Evaluation of the ‘Ladder to the Moon, Culture Change Studio Engagement Programme’
Staff Training: Two quasi-experimental case studies

Abstract

Background: Care homes provide personal care and accommodation for older people. The English Dementia Strategy aims to improve the quality of service provision for people with dementia. This includes specific mention of improving the quality of life in care homes; and as such includes objectives related to developing the workforce knowledge and skills. The Ladder to the Moon Culture Change Studio Engagement Programme (CCSEP) is a staff training approach based on the Positive Psychology framework that uses theatre and film-based activities.

Aim: To evaluate the impact of the CCSEP on care home staff in two care settings for older people, one nursing home and one residential home.

Methods: This study used a wait-list controlled design. However, the data analysis plan was amended to reflect difficulties in data collection; and a quasi-experimental case study approach was consequently utilised. Outcome measures for staff attitudes and beliefs: Sense of Competence in Dementia Care Staff; Approaches to Dementia Questionnaire; Job Satisfaction Index; Brief Learning Transfer System Inventory; Scale of Positive and Negative Experience. The Quality of Interaction Schedule (QUIS) was used to observe changes in staff-resident interaction.

Results: Fifty staff in two care homes completed the questionnaires and forty one undertook formal CCSEP training In Home A (nursing home) there was no significant change in any of the measures. In Home B (residential home) the QUIS showed an increase in positive interactions post intervention; a significant increase in the Building-relationship subscale of Sense of Competence; and a significant increase in staff sense of hopefulness towards people with dementia. The Brief Learning Transfer System Inventory showed a significant decrease post intervention. The intervention did not significantly affect the happiness or job satisfaction of care home staff.

Conclusion:
The results of this study provide tentative evidence about the efficacy of this staff training programme. Some significant improvement in staff attitudes to people with dementia, staff sense of competence, and positive staff-resident interactions were found in one of two homes. It is likely that the organisational problems affecting the other care home limited the implementation and therefore efficacy of the intervention there. The results therefore suggest
that when a supportive management structure is in place, CCSEP may be more effective in improving staff attitudes, sense of competence and interactions with residents.

**Keywords:** dementia, care homes, staff training, positive psychology, film activities

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**Implications for Practice**

**What does this research add to existing knowledge in gerontology?**

- It may be possible to use theatre and film–based staff training to positively influence attitudes, beliefs and interactions of staff caring for older people with dementia.

**What are the implications of this new knowledge for nursing care with older people?**

- The results of this study provide tentative evidence about the impact of CCSEP training programme, showing some significant improvement in staff attitudes to people with dementia, staff sense of competence and positive staff-resident interactions.

**How could the findings be used to influence policy or practice or research or education?**

- These findings provide possible evidence of positive change in care home staff as a result of a theatre and film based staff training programme, but only if management are supportive. Future work should include a controlled study to assess whether CCSEP is effective in comparison to usual care.
Introduction

There are approximately 400,000 people living in care homes across the UK, with 80% of residents estimated to have dementia or a severe memory problem (British Geriatrics Society, 2013). Accordingly, care home workers need to be trained to accommodate a variety of complex needs for these residents (Banerjee, 2009), with calls to improve the education provided to this workforce, and improve the quality of care (Department of Health, 2009).

Training for staff in care homes will only have a lasting influence if it works in parallel with the organisation’s philosophy, care practice and resources (Bowe & Loveday, 2000). Moreover, this training needs to promote appropriate attitudes to develop quality relationships with residents, which are integral to person-centred and relationship-centred approaches to care practice (Kitwood, 1997; Nolan et al., 2008).

Previous studies have suggested that residents benefit when staff are trained to deliver evidence-based psychosocial interventions. The activity-based intervention Cognitive Stimulation Therapy (Aguirre et al., 2013) improved cognition and quality of life. Other initiatives like Staff-training in Assisted Living Residences (STAR) (Goyder et al., 2012), and Psychomotor Dance Therapy (Guzmán et al., 2016) improved mood and decreased behaviours that challenge. Research has also suggested that theatre-based activities have similar beneficial effects on residents’ mood and behaviours (van Dijk et al., 2012), and are an effective modality to educate the health workforce about dementia and promote a person-centred approach to practice (Kontos and Naglie, 2007; Kontos, 2010).

