causes of distressed behaviour in dementia.

Research is currently being undertaken investigating the impact that participation in training has on clinical practice, through evaluation of the impact of enhanced psychological care on the prescribing of antipsychotic medication. It is anticipated that this will provide further insight into the clinical application and generalisability of the model taught in the workshop. Future research adopting qualitative methods could also provide insight into the impact of enhanced psychological knowledge and skill regarding assessment, formulation, and intervention on levels and intensity of distressed behaviour exhibited by people with dementia, as well as the impact on staff stress and burnout. Additionally, the current training and data is based on experienced health and social care staff, the majority of which work at senior or managerial levels. Training aimed at junior and less experienced staff would potentially generate greater change in consideration of psychological factors as causes of distressed

behaviour. Additionally, increased staff knowledge and skill regarding the experience of dementia and the development of distressed behaviour, as well as developing skills in psychological interventions, is likely to have considerable benefit to the individual with dementia.

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APENDICES

Appendix 1.1

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All submissions should be in the style of the Publication Manual of the American Psychological Association (6th edition). Papers should be double spaced throughout (including the references), with margins of at least 2.5 cm (1 inch). All pages must be numbered. The first page should include the title of the paper, first name, middle initial(s) and last name of the author(s), and for each author a short institutional address, and an abbreviated title (for running headlines within the article). At the bottom of the page give the full name and address (including telephone and fax numbers and e-mail address if possible) of the author to whom all correspondence (including proofs) should be sent. The second page should repeat the title and contain an abstract of not more than 250 words. The third page should repeat the title as a heading to the main body of the text.

All the authors of a paper should include their full names, affiliations, postal addresses, telephone numbers and email addresses on the cover page of the manuscript. One author should be identified as the corresponding author. The affiliations of all named co-authors should be the affiliation where the research was conducted. If any of the named co-authors moves affiliation during the peer review process, the new affiliation can be given as a footnote. Please note that no changes to affiliation can be made after the article is accepted. Please note that the email address of the corresponding author will normally be displayed in the article PDF (depending on the journal style) and the online article.

Structured abstracts: The main text should be preceded by a short structured abstract, accompanied by a list of keywords. The abstract should be arranged as follows: Title of manuscript; name of journal; abstract text containing the following headings: Objectives, Method, Results, and Conclusion.

Key words: A list of 3-5 keywords should be provided. Words already used in the title should be avoided if possible. The text should normally be divided into sections with the headings Introduction, Methods, Results, and Discussion. Long articles may need subheadings within some sections to clarify their content.

Style guidelines

Description of the Journal's [article style](#)

Description of the Journal's [reference style](#)

Any consistent spelling style is acceptable. Use single quotation marks with double within if needed.

If you have any questions about references or formatting your article, please contact authorqueries@tandf.co.uk (please mention the journal title in your email).

Units of measurement

All measurements must be cited in SI units.

Figures

All illustrations (including photographs, graphs and diagrams) should be referred to as Figures and their position indicated in the text (e.g. Fig. 3). Each should be submitted numbered with Figure number (Arabic numerals) and the title of the paper. The captions of all figures should be submitted on a separate page, should include keys to symbols, and should make interpretation possible without reference to the text.

- It is in the author's interest to provide the highest quality figure format possible. Please be sure that all imported scanned material is scanned at the appropriate resolution: 1200 dpi for line art, 600 dpi for grayscale and 300 dpi for colour.
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- All figures must be numbered in the order in which they appear in the paper (e.g. Figure 1, Figure 2). In multi-part figures, each part should be labelled (e.g. Figure 1(a), Figure 1(b)).
- Figure captions must be saved separately, as part of the file containing the complete text of the paper, and numbered correspondingly.
- The filename for a graphic should be descriptive of the graphic, e.g. Figure1, Figure2a.

Figures should ideally be professionally drawn and designed with the format of the journal (A4 portrait, 297 x 210 mm) in mind and should be capable of reduction.

