Using appreciative inquiry to implement person-centred dementia care in hospital wards

Anthony SCERRI MGer, M.HSc (HSM), RN (corresponding author)
        Assistant Lecturer
        Department of Nursing,
        Faculty of Health Sciences,
        University of Malta, Malta
        Tel No: 0035623401178

Anthea INNES PhD,
        Professor,
        Faculty of Social Sciences;
        University of Stirling, UK,
        Salford Institute for Dementia,
        University of Salford,
        Manchester, UK

Charles SCERRI PhD
        Senior Lecturer,
        Department of Pathology,
        Faculty of Medicine and Surgery,
        University of Malta, Malta

Abstract

The quality of care of persons with dementia in hospitals is not optimal and can be challenging. Moreover, staff may find difficulty in translating what they have learned during training into practice. This paper report the development and evaluation of a set of workshops using an Appreciative Inquiry (AI) approach to implement person-centred dementia care in two hospital wards. Staff worked collaboratively to develop a ward vision and to implement a number of action plans. Using AI approach, staff attitudes towards persons with dementia improved, inter-professional collaboration was enhanced and small changes in staff practices were noted. Dementia care in hospitals can be enhanced by empowering staff to take small but concrete actions after they engage in AI workshops, during which they are listened to and appreciated for what they can contribute.

Introduction

According to the latest World Alzheimer Report (Prince et al., 2015), 46.8 million people worldwide were living with dementia in 2015. This figure will almost double every 20 years, reaching 74.7 million in 2030 and 131.5 million in 2050. Similarly, the estimated number of persons with dementia over 60 years in 2010 in the Maltese Islands was 5,198 individuals. This figure is projected to be close to 10,000 persons or 2.3% of the total population in 2030 (Scerri & Scerri, 2012).

Due to different co-morbid conditions, these persons may require the need for referral and admission to a hospital setting. One quarter of hospital beds in the UK is estimated to be used by persons with dementia over the age of 65 (Alzheimer Society, 2009). However, the quality of dementia care in these settings is not optimal (Dewing & Dijk, 2014) and can be challenging (Clissett, Porock, Harwood & Gladman, 2013). Alzheimer Society UK (2009) reported that persons with dementia in hospitals stay longer than other patients without dementia, during which time their physical and cognitive status deteriorates whilst long-term institutionalization and the use of anti-psychotic medication becomes more likely. Similarly, two National Audits of Dementia in General Hospitals in the UK (Royal College of Psychiatrists 2011; 2013) identified 'disappointing results' and serious shortcomings. These reports concluded that the lack of quality of care in hospital settings is due to the inability of staff, especially nursing staff, to meet the needs of patients with dementia in a person-centred way. It also advocated that positive outcomes can be achieved by increasing the professional development of hospital staff on how to address these unmet needs.

Person-centred dementia care

Person-centred care (PCC) is a recurring theme in the provision of quality dementia care (Brooker, 2004; Edvardsson; Winblad & Sandman, 2008). It has been referred as the 'new

culture' of dementia care that puts the living experience of the person with dementia into perspective (Kitwood, 1997). Brooker & Latham (2015) argued that PCC can be perceived as a value base, a set of techniques for working with persons with dementia, or as a synonym for individualised care and consists of four main elements namely; valuing people with dementia and those who care for them (V), treating people as individuals (I), looking at the world from the perspective of the person with dementia (P) and providing a positive social environment in which persons with dementia can experience relative well-being (S). Edvardsson et al. (2008, p. 363) defined person-centred care for people with severe AD as 'supporting the rights, values and beliefs of the persons with dementia, involving them and providing unconditional positive regard, entering their world and assuming that there is meaning in all behaviour…maximizing each person's potential and sharing decisions.'

The theories of personhood as proposed by Kitwood (1997) have dramatically contributed in developing an epistemology of dementia that is more humane and holistic as it includes the perspective of the person and the complexity of the experience. Nevertheless, his ideas have been criticized with regards to the methodology adopted (Dewing, 2004) in drawing his conclusions and the application of PCC principles in practice (Adams, 1996; Dewing, 2008). Dewing (2004) suggested that PCC frameworks seem to focus on two cardinal aspects namely knowing the person and relationship-centred care. Moreover, there is a debate whether these frameworks need to be specific to a particular target group or can be generalised to different care settings and cultures. Nevertheless, others (Epp, 2003; Dewing, 2008) argued that Kitwood's theories do not necessarily need to be rejected but only refined. Additionally, evidence indicates that PCC strategies can positively influence persons with dementia, informal and formal caregivers (Edvardsson et al., 2008). Consequently, person-centred care principles have been advocated in clinical guidelines on dementia care (e.g. National Collaborating Centre for Mental Health, 2007) and in numerous national dementia strategies such as the

'Living Well with Dementia: A National Dementia Strategy' (Housing, 2009) and in the National Strategy for Dementia in the Maltese Islands 2015-2023 (Scerri, 2015). However, implementing these principles remain challenging (Clissett, Porock, Harwood & Gladman 2013; Innes, Macpherson & McCabe, 2006).

Two reviews (Moyle, Olorenshaw, Wallis & Borbasi, 2008; Dewing & Dijk, 2014) discussed person-centred care practices in hospital settings. Moyle et al. (2008) reviewed theoretical literature and identified a number of principles and models of care that are essential for best practice in the care of persons with dementia that can be applied in hospital settings. Dewing & Dijk (2014) critically appraised mainly descriptive studies, discussing themes such as diagnosis, staff knowledge and attitudes, experiences of persons with dementia, family carers and staff. A number of strategies of how to improve person-centeredness for patients with dementia admitted in hospitals, were also discussed such as the involvement of volunteers and liaison mental health nurses and the development of special care units, staff training and education programs. However, the authors argued that to date 'there seems little to celebrate in the way of excellence in dementia care in the general hospital. Part of the issue here may be that much of the research to date seems to capture existing poor practice and little research seeks out good practice' (p. 15). The aim of this study was to use AI to identify these good practices and to work with staff to develop strategies so that such practices can be sustained.

Dementia care training and educational interventions in clinical practice.

Most of the studies on staff training focus on teaching skills to caring staff in reducing challenging behaviours in residents with dementia (Moyle, Hsu, Lieff, & Vernooij-Dassen, 2010). In line with person-centred care principles, these training programmes seek to encourage staff to interpret challenging behaviours from the point of view of persons with dementia (Edvardsson et al., 2008) and as an expression of an unmet need (Algase et al., 1996). Two

reviews (McCabe, Davison & George, 2007; Spector, Orrell & Goyder, 2013) concluded that staff training can reduce behavioural and psychological symptoms of dementia (BPSD) and have positive impact on the staff in terms of knowledge, perceived ability to manage BPSD, decreased stress and reduced staff turnover. However, they highlighted the methodological weaknesses and low quality of the studies. Similarly, Kuske et al. (2007) commented that due to these methodological weaknesses and a lack of follow-ups, it was difficult to conclude that these programmes make a sustained difference to practice.

McCabe, Davison & George (2007) identified practical problems in carrying out similar research studies in formal care settings due to high staff turnover, participant bias, degenerative condition of dementia syndromes and the difficulty to maintain the results obtained over time. Moreover, workshops that are interactive and multifaceted bring about better outcomes than traditional non-interactive methods (Rampatige, Dunt, Doyle, Day & Van Dort 2009). Similarly, Turner, Eccles, Elvish, Simpson & Keady (2015) recommended that dementia care training should be specifically tailored for hospital wards and should evaluate patient outcomes once completed; since most of the studies to date focus mainly on staff outcomes (Elvish et al., 2014, Galvin et al., 2010).