To contribute further to the evidence-base for creative arts and dementia, research was conducted to evaluate The Ladder to the Moon (LttM) Culture Change Studio Engagement Programme (CCSEP). This UK-based staff training programme uses theatre and film-based activities to i) develop communication and interaction skills with residents, and ii) improve team work. The programme is based on the Positive Psychology framework, which focuses on “positive emotions, positive character traits, and enabling institutions” (p.410, Seligman, 2005). It also utilises the ‘PERMA’ principles: Positive Emotion; Engagement; Relationships; Meaning and Accomplishment (Seligman, 2011). It is delivered using the Goals, Reality, Options and Wrap-up (GROW) coaching model (Alexander, 2010).

Qualitative results of this evaluation, using focus groups, have been published elsewhere (Guzmán et al., 2016). This paper reports on the quantitative findings, which focused on staff outcomes. This was due to the limited literature on understanding the effect of such interventions on staff themselves. Such research is particularly important when care home staff work long hours, are
poorly paid and face the difficulty of forming meaningful relationships with residents as their dementia and comorbid illnesses advance (Middleton et al., 1999; Luff et al., 2011). Therefore, this study aimed to evaluate the impact of the CCSEP on care home staff.

Method

Design
The study utilised a wait-list controlled design with four data collection points: baseline, baseline 2 (pre-intervention), post intervention and follow-up, as illustrated in Figure 1. A wait-list control design involves one sample acting as a control group before receiving the intervention at a later date. Four time points were used to provide a breadth of data for analysis of change over time. Staff questionnaire data regarding staff attitudes and beliefs were collected at all four time points, whilst the QUIS observations were undertaken at baseline 1 (Time 1) and follow-up (Time 4) only. Two care homes were recruited by LttM. The CCSEP comprised three training days per cohort and three cohorts took part in each care home which took approximately 20 weeks. Staff inclusion criteria included: i) working regularly at the home; ii) able to read and speak English to complete the measures; iii) have access to the internet either in the care home or at their own home to complete the measures online. Staff that did not take part in the CCSEP were still invited to complete the questionnaires as the ethos of the intervention emphasised a whole care home approach, whereby any taught techniques and activities would be cascaded throughout the home.

Demographic information collected from staff included: gender, age, ethnicity, time working in the care home/care sector. All staff provided informed consent. Residents were assessed for their capacity to consent to be observed during the staff-resident observation periods. If residents lacked the capacity to provide informed consent, a Personal Consultee or a Nominated Consultee was identified to provide an opinion about their participation (Department of Health, 2009). Ethical approval was obtained from the London – Camden & Islington Research Ethics Committee [Reference Number: L12/LO/0961].

‘Insert Figure 1’

Settings
Care Home A: A nursing home for adults over 65 years with a designated unit for people living with dementia. The home has 81 beds with 73 staff members and a staff:resident ratio of 1:6. The care home has had seven managers over the past seven years.
**Care Home B:** A residential home for older people without major nursing needs, including a ‘high dependency unit’ for people with mobility difficulties. The home has 47 beds, with 81 staff members and a staff: resident ratio of 1:7. The Manager had worked at the home for the past 15 years.

**Measures**

The research team worked in partnership with Ladder to the Moon to ascertain the staff domains that CCSEP was aiming to affect. Accordingly, the research team located measures that would be best placed to validly and reliably assess these areas. This included staff attitudes and beliefs, staff-resident interactions and staff absence and turnover. An environmental measure was also included to provide environmental context to each of the homes. The battery of staff questionnaires were piloted with a care home not otherwise involved in the study or intervention to assess ease of completion and time needed. Staff were satisfied with the questionnaire assessments in their proposed format, and took approximately 25 minutes to complete them.