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Tables

Tables should be submitted on separate pages, numbered in Arabic numerals, and their position indicated in the text (e.g. Table 1). Each table

should have a short, self-explanatory title. Vertical rules should not be used to separate columns. Units should appear in parentheses in the column heading but not in the body of the table. Any explanatory notes should be given as a footnote at the bottom of the table.

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Appendix 1.2 STROBE Statement

STROBE Statement—checklist of items that should be included in reports of observational studies

| | Item No | Recommendation |
|------------------------------|---------|--|
| Title and abstract | 1 | (a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found |
| Introduction | | |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses |
| Methods | | |
| Study design | 4 | Present key elements of study design early in the paper |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection |
| Participants | 6 | (a) <i>Cohort study</i> —Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up <i>Case-control study</i> —Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls <i>Cross-sectional study</i> —Give the eligibility criteria, and the sources and methods of selection of participants (b) <i>Cohort study</i> —For matched studies, give matching criteria and number of exposed and unexposed <i>Case-control study</i> —For matched studies, give matching criteria and the number of controls per case |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable |
| Data sources/ measurement | 8* | For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group |
| Bias | 9 | Describe any efforts to address potential sources of bias |
| Study size | 10 | Explain how the study size was arrived at |
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why |
| Statistical methods | 12 | (a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (d) <i>Cohort study</i> —If applicable, explain how loss to follow-up was addressed <i>Case-control study</i> —If applicable, explain how matching of cases and controls was addressed <i>Cross-sectional study</i> —If applicable, describe analytical methods taking account of sampling strategy (e) Describe any sensitivity analyses |

Continued on next page

| Results | | |
|--------------------------|-----|---|
| Participants | 13* | (a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed (b) Give reasons for non-participation at each stage (c) Consider use of a flow diagram |
| Descriptive data | 14* | (a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders (b) Indicate number of participants with missing data for each variable of interest (c) <i>Cohort study</i> —Summarise follow-up time (eg, average and total amount) |
| Outcome data | 15* | <i>Cohort study</i> —Report numbers of outcome events or summary measures over time <i>Case-control study</i> —Report numbers in each exposure category, or summary measures of exposure <i>Cross-sectional study</i> —Report numbers of outcome events or summary measures |
| Main results | 16 | (a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period |
| Other analyses | 17 | Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses |
| Discussion | | |
| Key results | 18 | Summarise key results with reference to study objectives |
| Limitations | 19 | Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence |
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results |
| Other information | | |
| Funding | 22 | Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based |

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at www.strobe-statement.org.

Appendix 1.3 Methodological rating scale

| Title and abstract | | Score |
|---------------------------------------|---|--------------|
| 1.1 | Is the study's design indicated with a commonly used term in the title or the abstract? | 0 1 |
| 1.2 | Does the abstract provide an informative and balanced summary of what was done and what was found? | 0 1 |
| Introduction | | |
| 2.1 | Does the introduction explain the scientific background and rationale for the investigation being reported? | 0 1 |
| 2.2 | Does it state specific objectives, including any prespecified hypotheses? | 0 1 |
| 2.3 | Does the study address a clearly focussed issue? | 0 1 |
| Methods | | |
| 3.1 | Did the authors use an appropriate method to answer their question? | 0 1 |
| 3.2 | Does the paper present key elements of the study design early in the paper? | 0 1 |
| 3.3 | Is there adequate descriptions of the setting, locations, and relevant dates, including periods of recruitment and data collection? | 0 1 |
| 3.4 | Are the eligibility criteria, sources, and methods of selection of participants provided? | 0 1 |
| 3.5 | Does the study have ethical approval? (is it reported?) | 0 1 |
| 4. Variables | | |
| 4.1 | Are the outcomes clearly defined? | 0 1 |
| 5. Data sources / measurements | | |
| 5.1 | Are there sources of data and details of methods of assessment for each variable of interest? | 0 1 |
| 5.2 | Are the measures used standardised? | 0 1 |