There is increasing evidence that the success of these interventions is dependent on organisational and cultural factors during the implementation process. Aylward et al. (2003) concluded that continuing education in long-term care does not result in the desired change in practice when these factors are not considered. Similarly, a systematic review of educational interventions on primary dementia care indicated that training alone did not seem to increase adherence to dementia guidelines unless it is combined with other organisational incentives (Perry et al., 2011). Consequently, Spector et al. (2013) highlighted the implementation of additional supervision sessions to help in incorporating strategies into everyday practice in order to provide better and more sustained outcomes. Chapman and Law (2009) argued that

acquiring knowledge or facts about dementia is not enough, but staff need to be given the space to reflect using reflective meetings about how the acquired knowledge can be implemented in practice.

Method

Aims and objectives

The aim of the study was to determine how person-centred dementia care can be implemented in two hospital wards using an AI approach. More specifically the following objectives were sought:

1. **Theory generation:** To develop an understanding of person-centred dementia care in two Maltese hospital wards by inquiring appreciatively on positive experiences of staff and family members of in-patients with dementia.

2. **Raising awareness:** To provide staff with an understanding of person-centred dementia care based on implicit knowledge obtained from their own stories and explicit knowledge from PCC literature.

3. **Facilitating change:** To empower staff to develop their own action plans following their vision of what they imagine the care should be and what they wish the care could be.

4. **Process evaluation:** To evaluate the staff reactions to the AI workshops.

5. **Outcome evaluation:** To evaluate whether staff introduced person-centred care practices following the AI workshops.

The setting of the study

Two hospital wards in a rehabilitation setting were purposely selected for the study. These wards were identical to those used in a previous project that sought to develop recommendations to improve the physical and practice environment. (*****). This study

highlighted the incongruences between staff perceptions of care and current practice and recommended that a 'collaborative approach to staff development, mentoring and education (is required) to raise awareness of how to improve both the physical and psychosocial environments in hospital wards' (pg. 2). Consequently, this study, sought to respond to the need for staff development in person-centred dementia care and implement the recommended changes.

Ethical considerations

Ethical approval was obtained from the University Research Ethics Committee of the University of Malta and the hospital management. A covering letter with contact details was included with the questionnaire and distributed to the staff explaining the aims and objectives of the study. Moreover, a separate information letter was distributed to all staff giving details about the workshops, that attendance was voluntary and an informed consent obtained.

Permission was granted from the medical consultants and a list of potential patients identified. The patients were then contacted and asked whether they were willing to participate in the study. In line with a person-centred inclusionary approach (Dewing, 2002), consent was first sought from the patients. When this could not be obtained, the relatives were contacted for a proxy-consent.

The AI approach

Cooperrider and Whitney (2005, p. 8) have defined appreciative inquiry (AI) as the 'cooperative, co-evolutionary search for the best in people, their organisations and the world around them. It involves systematic discovery of what gives life to an organisation or a community when it is most effective and most capable in economic, ecological and human terms'. AI has been used in various contexts both as an approach to research (Reed, 2007) as well as an organisational development method for transformative change (Watkins, Mohr &

Kelly, 2011). AI consists of a 'strength-based collaborative approach' (Zandee and Cooperrider 2008, p.190) for the study of change in organisations and societies. Watkins et al. (2011) defined AI as a theory and a practice for approaching change from a holistic framework. AI has also been applied in health care contexts (Trajkovski, Schmied, Vickers & Jackson, 2013), as well as in in-patient settings (Watkins, Dewar & Kennedy, 2016) to seek to change practice.

One of the most common AI processes used in both organizational development and in research is the GEM 4-D Model (Watkins et al., 2011) where participants address a chosen affirmative topic through a dialogue laden 4-D cycle of Discovery, Dreaming, Designing, and Destiny (Cooperrider, Whitney & Stavros 2008; Reed, 2007). In the Discovery process, individuals engage in positive questioning to discover the most vital and alive moments and stories in relation to the affirmative topic (Cooperrider et al., 2008). In the Dream stage, participants work together to creatively build on the collective outcomes of the Discovery stage to envision new ideas of what might be in a preferred future (Cooperrider et al., 2008; Reed, 2007). In the Design stage, participants work together to co-construct an ideal vision through a 'possibility statements' based on what has worked well in the past and what has been envisioned for the future. The Destiny stage directs the energy toward realizing these statements through thinking and committing to specific actions (Cooperrider et al., 2008).

AI was used in this study to better understand what person-centred dementia care in hospital settings is and how it can be implemented in practice. Moreover, an AI approach was adopted to encourage staff participation to take responsibility of their past, present and future actions and change practice in a democratic way. AI starts by underlining the best of persons with dementia and those who care for them. This follows the VIPS framework of person-centred dementia care (Brooker & Latham, 2015) that acknowledges the importance of valuing people. Moreover, the AI approach sought to raise awareness of how persons with dementia can be perceived in more positive way; thereby influencing the participants' attitudes. Finally, PCC

strategies need to be acceptable to the context in which they are being developed and implemented. Reed (2007) commented that AI has an ethnographic component since there is a focus on making sense of contexts in a particular time and space. By using AI, the contextual factors in which staff engages with persons with dementia can be identified and possibly altered.

In order to 'Discover what works well', face-to-face interviews using open-ended questions were carried out with 33 staff members working in the two wards and 10 family members of dementia patients during which positive care experiences/stories and what made them possible were collected. Staff and family members were asked to narrate an experience or experiences during which they felt satisfied with the care being provided to a person with dementia in the hospital. The findings of these interviews are reported elsewhere (Innes, Kelly, Scerri and Abela, 2016). Five key themes were identified following thematic analysis of the positive care experiences of staff namely; 'building a relationship between the 'extended' dementia care triad', providing 'quality time' and 'care in time', going the 'extra mile', attending to the psychosocial needs and 'attending to the physical needs with a 'human touch'. A number of factors were identified that according to the staff and family members made these experiences possible including; the personal attributes of the care workers, organisational, environmental and contextual factors. This enabled an understanding of the context and helped in developing a framework on which the succeeding phases were based upon (Figure 1).

(Insert Figure 1)

Subsequently, six workshops (Table 1) were designed by the authors following the components of the 4-D cycle, and held between July-August 2014 in Ward 1, and between February-March 2015 in Ward 2. These workshops were repeated twice in each ward and were held separately as this reduced ward disruption and encouraged staff participation. Moreover, 'possibility statements' were developed, consisting of statements intended to stimulate action, clarify and

give shape to the dreams of the ward staff (Reed, 2007). Eventually, action plans were developed that were specific to the different ward cultures.

(Insert Table 1)

Overall, 24 workshops were held in both wards between 12:45 and 14:15. Although workshops in the two wards were held separately and at different points in time, the same material/presentations were used to initiate discussion. As a result, the findings will be presented together whilst any significant differences between the two wards will be highlighted. Various methods of learning including discussion, reflection and brainstorming using different media types including video clips, poems and group activities were used. An 'ideal' narrative story was developed from the perspective of a patient with dementia in a hospital ward that was partly derived from the staff own stories as obtained from the face-to-face interviews. As staff went through the narrative story, a number of exercises were carried out during which they were asked how they would feel had they been exposed to similar situations. These enabled a discussion about the need to provide the patient's sense of security and control, to maintain physical and emotional comfort, to see challenging behaviour as an expression of an unmet need, to encourage engagement, inclusion, and to maintain safety especially during mealtimes.