**Quality of Interaction Schedule (QUIS)**

The QUIS (Dean, Proudfoot and Lindesay, 1993) was used to undertake a structured observation of the quality of interaction between care staff and residents over a two hour period prior to lunch. Interactions were observed by a trained researcher, and coded as either Positive Social (PS); Positive Care (PC); Neutral (N); Negative Protective (NP) or Negative Restrictive (NR).

**Care home measures**

Information was collected on staff sickness, turnover; the number of adverse events (for example, falls, unplanned hospital visits), as well as complaints and compliments. It was felt that these measures were all possible indicators of the staff level of competence, satisfaction and transfer of learning into practice. There was no existing system in place to record compliments; hence, the number of ‘Thank you’ cards received from relatives and friends was recorded.

**Sheffield Care Environment Assessment Matrix (SCEAM)**

The SCEAM (Parker et al., 2004) assesses the design, layout and usage of the care environment. There are ten domains relating to features important to residents and one concerning staff provision. Domains are scored as present (1) or absent (0), total scores are reported as percentages, with a higher score indicating higher performance in that domain. It is completed through researcher observation of the environment and an interview with the care home manager. The SCEAM scores were not included in the pre and post analysis, but used to provide an environmental context for the results.

The following staff questionnaire assessments were undertaken online via Survey Monkey® or via paper copy.
**Sense of Competence in Dementia Care Staff (SCIDS)**

The SCIDS (Schepers et al., 2012) was used to assess care staff sense of competence. It contains 17 items across four subscales: ‘Building Relationships’; ‘Professionalism’; ‘Care Challenges’ and ‘Maintaining Personhood’. Each item is rated on a four-point scale from 1 = ‘Not at all’ to 4 = ‘Very much’. Higher scores represent a higher sense of competence.

**Approaches to Dementia Questionnaire (ADQ)**

The ADQ (Lintern & Woods, 2000) was used to assess staff approaches towards people with dementia. It contains 19 statements about people with dementia, which are rated using a five-point scale from ‘Strongly Agree’ to ‘Strongly Disagree’. A total attitude score can be calculated as well as subscale scores for ‘Hopefulness’ and ‘Person-centred’ Approaches. Higher scores represent a more positive attitude towards people with dementia.

**Job Satisfaction Index (JSI)**

The JSI (Firth-Cozens & Hardy, 1992) was used to measure staff job satisfaction. Staff rate 18 items which cover various aspects of their job (e.g. responsibility, supervision, pay), using a seven-point scale ranging from: 1 = ‘Extremely Dissatisfied’ to 7 = ‘Extremely Satisfied’. Higher scores indicate higher job satisfaction.

**Brief Learning Transfer System Inventory (BLTSI)**

The BLTSI (Spector et al., 2010) is a short-form version of the Learning Transfer System Inventory (Holton et al. 2000). It was used to identify factors that affect how staff transfer training into performing their job. Respondents rate each item on a five-point scale: 1= ‘Strongly Agree’ to 5 ‘Strongly Disagree’. Higher scores represent a better expectation of transferring learning into performance.

**Scale of Positive and Negative Experience (SPANE)**

The SPANE (Diener et al., 2009) was used to measure staff well-being. It is a self-report measure containing six positive feelings (e.g. Pleasant) and six negative feelings (e.g. Sad). Staff rate each feeling over the past 4 weeks on a scale of: 1 = ‘Very Rarely or Never’ to 5 = ‘Very Often or Always’. The overall score as well as separate positive and negative feeling scores can be calculated.
**Happiness Visual Analogue Scale (VAS)**

The Happiness VAS (non-standardised) scale was developed for this evaluation study in order to have a quick and easy happiness measure for staff to complete. It was used as a self-report measure that asked respondents to rate how happy they had been in the past four weeks using a visual analogue scale of 0 (Extremely unhappy) to 100 (Extremely happy).