| | | |
|---|--|-----|
| 6. Bias | | |
| 6.1 Have potential sources of bias been identified and addressed? | | 0 1 |
| 7. Study size | | |
| 7.1 Is the sample size justified? (Has a power calculation been used?) | | 0 1 |
| 8. Quantitative variables | | |
| 8.1 Were quantitative variables handled appropriately in analysis? (Is this explained?) | | 0 1 |
| 9. Statistical methods | | |
| 9.1 Were appropriate statistical tests used? | | 0 1 |
| 9.2 Were confounding factors considered? | | 0 1 |
| 9.3 Was missing data considered appropriately? | | 0 1 |
| Results | | |
| 10. Participants | | |
| 10.1 Does the study report numbers of individuals at each stage of study – e.g. numbers potentially eligible, examined for eligibility, confirmed eligibility, included in the study, and analysed? | | 0 1 |
| 10.2 Does the study provided explanations for non-participation at each stage? | | 0 1 |
| 11. Descriptive data | | |
| 11.5 Are the demographics of the participants clearly described? (e.g. profession, time since qualified, exposure to patients with dementia exhibiting distressed behaviour, gender) | | 0 1 |
| 11.2 Is information provided on potential confounders? | | 0 1 |
| 11.3 Is the number of participants with missing data for attitude / attribution scales stated? (including missing data within measures) | | 0 1 |

| | | |
|---|--|-----|
| 12. Outcome data | | |
| 12.1 Does the study report numbers of outcome events / summary measures? | | 0 1 |
| 13. Main results | | |
| 13.1 Does statistical analysis match aims / hypotheses identified? | | 0 1 |
| 13.2 Is it clear which confounders were adjusted for and why they were included? | | 0 1 |
| 13.3 Are confidence intervals provided? No / 90% = 0 95% = 1 | | 0 1 |
| 13.4 Are effect sizes reported? | | 0 1 |
| 14. Other analysis | | |
| 14.1 Is there any other analyses e.g. analysis of subgroups and interactions, and sensitivity analysis | | 0 1 |
| Discussion | | |
| 15. Key results | | |
| 15.1 Are the key results summarised with reference to study objectives? | | 0 1 |
| 16. Limitations | | |
| 16.1 Does the study discuss the limitations of the study, taking into account sources of potential bias or imprecision? | | 0 1 |
| 16.2 Does the study discuss both direction and magnitude of any potential bias? | | 0 1 |
| 17. Interpretation | | |
| 17.1 Does the study provide an overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant studies? | | 0 1 |
| 18. Generalizability | | |
| 18.1 Does the study discuss generalizability / external validity of the study results? | | 0 1 |
| 19. Funding | | |

| | | |
|--|---|-----|
| 19.1 Does the study make it clear whether or not there is a conflict of interest in terms of funding? | | 0 1 |
| Raw score Percentage score / 36 X 100 =% Quality rating of study..... | < 24% = Poor 25 – 49% = Low 50 – 74% = Moderate > 75% = High | |

Appendix 2.1

Major Research Project – proposal

Staff attributions towards distressed behaviour in dementia
before and after training in psychological assessment and
formulation

Sally McVicar

University of Glasgow

Section of Psychological Medicine

**Submitted in partial fulfilment of the requirements of the
degree of Doctorate in Clinical Psychology**

Abstract

The current research explores the impact psychological training has on attributions held by health and social care staff regarding the causes of distressed behaviour exhibited by individuals with dementia. The proposed study will explore the impact of psychological training on attributions held by health and social care staff regarding the causes of distressed behaviour. Participants include health and social care staff supporting people with dementia attending a two-day formal training workshops aimed at developing knowledge and skills regarding assessment, formulation, and interventions for distressed behaviours, using an evidence based psychological model (James, 2011). Attributions made by participants will be measured before and after training using the Challenging Behaviour Attribution Scale – Dementia (CHABA-D), adapted from the CHABA (Hastings, 1997) and findings examined in the context of attribution modification post-training. Additionally, as an adapted measure was used, the internal reliability of the CHABA-D will be measured using Cronbach's alpha.