In line with the 'Dream' phase of the AI, group work sessions were then organized to identify the participants' aspirations for the future so as to make the ward environment a better place for themselves, for the patients and their relatives/informal carers. During this brain storming session, themes were raised through which a number of possibility statements were derived for each ward. These were then proposed for consultation and approval in the next workshop. Eventually, each statement was discussed, changed and agreed upon by all participants. The last workshop was devoted to developing a number of actions. Table 2 shows the possibility statements and proposed actions plans developed by staff in one of the wards.

(Insert Table 2 here)

Evaluation of the AI workshops

Staff reactions to the AI workshops were collected through a set of questions developed as part of the staff questionnaire and distributed following the workshops. Staff members were asked to describe their perceived relevance and acceptability of the AI workshops. Moreover, the charge nurses responsible for the two wards were interviewed after four months to determine whether they perceived any change in practice as a result of the workshops.

The patients' quality of care was compared using Dementia Care Mapping (DCM) before (T1), immediately after (T2) and four months after completing the workshops (T3). DCM consists of an observational method that measures the quality of care given to patients with dementia in formal care settings (Brooker & Surr, 2005). Patients were observed for 6 hours, during which every five minutes, the quality of life is recorded according to four coding frames as obtained from Kitwood's Malignant Social Psychology and Positive Person Work (Kitwood, 1997). The first coding frame, Behaviour Category Coding (BCC), is used to record the behaviour of each person with dementia. Personal detractions (consisting of staff-patient interactions when patients are observed to undermine the personhood of the patient) and personal enhancers (consisting of staff-patient interactions when the patient's wellbeing is sustained) were collected as field notes. Although it has some limitations, DCM is an acceptable observational research tool to measure the quality of care of persons with dementia in formal care settings (Brooker 2005; Sloane *et al*., 2007; Chenoweth & Jeon 2007; Cooke & Chaudhury, 2012). Moreover, DCM has been used in hospital settings to provide a detailed narrative account of the staff-patient interactions and evaluate interventions (Goldberg et al., 2014).

Data analysis

The DCM data were initially filled in manually and eventually inputted in a Microsoft Excel (Version 2007) spreadsheet. The Group Behavioural Category Code (BCC) data was measured and compared between time points including the percentage of time that the patients in each time point were experiencing positive engagement, occupational diversity, agitation and distress, were withdrawn and in passive engagement. Field notes obtained from DCM describing staff-patient's interactions were categorised according to Kitwood's psychological needs of comfort, identity, inclusion, attachment and occupation when these were either enhanced or detracted (Kitwood, 1997).

The staff reactions as obtained from the questionnaire distributed after the workshops were calculated as a percentage of the responses obtained. Inductive thematic analysis (Lincoln and Guba, 1985) was used to condense data obtained from the interviews with the charge nurses and the field notes obtained from the DCM data in order to evaluate whether staff introduced person-centred care practices following the AI workshops.

Findings

Staff who participated in the workshops

An average of half of all staff in both wards (55% in Ward 1 and 44% in Ward 2) attended the six workshops. Table 1 shows the number of participants for each workshop. The difference in participation between wards was mainly due to the participation of more allied health care professionals in Ward 1 compared to Ward 2.

Staff reaction to the workshops

Participants were asked to rate their experience of the AI workshops using a self-developed Likert scale. 36 staff members (53% response rate) filled in this section of the questionnaire. This response is similar to the average number of staff who participated in the workshops in

both wards. All participants stated they would recommend these workshops to their colleagues. Table 3 shows the responses with regards to whether staff members agreed or disagreed with nine statements following their attendance to the workshops.

(Insert Table 3 here)

In addition to the Likert scale, staff was also asked if they wished to make any further comments. One staff member argued that refresher courses about dementia every six months were needed to sustain the change whilst another staff member argued that it is important '*that we practice what we preach*'. Another staff member commented that the workshops have helped staff in reinforcing the fact that patients' needs should remain at the centre of the care and how '*staff can adapt and be flexible*'. Moreover, another staff commented that during AI workshops, staff commitment was acknowledged, valued and supported. Furthermore, the importance of group collaboration, mutual understanding and learning from each other was highlighted by a number of participants.

> *"Such workshops are to be recommended as the action plan would be a plan brought up by the staff themselves"*

> *"(The AI process) created awareness and the sharing of stories developed mutual understanding to ensure that patients get the best care we are able to provide."*

Raising awareness and reflecting about person-centred care in their wards, however, raised concerns about the fact that *'challenges do exist'*. One respondent argued that his main concerns were related to gaining support from higher management, the lack of information that informal carers may have about the condition and the feeling of *"helplessness when no one supports me in trying to explain the concept of gradual irreversible deterioration"* to informal carers.

Changes in practice following the AI workshops

Findings were categorised into staff attitudes, initiatives implemented and overall impact of the workshops.

Staff attitudes. Both charge nurses agreed that they observed a number of changes in the way staff related to patients. Staff members were noticed to be 'more tolerant', 'patient', 'empathic', 'calmer' and 'more assured' when working with patients with dementia, especially in the way they communicated with them. Both charge nurses felt that staff had a better ability to cope with patients with dementia, especially those who used to find it particularly difficult:

> Charge nurse Ward 1: *"A more positive attitude was evident, even from those staff who have struggled to cope with the demands of dementia care in the past"*

These results are congruent with the DCM data with a decrease noted in the percentage of time spent in category U (unattended) and negative mood-engagement (ME) values for categories K (walking), W (self-stimulation) and Y (talking or interacting with oneself) before and after the workshops. Moreover, the number of staff interactions that enhanced the psychological need for comfort doubled following the workshops (Figure 2).

(Insert Figure 2 here)

Initiatives implemented. Although not all the initiatives, as suggested by the staff during the workshops were implemented, there were a number of initiatives introduced by the staff themselves. The charge nurse of Ward 1 commented that all patients, including patients with dementia, were being involved in occasional activities that were centred on the type of patients present.

> Charge nurse Ward 1: *"Often it was the staff themselves who initiated these activities – usually held in the dining area. In most cases it would involve some kind of game, e.g.*

bingo, and accompanied by a snack of something such bread with tomatoes, which patients would help prepare themselves. It was nursing staff who instigating these activities, but OT's (occupational therapists) and physio (therapists) would join in at times"

Similarly, the charge nurse of Ward 2, commented that some proposed initiatives during the workshops were actually being implemented:

Charge nurse Ward 2: *"Such examples are the doll therapy and certain group activities in the dining room such as tombola (bingo), music and care of indoor plants. One of the patients was also encouraged to recite the rosary. Some of the staff also mentioned preparation of food but for hygienic reason it was not encouraged. It was the staff who came up with these ideas but empowerment and encouragement to keep on such activities was from my side".*

However, DCM data revealed that the number of occupational diversity scores (consisting of the occurrence of individualized care that meets the need of a person with dementia for meaningful occupation) did not change much following the AI workshops (Figure 2). Furthermore, the activities were not always person-centred. For example, during a DCM session, in which bingo was being played, one of the patients attending the activity was not enjoying the session:

Bingo started for the other patients but the patient is still very distressed and wanted to leave asking again for her children. The care worker told her that her children were grown up now. The care worker also asked the patient how old she was. The patient looked bewildered and did not respond. Care worker asked her 'You have seventy-eight years and you have an eight-month old baby?' The care worker continued 'You are old lady' and took the patient out of the dining room in the corridor. (Field notes: Patient C2)

Overall impact of workshops. The 'possibly statements' were not discussed in Ward 1 in subsequent reflective meetings, although this was not the case in Ward 2. However, informal discussions were being held in Ward 1. Moreover, in Ward 2, these statements were printed and affixed in a prominent place in the ward to be visible by all staff members:

> Charge nurse Ward 1: "*I often look at the possibility statements myself to see if we are improving or reaching any of the goals we had set ourselves! I can't say we discuss anything on a formal basis, but discussions are often held during handover time, especially if we have any challenging cases. Staff then feel free to come up with ideas themselves on improving care or actually change the way care is given – at least this seems more patient-centred!*"

> Charge nurse Ward 2: "*Yes (they are discussed), to see how can we keep on improving. The statements were also printed and fixed next to the staff list so staff will remember those statements that were brought up by themselves*".