**Intervention**

The Ladder to the Moon team comprises a coach and (usually) two professional actors. They deliver the Culture Change Studio Engagement Programme (CCSEP) as follows:

- An initial call by the coach to the manager and senior team members to identify goals for the home.
- A film theme (e.g. Sound of Music; South Pacific) and a cohort of 12 to 15 staff to participate in the programme is chosen.
- On Day 1, Positive Psychology, the PERMA concept, ‘Making Someone’s Day’ and ‘Savouring’ [enjoying the moment using objects to reminisce] are introduced using small and large group discussions and practical activities. The selected film topic is discussed with staff to generate ideas for activities with residents and relatives.
- On Day 2, the coach recaps learning from Day 1, and staff practise communication skills.
- This is followed by the ‘Big Shoot’ (up to two hours duration): residents and staff adopt main characters of the chosen film and cinema studio crew roles (e.g. make-up artist, clapper-board operator) and family members are also invited. There is singing and dancing along to music, and ‘Oscar’ award statues are given to residents.
- The CCSEP team video records the interaction, having arranged the consent for filming with the home, and produces a DVD. The coach then debriefs with the staff group to set personal goals.
- On Day 3 the CCSEP coach facilitates discussion with the staff group, which includes watching the DVD to review Day 2; reflecting on the learning, progress on goals, and planning changes to take forward into practice.
- At a final meeting, the coach reflects with the manager on the culture of care changes.

**Data Analysis**

Survey Monkey® data were imported into Statistical Package for the Social Sciences (SPSS version 21) and hard-copy data were collected and entered manually for analysis. Due to the observed differences between the two homes it was considered inappropriate to compare them statistically. Accordingly, the data analysis plan was amended and a quasi-experimental case study approach was utilised. It had been intended to analyse the staff questionnaire data
using repeated-measures, comparing data from staff within the same care home across the four time points. However, this was not possible as too few staff had completed the outcome measures at all four points. Hence two points; the pre-intervention (Time 2) and post-intervention data (Time 3) were used. Analysis included data from staff who had not completed the formal training as taught activities and techniques were intended to be cascaded throughout the home to all members of staff.

QUIS observations (Time 1 and Time 4) were analysed applying $X^2$ tests using Graphpad, a statistical package available online (http://graphpad.com/quickcalcs/contingency1/). The Kolmogorov-Smirnoff test was conducted on the outcome measure data and the histograms appeared to be normally distributed. A series of paired t-tests were carried out to evaluate the changes pre- and post-CCSEP on staff questionnaire assessments.

**Results**

*Environmental assessment: The SCEAM*

Home A had an ‘Independent Unit’ layout located in a 'Mature suburb' built in 2005. Home B had a ‘Group Living’ layout located in a ‘Village’ built between 1850-1917. Home A scored higher than Home B for the following domains: *Community; Safety and Health; Support for Physical Frailty; Choice & Control, and Staff Provision*. Home B scored higher than Home A for: *Privacy, Personalisation, Support for Cognitive Frailty, Normalness and Authenticity*. The domains *Comfort of the Environment and Awareness of the Outside World* were the same for both homes. See Table 1 for the SCEAM scores for each home.

‘*Insert Table 1 here*’

**Home A (nursing home)**

A total of 53 staff were invited to take part; 39 consented, of whom 19 completed questionnaires (7 online/12 paper copies); thus, a 35.9% response rate was achieved. Of the 19 participants, 53% undertook the CCSEP training. See Table 2 for staff participants’ demographic information.