Introduction

Stress and distress in dementia

'Stress and distress in dementia' is a term used to describe what is traditionally known as 'behaviour that challenges', 'challenging behaviour' or 'behavioural and psychological symptoms of dementia'. This can therefore refer to numerous behaviours or presentations that are observed to be distressing to the individual or to cause stress/distress in others (James, 2011). Common distressed behaviours in dementia include aggression, pacing, repeating questions frequently, shouting and other vocalisations, sexual disinhibition, hoarding, self injurious behaviour, apathy, and agitation (Turner, 2005).

Causes of distressed behaviour in dementia

There are a number of theories regarding the cause of distressed behaviour in an individual with dementia. Biological models consider distressed behaviour as a consequence of internal physiological states, for example attributing behaviour to the dementia due to neurological or structural changes in the brain, or to pain or infections. For example, it has been proposed that pain in persons with impairments of abstract thinking and language may present as distressed behaviours such as increased vocalisations, distress at being touched culminating in verbal and/or physical aggression and restlessness (Cohen-Mansfield and Lipson, 2008). Prophylactic use of analgesics as a preventative intervention for distressed behaviour exhibited by people with dementia has had some success (Husebo et al, 2011). However, it could be argued that there are ethical issues regarding medicating when it

may not be necessary, as well as the financial implications of prophylactically administering analgesic medication to everybody with moderate to severe dementia. There has been some reported success in the use of behavioural modification interventions, based on learning theories as a treatment for distressed behaviour exhibited by people with dementia (Allen-Burge et al, 1997). Environmental models consider behaviour as a response to environmental stimuli, and psychological models consider distressed behaviour to be the outward indication of negative internal states. There are limitations to each of these models when considered in isolation. James (2011) has outlined a non-exclusive list of common causes of distressed behaviour, highlighting the complexity of possible interactions between biological, psychological, and environmental factors, emphasising the need for comprehensive assessment gathering information from a variety of sources (see James (2011) for a comprehensive list).

Biopsychosocial understanding of distressed behaviour

There is an increasing evidence base for the use of biopsychosocial interventions for distressed behaviour in dementia (Enmarker et al, 2011; Olazaran et al, 2010; O'Neill et al, 2011). Neurodegeneration can lead to deficits in all cognitive domains including memory, attention and concentration, executive function, praxis, and spatial awareness. These deficits significantly impact on a person's ability to make sense of the world. Additionally, people with dementia will very often experience time distortions, leading them to believe themselves to be much younger than they actually are (James, 2011). Therefore,

interpretations regarding their environment and interactions with others are made within the context of their roles and responsibilities as a younger adult, in a way that is incongruent with the external reality. Thus, a woman with dementia may be responding to her internal reality whereby she has to be home for her children. When someone prevents her from this responsibility, she becomes anxious and frustrated, and hostile towards the person who is preventing her from caring for her children. Without fully understanding the context within which distressed behaviour exists, it is less likely that staff caring for the individual will use the most appropriate intervention to reduce distress, subsequently causing additional stress to staff as they struggle to manage the distressed behaviour exhibited by the person with dementia.

The role of staff attitudes in distressed behaviour

Attribution theories of emotion and motivation, and helping behaviour (Weiner, 1980, 1985) imply that beliefs regarding the cause of behaviours in others, coupled with emotional responses to behaviours, predict the likelihood of helping behaviour. Causal attributions vary across three main factors: 'internality' (the extent to which the cause of a behaviour is considered internal to the individual); 'stability' (the extent to which a behaviour is considered to indicate future behaviour); and 'controllability' (the extent to which the person is considered to have control over their actions). Thus if behaviour is considered to be due to factors within the individual (e.g. cognitive impairments caused by the dementia), that are unlikely to change, there may be a risk that

beliefs about the behaviour will include 'nothing can be done' to change behaviours and reduce distress. Overall consideration of the individual may be negative. The interaction between causal attributions of aggressive behaviour and staff perceptions of clients has been researched in the field of Intellectual Disability. Jahoda et al (2005) found that staff held a number of negative attitudes to clients who had exhibited aggressive behaviour towards them. Qualitative interview data indicated that participants did not respond objectively to the aggressive behaviour, with many reporting thoughts regarding retaliation during episodes of aggressive behaviour.