Both charge nurses agreed that the workshops had a positive impact on the patients with dementia and on the staff, although it was acknowledged that much more needs to be done for the care to become more person-centred:

> Charge nurse Ward 1: "*Yes, I feel that the workshops did have a positive effect on the way persons with dementia are perceived and understood. Having an open forum where staff were sincerely listened to and their frustrations acknowledged helped them to see that they can make a difference no matter how small that might be. This in turn helped to generally improve attitudes, made the care more patient-centred (though we still have a long way to go) and hopefully the job more satisfying*"

DCM findings also indicated that further improvement is necessary. Patients spent more than one fourth of the time in passive engagement (borderline: being socially involved but passively), whilst in almost one fifth of the mapped time, they were socially withdrawn especially sleeping. This remained so after the workshops.

Discussion

The aim of the study was to develop and evaluate a facilitation workshops for hospital staff in person-centred dementia care based on an appreciative inquiry approach. Six workshops were organized in which staff was guided to a process of reflective learning about working positively with persons with dementia using a narrative story partly developed from their own experiences/stories.

The workshops were positively accepted by hospital staff and helped them to reflect about how to work in a more person-centred way and to develop action plans in order to improve the quality of care. Although these responses may have some social desirability bias, they are congruent with the findings obtained from the comments made by the charge nurses in the exit interview. Many studies that used an AI approach had similar findings in terms of the participants' acceptability to the AI intervention. Kavanagh et al (2010) found that the participants acknowledged the positive, collaborative and democratic approach of both the AI workshops and the fact that the intervention was related to the context of care. This is also congruent with a methodological literature review of the AI studies (Trajkovski et al, 2013, p. 1224) that found how '*AI was mostly positively perceived by participants'*.

The results presented resonate other studies on the value of storytelling in healthcare education (Haigh & Hardy, 2011) and organisational development (Brown, 2005). For example, Laver and Croxon (2015) showed how the use of an evolving case study as a teaching tool helped in reflection and changing nursing students' attitudes towards older persons. Moreover, in the

present study, critical reflection on the case scenario derived from their own positive care experiences helped in changing staff attitudes and provided pragmatic solutions on how to best deal with common day-to-day challenges. Similarly, Chapman and Law (2009) used facilitator led reflective discussions as part of a dementia learning workshops for healthcare assistants. Finally, there is increasing evidence that learning from people's experiences can be a catalyst for innovation and development (Dewar & Nolan, 2013).

Whilst the Dream phase was a time for self-reflection, it was also a time for understanding what is PCC, through a set of activities developed around the 'ideal' story. This was sought by integrating the findings obtained from the Discovery phase with what is already known about person-centred dementia care focusing particularly on Kitwood's model of personhood. Using different sources of 'best' evidence has been considered as an important element for successful implementation as described by the PARIHS Framework (Rycroft-Malone, 2004) with the authors arguing that the challenge is how to integrate 'propositional knowledge' (i.e. formal, explicit knowledge, derived from research) with 'non-propositional knowledge' (i.e. informal, implicit, or internal and derived primarily through practice). However, according to Reed (2007), an AI approach can offer a solution by integrating theory with practice. Figure 3 shows how AI was used in this study to achieve this integration.

(Insert Figure 3 here)

There are a number of advantages for using an AI approach. The learning process was directly relevant to the staff members as they shared their own best practices of what worked well within their own context. Staff became aware of person-centred models in a practical way through the use of the 'ideal' story that was close to their real life situations. This ensured that the knowledge given met the needs and interests (Moyle et al., 2010; Beeber, Zimmerman,

Fletcher, Mitchell & Gould, 2010) and '*made sense*' for the staff working in the setting (Scales, 2014).

A ward vision through the possibility statements offered the staff a direction to enhance the quality of care in the two wards. However, the organisational culture and strategic focus of the hospital could have not been aligned to the ward vision as developed by the staff. This can be achieved if a 'whole system approach' (Adams, 2007) is used linking all the persons concerned including the patients with dementia, their family members, direct care workers (professionals and non-professionals) and administrative and managerial staff. One possible strategy could be to include all these stakeholders to develop a hospital vision using an AI approach similar to the present study.

Although some proposed initiatives, such as the life story forms or the photo album, were not implemented, there were genuine attempts to initiate some activities by the staff themselves. This is in contrast with other studies (e.g. Teri et al., 2009) in which hesitation in trying out new strategies following a training workshops was reported. However, although the setting up of an activity group that coordinates the activities organized in the ward was proposed in one of the wards, this has not been set up. This could have provided the necessary structure to make concrete changes in the patient outcomes and maintain participants' motivation through the change process. Moreover, the need for management support and commitment following staff development and training programmes are essential for knowledge transfer and to sustain the change (Kuske et al., 2007; Moyle et al., 2010; McCabe et al., 2007). A recent study (Brooker et al., 2015) in nursing homes in the UK showed that the introduction of the Dementia Care Coaches (DCC) were effective in reducing the use of antipsychotic medication for persons with dementia only when the management and organizations were supporting this role.

Nursing staff were generally the initiators, although other staff members were included as well. This indicate that the workshops were also able to initiate and sustain interdisciplinary collaboration. The discussions held during the AI workshops also acted as a "fusion of strengths" of the staff skills and resources through an '*awareness of group resources and increased motivation to cooperate*' (Bushe 2011, p. 6). During the workshops, staff felt that they needed to communicate more together and suggested to leave five minutes during handover to discuss what worked well with patients with dementia. Similarly, Dematteo and Reeves (2011) reported that staff participating in AI workshops found the approach useful to increase inter-professional collaboration.

AI should not be considered as a single initiative but a cyclical ongoing process that does not end when the phases are completed. Consequently, the present study was the start of the process of change that shed the seed of person-centred dementia care within this setting. Continuous staff development is required in health care settings to improve the care of persons with dementia and their family members. AI provided staff in both wards with a roadmap to develop person-centred care in their respective hospital wards. However, it is the staff themselves who need to think how these 'possibility statements' can truly become possible. As highlighted in other studies (Brooker et al., 2015, Turner et al., 2015), the involvement of the higher management is crucial for giving the opportunity of translating these ideals into reality. Moreover, the organisational vision needs to be line with this ward vision. Otherwise, staff enthusiasm may dwindle if they encounter too many barriers for implementing their initiatives.

Limitations

There are a number of limitations in the study. Although the inclusion of persons with dementia could have substantially contributed to enriching the AI workshops, the aim of the study was to focus on staff experiences and give staff the opportunity for dialogue and reflection.

Moreover, DCM helped to capture some experiences from the point of view of people with dementia. Although the DCM manual (Brooker & Surr 2005) advocates conducting inter-rater reliability checks, this was not possible since the researcher was the only qualified mapper in the country at that time of data collection. A small sample of patients with dementia were observed and compared at each time point. Increasing the sample size of both staff and patients (for example by including more wards) could have increased the generalizability of the findings. However, the aim of the study was not to train the largest number of staff available but to test how AI could be used to implement person-centred dementia care in hospital settings.