‘*Insert Table 2 here*’

**Quality of Interaction Schedule (QUIS)**

There was a decrease in positive interactions but this did not reach statistical significance.
**Staff Outcome Measures**

There was no statistically significant change on Sense of Competence (SCIDS) between pre and post CCSEP, \( t (11) = -.386, p=.707 \). Similarly, there were no significant statistical changes on the other subscales. There was no significant change on the overall score of the Approaches to Dementia Questionnaire (ADQ), \( t (10) = .909, p=.385 \) and no significant changes on the 'Hope' and 'Person-centred care' ADQ subscales. There was no significant change on Job Satisfaction Inventory scores, \( t (7) = 2.250, p=.059 \). The Brief Learning Transfer Scale Inventory (BLTSI) did not demonstrate change,\( t (10) = -2.028, p=.070 \); the Scale of Positive and Negative Experience (SPANE) did not change significantly after the training intervention, \( t (10) = -0.747, p=.472 \). The VAS Happiness scores did not demonstrate significant change, \( t (9) = -1.353, p=.209 \).

**Care home measures**

Home A declined to provide the number of complaints at the later data collection points. See Table 3 for care home measures results.

‘Insert Table 3 here’

**Home B (residential home)**

A total of 52 staff were invited to take part, 31 consented and completed questionnaires (30 online/1 paper copy); thus a response rate of 59.6% was achieved. Of the 31 staff participants, 71% undertook CCSEP training.

**Quality of Interaction Schedule (QUIS)**

A \( \chi^2 \) with Yates correction indicated a positive significant difference in the association between pre and post positive interactions, \( \chi^2 (1, n = 300) = 43.28, p=.001 \) based on observations of 39 staff members interacting with residents. See Figure 2 for observed interactions.

-Insert Figure 2 here-

**Staff outcome measures**

There was no statistically significant change on the Sense of Competence (SCIDS) total score between pre and post CCSEP, \( t (25) = -1.627, p=.116 \). There was a significant statistical change on the 'Building-relationships' subscale of the SCIDS from pre (M=10.14, SD= 2.75) to post CCSEP (M=11.46, SD=2.06), \( t (27) (-2.770, p=.010 \). There was no significant statistical change on the other subscales.
There was no significant statistical change on the Approaches to Dementia Questionnaire (ADQ) scores, t (27) = .946, p=.353. The 'Person-centred' subscale did not show significant change, t (27) = 1.899, p=.068. There was a significant change on the ‘Hope’ subscale from pre (M= 29.46, SD= 4.44) to post CCSEP (M= 31.42, SD= 4.12), t (27) = -2.596, p=.015).

There was no significant change on the Job Satisfaction Inventory (JSI) scores (t (8) = -1.5122, p=.169).

There was a negative significant change on the Brief Learning Transfer Scale Inventory (BLTSI) scores from pre (M= 60.89, SD= 7.70) to post CCSEP training (M= 43.14, SD= 10.42), t (27) = 9.07, p<.001).

There was no significant change on the Scale of Positive and Negative Experience (SPANE) total score of positive experience, t (27) = 0.945, p=.353) or negative experience, t (26) -0.636, p=.531). There was no significant change on the Happiness Visual Analogue Scale (VAS) scores, t (27) = 0.271, p=.788.

See Table 4 and 5 for the staff outcome measures results for each home.

‘Insert Tables 4 and 5 here’

Discussion
This study aimed to evaluate the impact of the CCSEP, a theatre and film based staff training intervention, on staff working in care homes. In Home A (nursing home), no significant differences were found across all measures for staff pre-post CCSEP. A simple explanation could be that the CCSEP is not an effective staff intervention. However, this is unlikely due to changes observed in Home B (see below) as well as qualitative evidence to the contrary (Guzmán et al., 2016). An alternative reason could be that staff immersion in the CCSEP and its principles at this residential home were not adequate to support any significant change. As the study progressed in Home A, the lack of managerial action to organise staff to attend the training sessions, and to enable staff to participate in the study became clear. Moreover, staff turnover and sickness increased. Donoghue & Castle (2009) found that there is an association with staff turnover and the manager’s leadership style to support culture change and activities. It may be that the lack of managerial support had an impact on the implementation of CCSEP. Moreover, the research team became aware that the care home had not achieved certification
from another dementia training project undertaken the year before, which could have contributed to the low staff motivation to engage in yet another training programme aimed at changing the culture of care.