There often exists a disparity between reports of distressed behaviour from different care staff regarding the same person with dementia (Everitt et al, 1991). This supports theories that the behaviour is not intrinsic to the person with dementia; rather it is the result of a complex interaction between internal and external factors present for both the patient and individual staff members. Nakahira et al (2008) found that negative attributions were more common in younger, less experienced staff, with an associated increased use of antipsychotic medication and restraint to manage aggressive behaviour in this staff group. In contrast, staff members holding more positive attitudes toward distressed behaviour have been found to increase person-centred care and the likelihood that behaviour is considered within the context of unmet needs (Abderhalden et al. 2002; Gilson and Moyer, 2000). Thus, the way in which care staff view the person with dementia

and the causal attributions for distressed behaviour have implications for the range and model of interventions available to the individual.

Staff training to reduce distressed behaviour

Training programmes designed to educate staff regarding the causes of distressed behaviour and to promote empathy by placing the focus on the person rather than the behaviour have had mixed results. Some studies have demonstrated significant reductions in distressed behaviour in people with dementia (Chrzescijanskil et al, 2007; Wilkinson, 1999; Maxfield et al 1996). Other studies have demonstrated increased skill and knowledge regarding dementia in staff, but were unable to demonstrate reductions in distressed behaviour in residents (Cohen-Mansfield et al, 1997; Davison et al, 2006; Magai et al, 2002). The inconsistency regarding the impact that staff education in dementia has on the frequency of distressed behaviour perhaps reflects the individual nature of promoting change through changing attributions. In contrast, training aimed at developing skills in psychological assessment and intervention foster consistency through providing structure, as well as collaboration among all involved in caring for an individual. Furthermore, training incorporating psychological factors embeds distressed behaviour within an evidence based assessment and intervention model, and has been shown to subsequently reduce prescribing of antipsychotic medication and the use of restraints as a first line intervention (Fossey et al, 2006).

Aims of current study

The current study will explore the causal attributions towards distressed behaviour exhibited by people with dementia made by experienced health and social care staff. Staff attributions as to the causes of distress in dementia will be measured before and after attending a two-day formal training workshop aimed to increase knowledge and skills specific to psychological theory and interventions in response to distress in dementia, based on the Newcastle Clinical Model (James, 2011).

The Challenging Behaviour Attribution Scale (CHABA) (Hastings, 1997) measures attributions in relation to five causal factors: *Learned behaviour, medical/biological, emotional, physical environmental, and self-stimulation* all of which can be considered under the three factors identified by the Newcastle Support Model and include known causes of distress as outlined above. The CHABA-D is an adapted version of the CHABA aimed to measure staff attributions of distressed behaviour in dementia. The CHABA sub-scale measuring emotional attributions was modified to include cognitive factors following discussion with Older Adult specialist Clinical Psychologists as this was considered to better reflect attributions made to distressed behaviour exhibited by people with dementia. The remaining sub-scales in the CHABA-D are the same as those in the CHABA but *emotional* is now termed *emotional/cognitive*. As the CHABA-D has not previously been used to measure attributions towards distressed behaviours exhibited by

people with dementia, a specific aim of this research is to investigate the internal reliability of the scale.

Aims and hypotheses

Aims

5. Examine the reliability of the Challenging Behaviour Attribution (CHABA) Scale (Hastings, 1997), adapted for use with dementia populations (CHABA-D)
6. Examine the attributions held by health and social care staff working with people with dementia prior to undertaking training in psychological assessment and intervention.
7. Measure and describe attributional shift, if any, following training
8. Discuss the findings and implications for future training assessment outcomes, directions and research

Hypotheses

4. Analysis will show the CHABA-D to be a reliable measure of causal attributions made towards causal factors of distressed behaviour exhibited by people with dementia
5. Participants will make more attributions relating to cognitive/emotional factors than biomedical following training, consistent with the focus on promoting an understanding of distressed behaviour within a psychological framework
6. Following training, participants will demonstrate an increased awareness of all factors as possible causes of distressed behaviour, consistent with workshop promoting a

comprehensive psychological assessment incorporating
biopsychosocial information

Plan of Investigation

Participants

Participants will be health and social care staff attending a 2-day formal training workshop designed to enhance knowledge and skill regarding assessment and intervention for distressed behaviour in dementia. All participants will work specifically with people with dementia, and work environments will include community mental health teams, residential care-home facilities, and in-patient assessment wards across Lanarkshire.