Conclusion

A number workshops based on an appreciative inquiry approach improved staff attitudes and facilitated change leading to a number of improvements in the quality of care of patients with dementia in hospital wards. Furthermore, the data presented here continues to add evidence of the applicability of appreciative inquiry in health care research (Trajkovski, Schmied, Vickers & Jackson. 2013) and in in-patient settings (Watkins, Dewar & Kennedy 2016). Additional studies, in other contexts and settings, are required to further evaluate the effectiveness of this approach, possibly using larger samples. Finally, this study showed that dementia care in hospitals can be enhanced by empowering staff to take small but concrete actions after they engage in an AI workshops during which they are listened to and appreciated for what they can contribute.

Conflict of interest:

No conflict of interest has been declared by the authors.

Author contributions

All authors meet at least one of the following criteria and have agreed on the final version:

• Substantial contributions to conception and design, acquisition of data, or analysis, and interpretation of data;

• Drafting of the article or revising it critically for important intellectual content.

References

Adams, T. (1996). Kitwood's approach to dementia and dementia care: a critical but appreciative review. *Journal of Advanced Nursing*, *23*(5), 948-953.

Adams, T. (2007). Nursing people with dementia and their family members–towards a whole systems approach. In Adams (Ed), *Dementia care nursing: promoting well-being in people with dementia and their families*. UK: Palgrave Macmillan.

Algase, D. L., Beck, C., Kolanowski, A., Whall, A., Berent, S., Richards, K., & Beattie, E. (1996). Need-driven dementia-compromised behavior: An alternative view of disruptive behavior. *American Journal of Alzheimer's Disease and Other Dementias*, *11*(6), 10-19.

Alzheimer's Society. (2009). *Counting the cost. Caring for persons with dementia on hospital wards.* Alzheimer's Society. London From: http://www.alzheimers.org.uk/countingthecost (Accessed: 17th June 2015).

Aylward, S., Stolee, P., Keat, N., & Johncox, V. (2003). Effectiveness of continuing education in long-term care: a literature review. *The Gerontologist*, *43*(2), 259-271.

Beeber, A. S., Zimmerman, S., Fletcher, S., Mitchell, C. M., & Gould, E. (2010). Challenges and strategies for implementing and evaluating dementia care staff training in long-term care settings. *Alzheimer's Care Today*, *11*(1), 17-39.

Brooker, D. (2004). What is person-centred care in dementia? *Reviews in Clinical Gerontology*, *13*(3), 215-222.

Brooker, D., & Latham, I. (2015). *Person-Centred Dementia Care: Making Services Better with the VIPS Framework*. London: Jessica Kingsley Publishers.

Brooker, D. (2005). Dementia care mapping: a review of the research literature. *The Gerontologist*, *45*(supplement 1), 11-18.

Brooker, D. J., Latham, I., Evans, S. C., Jacobson, N., Perry, W., Bray, J., ... & Pickett, J. (2015). FITS into practice: translating research into practice in reducing the use of anti-psychotic medication for people with dementia living in care homes. *Aging & mental health*, 1-10.

Brooker, D. & Surr, C. (2005) *Dementia Care Mapping: Principles and Practice.* University of Bradford: Bradford Dementia Group

Brown Wilson, C., & Clissett, P. (2011). Involving older people in research: practical considerations when using the authenticity criteria in constructivist inquiry. *Journal of Advanced Nursing*, *67*(3), 677-686.

Brown, J. S. (2005). *Storytelling in organizations: Why storytelling is transforming 21st century organizations and management*. New York: Routledge.

Bushe, G. R. (2011). Appreciative inquiry: Theory and critique. *The Routledge Companion to Organizational Change.* Oxford, UK: Routledge.

Chapman, A., & Law, S. (2009). Bridging the gap: an innovative dementia learning workshops for healthcare assistants in hospital wards using facilitator-led discussions. *International Psychogeriatrics*, *21*(S1), S58-S63.

Chenoweth, L., & Jeon, Y. H. (2007). Determining the efficacy of Dementia Care Mapping as an outcome measure and a process for change: A pilot study. *Aging and Mental Health*, *11*(3), 237-245.

Clissett, P., Porock, D., Harwood, R. H., & Gladman, J. R. (2013). The challenges of achieving person-centred care in acute hospitals: a qualitative study of people with dementia and their families. *International Journal of Nursing Studies*, *50*(11), 1495-1503.

Cooke, H. A., & Chaudhury, H. (2013). An examination of the psychometric properties and efficacy of Dementia Care Mapping. *Dementia*, *12*(6), 790-805.

Cooperrider, D. L., & Sekerka, L. E. (2006). Toward a theory of positive organizational change. In Gallos J.V. (Ed.) *Organization development:* A Jossey-Bass reader, 223-238.

Cooperrider, D. L., & Srivastva, S. (1987). Appreciative inquiry in organizational life. *Research in Organizational Change and Development*, *1*(1), 129-169.

Cooperrider, D. L., & Whitney, D. (2005). A positive revolution in change: Appreciative inquiry. *Public Administration and Public Policy*, *87*, 611-630.

Cooperrider, D., Whitney, D. D., & Stavros, J. M. (2008). *The appreciative inquiry handbook: For leaders of change*. San Francisco: Berrett-Koehler Publishers.

Creswell, J. W., & Clark, V. L. P. (2007). *Designing and conducting mixed methods research*, (2nd Edition) London: Sage Publications

Dematteo, D., & Reeves, S. (2011). A critical examination of the role of appreciative inquiry within an interprofessional education initiative. *Journal of Interprofessional Care*, *25*(3), 203-208.

Dewar B. (2011) Caring about Caring: An Appreciative Inquiry about Compassionate Relationship-Centred Care Belinda (Doctoral Dissertation) From: http://researchrepository.napier.ac.uk/4845/1/PHDFINALBDEWAR2011[1].pdf (Accessed June 17, 2012).

Dewar, B., & Nolan, M. (2013). Caring about caring: developing a model to implement compassionate relationship centred care in an older people care setting. *International Journal of Nursing Studies*, *50*(9), 1247-1258.

Dewing, J. (2002). From Ritual to Relationship: A person-centred approach to consent in qualitative research with older people who have a dementia. *Dementia*, *1*(2), 157-171.

Dewing, J. (2004). Concerns relating to the application of frameworks to promote person-centredness in nursing with older people. *Journal of Clinical Nursing*, *13*(s1), 39-44.

Dewing, J. (2008). Personhood and dementia: revisiting Tom Kitwood's ideas. *International Journal of Older People Nursing*, *3*(1), 3-13.

Dewing, J., & Dijk, S. (2014). What is the current state of care for older people with dementia in general hospitals? A literature review. *Dementia*, 1471301213520172.

Edvardsson, D., Winblad, B. & Sandman, P. (2008). Person-centred care of people with severe Alzheimer's disease: current status and ways forward, *The Lancet Neurology, 7*(4), 362-367.

Elvish, R., Burrow, S., Cawley, R., Harney, K., Graham, P., Pilling, M., ... & Keady, J. (2014). 'Getting to Know Me': the development and evaluation of a training workshops for enhancing skills in the care of people with dementia in general hospital settings. *Aging & mental health*, *18*(4), 481-488.

Epp, T. D. (2003). Person-centred dementia care: A vision to be refined. *The Canadian Alzheimer Disease Review*, *5*(3), 14-19.