In contrast, at Home B (residential home), there were significant changes noted on the outcome measures. Similar to Goyder et al., (2012), staff significantly increased their sense of competence in ‘building relationships’, and the ‘hope’ they perceived for people with dementia. The former is integral to person/relationship centred care and may have arisen due to the specific principles utilised within CCSEP, including ‘Make Someone’s Day’ whereby staff are supported to practise ways of communication to create an enjoyable shared experience with residents. Moreover, a higher sense of competence can lead to higher quality care provision (Schepers et al., 2012, whilst staff’s increased sense of ‘hope’ is linked to better quality of life for residents in care homes (Zimmerman, 2005; Spector and Orrell, 2006). Indeed, changes in staff attitudes and beliefs may have translated into practice; the QUIS results suggest that staff interacted significantly more positively with residents after the delivery of the CCSEP training.

It is likely that the management at Home B helped to facilitate staff engagement in CCSEP, and promoted the significant changes observed. Leadership style is recognised to have a great impact on workforce practice, as well as the ethos and culture of the home (Orellana, 2014). Management were supportive of staff attending CCSEP sessions (e.g. through helpful rota organisation), as well as being involved in the research processes (e.g. allowing access to the internet to complete online questionnaires). Accordingly, when undertaking research in care homes, it is crucial that management is supportive to enable session attendance and implementation in practice (Wenborn et al., 2013). The time needed to engage with the manager therefore needs to be incorporated into the study protocol and timetable.

However, it is important to note that not all measures demonstrated positive change. Total scores on the Brief Learning Transfer System Inventory showed a significant decrease, suggesting reduced readiness for transfer of learning. This suggests that staff lacked confidence about implementing their CCSEP learning into practice without coaching supervision. Moniz-Cook et al., (1998) suggests that it is unlikely that effects are maintained over time without the use of follow-up support. A recommendation to improve theatre and film-based staff training like CCSEP may be to implement a follow-up coaching and supervision structure once the formal training has been completed.
Additionally, there was no significant difference on Happiness and Job Satisfaction measures post-CCSEP. This may be because the CCSEP intervention does not particularly affect these factors, however it may also be that staff at this care home were already at a level of happiness and job satisfaction that were high enough to mitigate any significant impact on these aspects.

**Limitations and future work**

One of the main limitations of this research study were the problems inherent within the care homes, which are known to compromise methodological rigor in studies (Kuske, et al. 2009). Staff shortages, absence, turnover and reluctance to participate resulted in a small sample, with only a total of 50 staff (out of 106 approached, of whom 82 consented) completing questionnaires. These difficulties, in combination with the considerable differences between the homes meant that comparative analysis between the two homes as intended was either not appropriate or underpowered. As a result, a lack of control group meant that any causative interpretations of the results should be taken with caution. This is especially so, considering the use of multiple outcome measures which can increase the likelihood of type 1 errors. Future work should include a controlled study to assess whether CCSEP is effective in comparison to usual care. For appropriate comparisons to be made, investigations should use purposive sampling to select similar care homes, with managers that are supportive of the research process and staff attendance at CCSEP.

**Conclusion**

The CCSEP is a staff training intervention, based on the Positive Psychology framework, which aims to change the culture of care in care homes in order to increase and improve staff-resident interaction. The results of this study provide tentative evidence about the efficacy of this staff training programme. Some significant improvement in staff attitudes to people with dementia, staff sense of competence, and positive staff-resident interactions were found in one of two homes. It is likely that the organisational problems affecting the other care home limited the implementation and therefore efficacy of the intervention there. The results therefore suggest that when a supportive management structure is in place, CCSEP may be more effective in improving staff attitudes, sense of competence and interactions with residents.

**Conflict of Interest**

None
Description of authors’ roles

X,Y,Z,W designed the study. X collected, analysed data, and drafted the manuscript. Y supported data collection. Z,W supervised the project and provided expert advice. All authors agreed the final manuscript.

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