Recruitment Procedures

This study will be part of a larger national training programme funded by NHS Education for Scotland (NES). Local health and social care staff will be invited to attend the 2-day formal training workshop. Managers of carehomes designed to meet the needs of people with dementia will be invited to release staff to attend training, as will managers of Community Mental Health Teams – Older Adults (CMHT-OA). A rollout programme will ensure that the training is available to all facilities supporting people with dementia.

Measures

All health and social care staff attending the 2-day formal training

workshop will be required to complete the following measures pre and post training:

- CHABA-D
- Training Acceptability Rating Scale (TARS)
- Intended Learning Outcomes measure

Design / research procedures

Within groups survey design using convenience sampling.

Data Analysis

- Statistical analysis will be carried out using SPSS version 19
- Descriptive statistics will be presented as medians, means and standard deviations
- Cronbach's alpha will be used to measure reliability of the CHABA-D³
- As Likert scales are used which do not provide true interval data, non-parametric data analysis will be used to investigate changes in attributions on the CHABA-D
- Friedman's test will be used to explore differences between the five sub-scales at baseline and again post course, with Wilcoxon's as post hoc if significant results are indicated
- Wilcoxon signed-rank test will be used to measure differences pre and post training across individual sub-scales

Sample size

³Although data is non-parametric, Cronbach's alpha is commonly used for data of this type (Zumbo and Rupp, 2004)

This study is taken from a larger training programme currently being rolled out across Lanarkshire. It is anticipated that data from >100 participants will be available for analysis.

Settings and equipment

Data will be generated from training currently being delivered across Lanarkshire. The author is involved in co-delivering this training as part of clinical responsibilities. Settings and equipment are provided by NHS Lanarkshire and / or training venues. Settings and equipment specific to this research are:

- Laptop with SPSS 19 installed

Ethical Issues

This study will involve the analysis of data collected as part of a training programme being routinely delivered by NHS Education for Scotland. The data for this study will be from training delivered in Lanarkshire. All data are anonymous. There are no major ethical issues associated with participation in training. All staff participating in the training will be experienced professionals in caring for people with dementia. The staff delivering the training will also be experienced in managing distress in patients and staff and therefore if any aspect of the training is distressing to participants this will be managed within the training programme.

Financial issues

There are no costs associated with this study as NHS Education for Scotland has provided the main training materials and the training is routinely delivered by NHS Lanarkshire staff as part of a wider dementia strategy training programme. The University of Glasgow will supply a laptop with SPSS 19 software.

Timetable

| | |
|---|---------------------------|
| Workshops delivered | November 2012 – June 2013 |
| Data collection | June 2013 |
| Analysis | June 2013 |
| Final write-up and preparation for viva | June – July 2013 |

Practical applications

It is anticipated that providing training in psychological assessment, formulation, and intervention will impact on the way in which health and social care staff will consider the cause of distressed behaviour exhibited by people with dementia. It is further anticipated that this will influence and direct participants clinical practice in terms of identifying biopsychosocial factors driving distressed behaviours, thus increasing the potential for appropriate and effective individualised interventions available. By using attributions as an outcome measure it is hoped that this research will demonstrate that training will change the way in which staff supporting people with dementia view the causes of distressed behaviour, subsequently improving person-centred care. The current research supports international and national priorities for

dementia care. It is anticipated to add to the evidence base supporting the use of psychological interventions by demonstrating the role of training in changing staff attributions towards the causes of distressed behaviour exhibited by people with dementia. Further research is in development to establish the impact that attending training has on clinical practice and the reduction of prescribing of antipsychotic medication.