Galvin, J. E., Kuntemeier, B., Al-Hammadi, N., Germino, J., Murphy-White, M., & McGillick, J. (2010). 'Dementia-friendly hospitals: Care not crisis' An educational program designed to improve the care of the hospitalized patient with dementia. *Alzheimer disease and associated disorders*, *24*(4), 372.

Goldberg, S. E., Whittamore, K. H., Pollock, K., Harwood, R. H., & Gladman, J. R. F. (2014). Caring for cognitively impaired older patients in the general hospital: A qualitative analysis of similarities and differences between a specialist Medical and Mental Health Unit and standard care wards. *International Journal of Nursing Studies*, *51*(10), 1332-1343.

Haigh, C., & Hardy, P. (2011). Tell me a story—a conceptual exploration of storytelling in healthcare education. *Nurse Education Today*, *31*(4), 408-411.

Hanson E., Magnusson L., Nolan J. & Nolan M.R. (2006). Developing a model of participatory research involving researchers, practitioners, older people and their family carers. *Journal of Research in Nursing 11*(4), 325–342.

Housing (2009) National Dementia Strategy for England (2009) From: https://www.gov.uk/government/publications/living-well-with-dementia-a-national-dementia-strategy (accessed November 30, 2015)

Innes, A., Macpherson, S., & McCabe, L. (2006). *Promoting person-centred care at the front line*. York: Joseph Rowntree Foundation.

Innes, A., Kelly, F., Scerri, C., & Abela, S. (2016). Living with dementia in hospital wards: a comparative study of staff perceptions of practice and observed patient experience. International journal of older people nursing.

Kavanagh, T. (2010) Appreciative Inquiry: An interactive organizational intervention to translate acute pain management evidence into paediatric nursing practice (Doctoral Dissertation)

Kitwood, T. (1997). *Dementia reconsidered: The person comes first,* Philadelphia: Open University Press.

Kuske, B., Hanns, S., Luck, T., Angermeyer, M. C., Behrens, J., & Riedel-Heller, S. G. (2007). Nursing home staff training in dementia care: a systematic review of evaluated programmes. *International Psychogeriatrics*, *19*(5), 818-841.

Laver, S., & Croxon, L. (2015). Narrative pedagogy with evolving case study–A transformative approach to gerontic nursing practice for undergraduate nursing students. *Nurse Education in Practice*, *15*(5):341-344.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75). USA: Sage.

McCabe, M. P., Davison, T. E., & George, K. (2007). Effectiveness of staff training programmes for behavioural problems among older people with dementia. *Aging and Mental Health*, *11*(5), 505-519.

Moyle, W., Olorenshaw, R., Wallis, M., & Borbasi, S. (2008). Best practice for the management of older people with dementia in the acute care setting: a review of the literature. *International Journal of Older People Nursing*, *3*(2), 121-130.

Moyle, W., Hsu, M. C., Lieff, S., & Vernooij-Dassen, M. (2010). Recommendations for staff education and training for older people with mental illness in long-term aged care. *International Psychogeriatrics*, *22*(7), 1097-1106.

National Collaborating Centre for Mental Health (UK). (2007). Dementia: A NICE-SCIE guideline on supporting people with dementia and their carers in health and social care. British Psychological Society. From: www.nice.org.uk/nicemedia/pdf/CG042NICEGuideline.pdf (accessed June 18, 2015).

Nolan M.R., Hanson E., Magnusson L. & Anderson B. (2003). Gauging quality in constructivist research: the Alder Vast Sjuharad model revisited. *Quality in Ageing, 4*(2), 22–27.

O'Connor, M. L., & McFadden, S. H. (2010). Development and psychometric validation of the dementia attitudes scale. *International Journal of Alzheimer's Disease*, 1-10.

Perry, M., Drašković, I., Lucassen, P. L. B. J., Vernooij-Dassen, M. J. F. J., van Achterberg, T., & Rikkert, M. O. (2011). Effects of educational interventions on primary dementia care: a systematic review. *International Journal of Geriatric Psychiatry*, *26*(1), 1-11.

Prince, M., Wimo A., Guerchet M., Ali G-M., Wu Y-T., Prina M. (2015). *World Alzheimer Report. The Global Impact of Dementia*. Alzheimer's Disease International. From http://www.alz.co.uk/research/WorldAlzheimerReport2015.pdf (accessed June 17, 2015).

Rampatige, R., Dunt, D., Doyle, C., Day, S., & van Dort, P. (2009). The effect of continuing professional education on health care outcomes: lessons for dementia care. *International Psychogeriatrics*, *21*(S1), S34-S43.

Reed, J. (2007). *Appreciative inquiry: Research for change*. USA: Sage Publications, Inc.

Royal College of Psychiatrists. (2011). *Report of the National Audit of Dementia Care in General Hospitals*. Editors: Young J, Hood C, Woolley R, Gandesha A and Souza R. London: Healthcare Quality Improvement Partnership.

Royal College of Psychiatrists (2013). *National Audit of Dementia care in general hospitals 2012-13: Second round audit report and update*. Editors: Young J, Hood C, Gandesha A and Souza R. London: HQIP.

Rycroft-Malone, J., Seers, K., Titchen, A., Harvey, G., Kitson, A., & McCormack, B. (2004). What counts as evidence in evidence-based practice? *Journal of Advanced Nursing*, *47*(1), 81-90.

Scales, K. (2014). Doing what makes sense: locating knowledge about person-centred care in the everyday logics of long-term care (Doctoral dissertation, University of Nottingham).

Scerri, A., & Scerri, C. (2012). Dementia in Malta: new prevalence estimates and projected trends. *Malta Medical Journal*, *24*(3), 21-24.

Scerri, C. (2015). *Empowering change: A National Strategy for Dementia in the Maltese Islands 2015-2023*. Parliamentary Secretariat for the Rights of Persons with Disability and Active Ageing, Malta, ISBN: 978-99957.

Sloane, P. D., Brooker, D., Cohen, L., Douglass, C., Edelman, P., Fulton, B. R., ... & Zimmerman, S. (2007). Dementia care mapping as a research tool. *International Journal of Geriatric Psychiatry*, *22*(6), 580-589.

Spector, A., Orrell, M., & Goyder, J. (2013). A systematic review of staff training interventions to reduce the behavioural and psychological symptoms of dementia. *Ageing Research Reviews*, *12*(1), 354-364.

Teri, L., McKenzie, G. L., LaFazia, D., Farran, C. J., Beck, C., Huda, P., ... & Pike, K. C. (2009). Improving dementia care in assisted living residences: addressing staff reactions to training. *Geriatric Nursing*, *30*(3), 153-163.

Trajkovski, S., Schmied, V., Vickers, M., & Jackson, D. (2013). Implementing the 4D cycle of appreciative inquiry in health care: a methodological review. *Journal of Advanced Nursing*, *69*(6), 1224-1234.

Turner, A., Eccles, F. J., Elvish, R., Simpson, J., & Keady, J. (2015). The experience of caring for patients with dementia within a general hospital setting: a meta-synthesis of the qualitative literature. *Aging & mental health*, 1-11.

Watkins, J. M., Mohr, B. J., & Kelly, R. (2011). *Appreciative inquiry: Change at the speed of imagination* (Vol. 35). San Francesco: Wiley.

Watkins, S., Dewar, B., & Kennedy, C. (2016). Appreciative Inquiry as an intervention to change nursing practice in in-patient settings: An integrative review. *International Journal of Nursing Studies*, *60*, 179-190.