Appendix 2.2

Psychological Interventions in Response to Stress and Distress in Dementia

CHABA-D (Modified CHABA for Dementia)

Please read the following brief description:

Elizabeth is a 70 year old woman who has Alzheimer's Disease. Sometimes Elizabeth is aggressive towards the people who care for her in the nursing home. She will punch and kick people, pull their hair and physically push them when they are trying to attend to self-care tasks. Sometimes she takes off her clothes in the day room in front of the other residents when visitors are there and repeatedly shouts out.

Consider how likely it is that the following statements are reasons for Elizabeth behaving that way described above. You have been given very little information compared to what information you might have if you worked with Elizabeth. Therefore, simply think about the most likely reasons for someone like Elizabeth behaving this way.

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

VUL = very unlikely

UL = unlikely

E = equally likely/unlikely

L = likely

VL = very likely

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

| | | | | | | |
|----|--|----|----|---|---|----|
| 1 | Because she is in pain | VU | UL | E | L | VL |
| 2 | Because she is physically ill | VU | UL | E | L | VL |
| 3 | Because she is tired | VU | UL | E | L | VL |
| 4 | Because she cannot cope with high levels of stress | VU | UL | E | L | VL |
| 5 | Because the day room is too crowded with people | VU | UL | E | L | VL |
| 6 | Because she is bored | VU | UL | E | L | VL |
| 7 | Because of the medication she is given | VU | UL | E | L | VL |
| 8 | Because she is unhappy | VU | UL | E | L | VL |
| 9 | Because she has not got something she wanted | VU | UL | E | L | VL |
| 10 | Because she lives in unpleasant surroundings | VU | UL | E | L | VL |
| 11 | Because she enjoys it | VU | UL | E | L | VL |
| 12 | Because she is in a bad mood | VU | UL | E | L | VL |
| 13 | Because high humidity makes her uncomfortable | VU | UL | E | L | VL |
| 14 | Because she is worried about something | VU | UL | E | L | VL |
| 15 | Because of infection | VU | UL | E | L | VL |
| 16 | Because her surroundings are too cold/hot | VU | UL | E | L | VL |
| 17 | Because she wants something | VU | UL | E | L | VL |
| 18 | Because she feels threatened | VU | UL | E | L | VL |
| 19 | Because she is angry | VU | UL | E | L | VL |
| 20 | Because there is nothing for her to do | VU | UL | E | L | VL |
| 21 | Because she lives in a noisy place | VU | UL | E | L | VL |
| 22 | Because she is handled poorly by some carers | VU | UL | E | L | VL |
| 23 | Because she is sexually promiscuous | VU | UL | E | L | VL |
| 24 | Because there is not much space for her to move around | VU | UL | E | L | VL |
| 25 | Because she is left on her own | VU | UL | E | L | VL |
| 26 | Because she is hungry or thirsty | VU | UL | E | L | VL |
| 27 | Because she is frightened | VU | UL | E | L | VL |
| 28 | Because somebody she dislikes is nearby | VU | UL | E | L | VL |
| 29 | Because she believes she can wash herself | VU | UL | E | L | VL |
| 30 | Because she does not get outdoors much | VU | UL | E | L | VL |
| 31 | Because she is rarely given activities to do | VU | UL | E | L | VL |
| 32 | Because she wants attention from others | VU | UL | E | L | VL |

| | | | | | | |
|----|--|----|----|---|---|----|
| 33 | Because she has dementia and that's what happens | VU | UL | E | L | VL |
|----|--|----|----|---|---|----|

Psychological Interventions in Response to Stress and Distress in Dementia

H 2.18

Post-training evaluation

The Psychology of Dementia Team welcomes feedback on all training initiatives. As part of the evaluation of this course, we would appreciate you completing this questionnaire. We will combine the results from all those taking part in the course and we will not be examining individual responses. Please answer all of the questions. It should take only 5 minutes to complete. Thank you for your time.

A. About you

Name

.....

Work address

.....