Zandee, D. P., & Cooperrider, D. L. (2008). Appreciable worlds, inspired inquiry. *The Sage handbook of action research: Participative inquiry and practice*, 190-198

Workshops	AI Phase	Agenda	Method of delivery	Number of staff from Ward 1 (% of all ward staff, N=36)	Number of staff from Ward 2 (% of all ward staff, N=32)
1	Introduction	Intro to AI, Overview of the main findings of the Discovery phase	Deductive and descriptive	19 (52)	15 (47)
2	Dream 1	A morning with Mary 1	Inductive: Discussion and reflection	20 (56)	13 (41)
3	Dream 2	A morning with Mary 2	Inductive: Discussion and reflection	19 (52)	13 (41)
4	Design 1	Creating a vision for the future 1	Inductive: Brainstorming and discussion	19 (52)	12 (38)
5	Design 2	Creating a vision for the future 2	Inductive: Brainstorming and discussion	22 (61)	17 (53)
6	Delivery	From dreaming to delivering	Inductive: Brainstorming and discussion	21 (58)	12 (38)

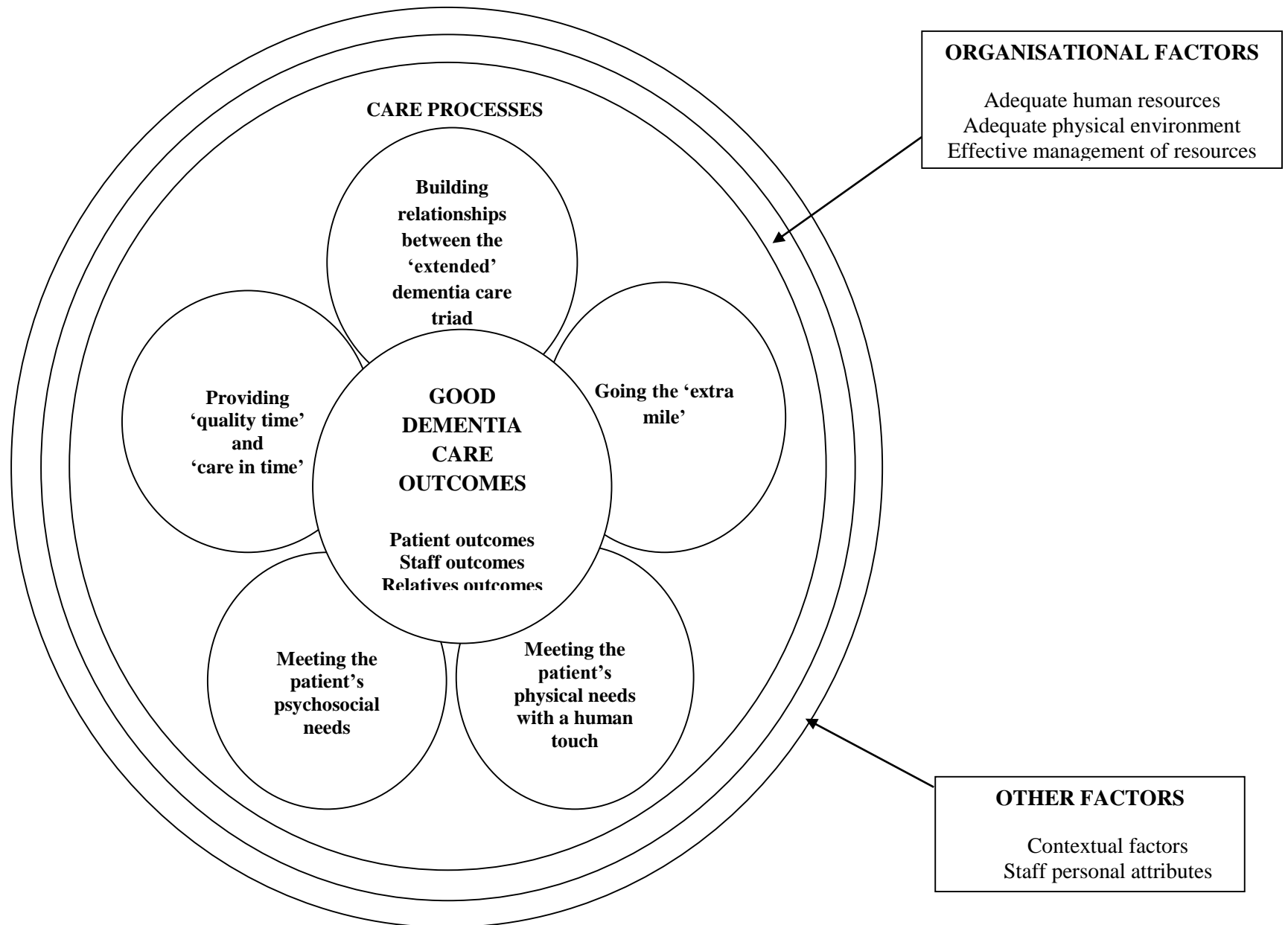**Table 1.** Agenda of the workshops, method of delivery and number of participants in each workshop

Possibility statements of Ward 1 as agreed upon by all participants	Action plans proposed during the last AI workshop in Ward 1
• At (Ward 1) we work together with the patients, their relatives and the multidisciplinary team, to create an environment where everyone is appreciated and feels welcome. • We value and respect each other's opinions, acknowledge each other's abilities and limitations and work to build an environment that is flexible and person centred. • We believe that by joining available resources and thinking creatively we can 'go the extra mile' and provide 'quality time' and 'care in time' to our patients. • We look at the holistic needs including the physical, pathological, psychological, spiritual and social needs of the patients whilst maintaining respect, dignity, choice and equity in our provision of care. • We aim to create a rehabilitation environment that encourages independence and acts as a constant stimulus for our patients. • We aim to enhance quality of life, a sense of wellbeing and inclusion through activities and personal involvement. • We acknowledge the patient's life experiences and share significant information with relevant staff for the patient's benefit. • We listen and acknowledge the relatives' concerns, providing support and timely information. • We encourage the relatives' participation from day one and always provide an open channel of communication to build a trusting relationship.	• The setting up of an activity group composed of staff members supported by OTs. Some of the activities suggested included a 'gardening club'. One of the staff members donated planting pots. • Develop a photo album of the patients: staff would encourage relatives to bring past photos. These will be put in a plastic folder on the locker and used for reminiscence • A DVD player was recently donated by one of the staff members. Staff were asked to bring CD and DVDs of movies that the patients may enjoy watching. • Staff suggested to bring a pet e.g. bird but there were concerns regarding infection control and risk of allergies. • Staff suggested collecting some information about patient's life events. • Staff suggested to celebrate patient's birthdays by for example giving a muffin and a card and to write the birthdays of the patients in the ward diary or on the notice board. • Staff were encouraged to bring old newspapers, magazines and books that may have old stories.