B. About the training: please rate your agreement with the following statements on this scale:

The first six statements concern the content of the training that you have just completed.

| | | | | | |
|-------------------|---------------------|-------------------|----------------|------------------|----------------|
| strongly disagree | moderately disagree | slightly disagree | slightly agree | moderately agree | strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 |

1. General acceptability:

This approach would be appropriate for a variety of staff

1 2 3 4 5 6

2. Effectiveness:

The training will be beneficial for the staff

1 2 3 4 5 6

3. Negative side-effects:

The training will result in **disruption or harm to clients**

1 2 3 4 5 6

4. Appropriateness:

Most staff would **not** accept that the training provided

1 2 3 4 5 6

is an appropriate approach to client care

5. Consistency:

The training was consistent with common sense and good

1 2 3 4 5 6

practice in helping staff to work effectively

6. Social validity:

In an overall, general sense, most staff would approve of
1 2 3 4 5 6
training in this method (e.g. would recommend it to others)

The next 12 questions focus on your impressions of the teaching process and outcomes i.e. how competently you think the training was conducted and whether it was helpful or not.

For each question **please tick** the statement that best expresses your opinion.

7. Did the workshop improve your understanding?

Not at all a little quite a lot a great deal

8. Did the workshop help you to develop work-related skills?

Not at all a little quite a lot a great deal

9. Has the workshop made you more confident?

Not at all a little quite a lot a great deal

10. Do you expect to make use of what you learnt in the workshop in your workplace?

Not at all a little quite a lot a great deal

11. How competent were the workshop leaders?

Not at all a little quite a lot a great deal

12. In an overall, general sense, how satisfied are you with the workshop?

Not at all a little quite a lot a great deal

13. Did the workshop cover the topics it set out to cover?

Not at all a little quite a lot a great deal

14. Did the workshop leaders relate to the group effectively? (e.g. made you feel comfortable and understood)

Not at all a little quite a lot a great deal

15. Were the leaders motivating? (e.g. energetic, attentive and creative)

Not at all a little quite a lot a great deal

16. What was the most helpful part of the workshop for you personally?

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18. What change(s), if any, would you recommend? (e.g. to the content or teaching)

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19. Please also make any other comments that you would like to offer.

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Thank you for your time

**Developing an understanding in dementia: From Nursing
Assistant to Trainee Clinical Psychologist**

Sally McVicar

University of Glasgow

Section of Psychological Medicine

**Submitted in partial fulfilment of the requirements of the
degree of Doctorate in Clinical Psychology**

Abstract

The following reflective account takes the form of a narrative journey exploring the development of my understanding of dementia and dementia care and includes recognitions regarding the importance of service development in this area. It spans my experiences as a Nursing Assistant in this area, through my experiences as a trainee Clinical Psychologist in both my core Older Adult placement and a specialist placement in 3rd year. I have mainly used Boud et al's (1985) reflective model to guide me where I outline the experience and my reflections on the experience, and then present the outcome. I found that in many of experiences detailed below the outcome was often how my view and understanding of situations changed following my reflections, as well as the impact reflections had on my professional development.

**Preparing to be a Clinical Psychologist: Consolidation of
knowledge and skills within the context of stroke**

Sally McVicar

University of Glasgow

Section of Psychological Medicine

**Submitted in partial fulfilment of the requirements of the
degree of Doctorate in Clinical Psychology**

Abstract

The following narrative account is developed from my reflections while on placement in a specialist stroke service. This was my final placement as a Trainee Clinical Psychologist and reflections incorporate my consolidation of my knowledge and skill regarding the development over the past three years, in preparation for starting out as a qualified Clinical Psychologist. I discuss many of my experiences in relation to what I have learnt from them, and how my understanding and approach is different now as they were earlier in my training. I discuss the role of Clinical Psychology in multi-disciplinary team function, and in facilitating physical and occupational rehabilitation for individuals who have experienced stroke. The account also considers changes I have made to my practice to allow for appropriate interventions while accommodating significant communication difficulties. I outline my reflections from training and how this skill has developed throughout my training. I have mainly used Boud et al's (1985) reflective model to guide me where I outline the experience and my reflections on the experience, and then present the outcome. I found that in many of experiences detailed the outcome was often how my view and understanding of situations changed following my reflections, as well as the impact reflections had on my professional development.