Table 2. Possibility statements and action plans developed by staff working in Ward 1 (OT: Occupational therapists)

Statement	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly Agree
1. The themes discussed during the workshops were new to me	25.0	36.1	5.6	8.3	16.7	8.3	0.0
2. The themes discussed during the workshops were applicable to my work	2.8	0.0	2.8	2.8	11.1	50.0	30.6
3. The workshops were relevant to my professional development	0.0	2.8	0.0	2.8	8.3	50.0	36.1
4. The workshops helped me view persons with dementia in a more positive way	0.0	2.8	2.8	2.8	8.3	38.9	44.4
5. The workshops helped me reflect about what can be an ideal caring environment for patients with dementia in my ward	0.0	5.6	0.0	5.6	2.8	44.4	41.7
6. The workshops helped me to think about how I can work in a more person-centred way with patients with dementia and their relatives	0.0	0.0	0.0	11.1	2.8	58.3	27.8
7. The workshops helped me to develop one or more of these action plans in order to improve the quality of care of patients with dementia in my ward	2.8	0.0	2.8	5.6	11.1	47.2	30.6
8. The workshops directly contributed to improve the quality of care of patients with dementia in my ward	0.0	0.0	5.6	11.1	8.3	44.4	30.6
9. The workshops directly contributed to improve the quality of care of relatives of patients with dementia in my ward	0.0	0.0	0.0	19.4	8.3	38.9	33.3

Table 3. Staff members' reactions to the workshops (% of responses)

Figure 1. Conceptual framework developed following the Discovery phase of the study

CARE PROCESSES

Building relationships between the 'extended' dementia care triad

Providing 'quality time' and 'care in time'

GOOD DEMENTIA CARE OUTCOMES

Going the 'extra mile'

Patient outcomes
Staff outcomes
Relatives outcomes

Meeting the patient's psychosocial needs

Meeting the patient's physical needs with a human touch

ORGANISATIONAL FACTORS

Adequate human resources
Adequate physical environment
Effective management of resources

OTHER FACTORS

Contextual factors
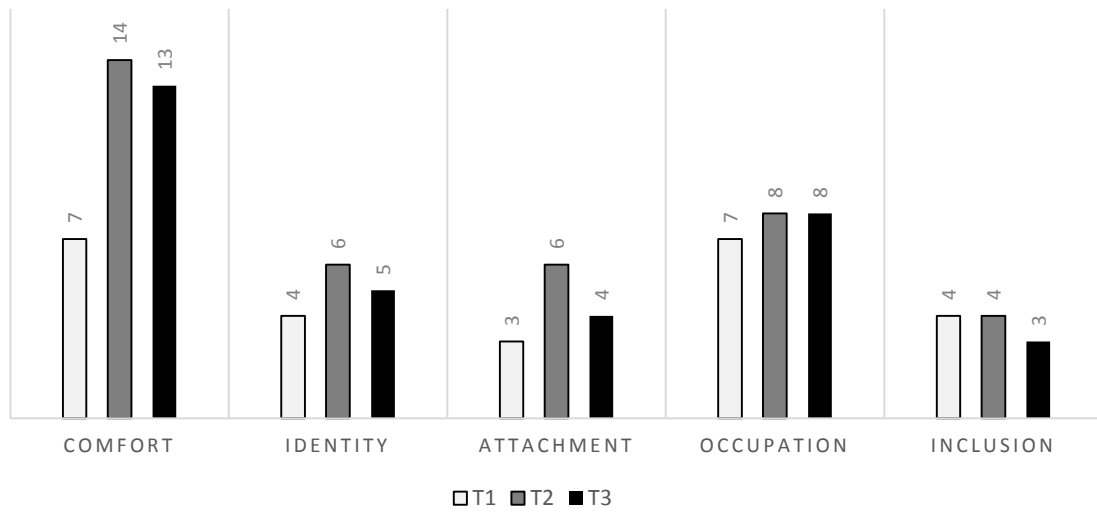Staff personal attributes

Figure 2. Comparison of the number of times the psychological needs of patients with dementia were enhanced at different time points using DCM data
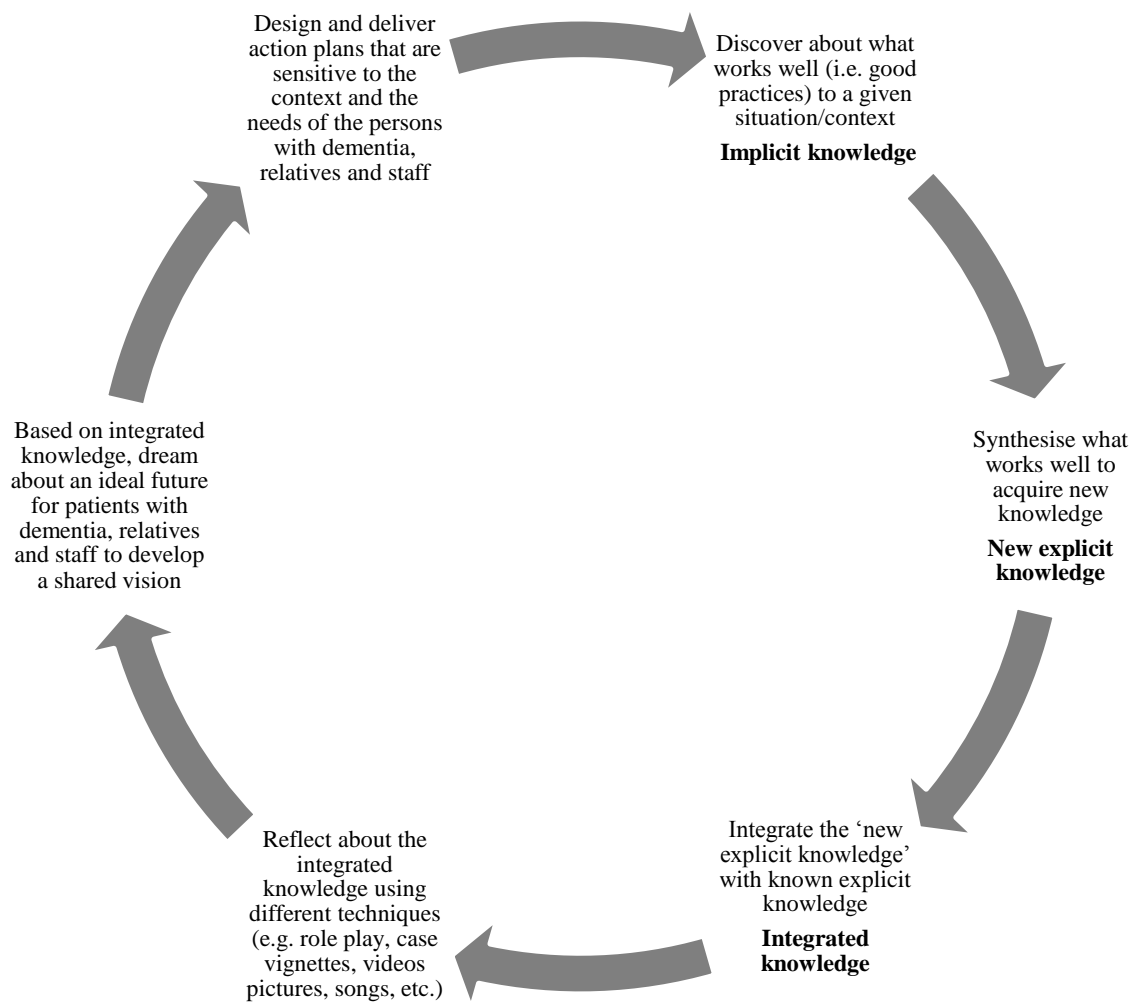
Design and deliver action plans that are sensitive to the context and the needs of the persons with dementia, relatives and staff

Discover about what works well (i.e. good practices) to a given situation/context
Implicit knowledge

Based on integrated knowledge, dream about an ideal future for patients with dementia, relatives and staff to develop a shared vision

Synthesise what works well to acquire new knowledge
New explicit knowledge

Reflect about the integrated knowledge using different techniques (e.g. role play, case vignettes, videos pictures, songs, etc.)

Integrate the 'new explicit knowledge' with known explicit knowledge
Integrated knowledge

Figure 3. Using an AI approach to develop knowledge and facilitate change in person-centred dementia care