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## Museum Object Handling: A Health Promoting Community-Based Activity for Dementia Care

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### Abstract

In a quasi-experimental design (N = 80), this study examined the wellbeing impact of handling museum artefacts, by testing for differences across domain, time, gender and stages of dementia. Results indicated people with early and moderate impairment showed positive increases in wellbeing, regardless of the type of dementia but those with early stage dementia showed larger positive increases in wellbeing. We can feel confident that for most people with early to middle stage dementia, handling museum objects in a supportive group environment, increases subjective wellbeing and should be considered part of a health promotion strategy in dementia care.

**Key words:** dementia care, health promotion, wellbeing, museums, object handling, public health

### Introduction

How best to care with people living along the continuum of dementia is a worldwide health and social care concern. Much of the focus of care is based on a medical model of assessment and diagnosis often followed by prescribing various medications in hopes of lessening symptoms. Until recently little consideration has been given to the question of how to promote the health and wellbeing of those with dementia and the informal caregivers who are often involved in providing support. Diagnosis of a dementia, whilst important, does not lead to a recognisable care pathway for family members or communities as it might for other long-term conditions such as learning disabilities, diabetes or asthma, for example. Until cures for the various types of dementia have been discovered all nations are confronted with a significant public health problem of how best to care for this population.

A range of evidence suggests that interacting with the arts can be beneficial for people's health and wellbeing (Ander et al., 2012; Camic, 2008; Royal Society for Public Health, 2013; Staricoff, 2004) and that the role of culture and leisure plays an important role in wellbeing and health (National Leisure &

Culture Forum, 2014). The arts draw from the entire breadth of human experience and having ethological utility (Dissanayake, 1988), they can evoke a sense of universality that has the potential to increase subjective wellbeing, social inclusion and inspire creativity. Many art forms involve the use of material objects in some form or another in the making, creating or examining of art. Material objects have been part of human development across the life span and are with us through our entire lives (Camic, 2010). In recent years, museum object handling is becoming increasingly understood to be a psychosocial wellbeing-focused intervention (Chatterjee, 2008). Object handling involves touch, which is a key sense that may become more important for people as they get older (Rowlands, 2008), particularly if vision and hearing are limited. Ander et al. (2012) proposed that interacting with museum objects can prompt memories of people, holidays, cultural meanings, history, and provide links to the present. Paddon et al. (2013) suggested that the different senses involved in viewing and touching objects involve a deeper level of processing and thus may facilitate new learning.

Neuropsychological evidence put forward by Critchley (2008) indicated that touch may invoke a sense of wellbeing through being linked to emotional and motivational systems in the brain, whilst other authors argue that museum objects trigger memories and associative or ‘meaning-making’ cognitions (Dudley, 2010; Froggett et al., 2011). Recent empirical evidence has shown that individual object handling sessions, conducted with a range of individuals in varying states of health, can increase their sense of wellbeing in the moment (Noble & Chatterjee, 2008; Lanceley et al., 2011). Therefore, it appears that there may be some unique benefit to be gained by interacting with museum objects as part of community-based health promotion programmes.

Museums have a wealth of less tangible resources to offer beyond the art collections they hold including the potential for health promotion, social inclusion, a sense of belonging, new learning, creative exploration and emotional and cognitive stimulation (Chatterjee & Camic, 2015). Recent studies on art gallery-based interventions for people with dementia and their carers show positive outcomes and there is a call for further attention to this area (Camic, Tischer & Pearman, 2014; MacPherson, et al., 2009). A ‘Culture & Health Framework’ was been proposed to better integrate and coordinate museums/galleries with UK public health initiatives (Camic & Chatterjee, 2013) and Camic, Baker & Tischler (2015) have developed the first evidenced-based understanding about how art gallery activities positively impact people with dementia;

this is important as it can guide future health promotion research and support wellbeing practices in other cultural organisations such as museums, archives and libraries.

Given the evidence outlined above, it seems feasible that people with dementia will benefit from museum-based programmes involving viewing art and handling heritage objects as part of public health oriented health promotion programmes. Object handling is often a core activity for many museums yet the role of museums as health-promoting organisations is under-researched. In order to better understand the health promoting value of handling museum objects for people with dementia, the present study was developed through a community partnership between the Alzheimer's Society, Tunbridge Wells Museum and Gallery and Canterbury Christ Church University. Our overarching research question sought to determine if touching and talking about objects from the museum's collection would increase 'in the moment' subjective wellbeing for people at the early and mid stages of different types of dementia. Understanding 'in the moment' wellbeing is important because it can provide family members and professional caregivers with information about what activities are cognitively stimulating, creative, emotionally engaging and appropriately challenging, without relying on reminiscence, previous knowledge or memory (Basting, 2009), all of which can prove stressful experiences or difficult to recall (Woods et al., 2012). First coined by a caregiver in a study at the National Gallery of Australia (MacPherson et al., (2009, p. 751), "you do it in the moment" has become a valued concept to understand the immediate, in the present moment experiences of people with dementia. Research studies often seek to measure outcome after a specific period, ranging from the end of a multiple week intervention, for example, to follow-up times weeks or months, post intervention. This type of research design fails to capture week by week or moment to moment impact of an intervention for someone with significant cognitive impairment who experiences a life threatening, chronic disease such as one of the dementias. If someone cannot recall that they even participated in a programme or activity a month, week or even a day after the event, attempting to measure change at the end of an extended period of time, will tell us very little about the intervention's impact. Further understanding and appreciation for the immediacy of experience, we would argue, could help public health services, community organisations and charities to better understand which activities to support in order to further develop, for example, Dementia Friendly Communities, a health promoting national government initiative in the United Kingdom (Alzheimer's Society, 2015). In a cross-over design, Johnson et al. (2015) found that museum object handling taking place in a museum setting, increased wellbeing more than a social, non art activity, for people with early stage dementia, when participating with an informal caregiver (family member or close friend). The

present study extended this research by using a larger sample size and compared two groups, those with mild and moderate levels of impairment (early to mid-stage dementia) and did so without the involvement of informal caregivers, in order to determine if the activity was effective without a family member or close friend present.

### **Subjective wellbeing**

The construct of subjective wellbeing is not without controversy nor is it straightforward to define. Deiner (1984, p. 561) concluded subjective wellbeing is a multidimensional concept, likely determined by many factors that can be conceptualised at different levels of analysis. Initially underpinned by happiness theories focused on the integration and fulfilment of one's goals (Chekola, 1975), subjective wellbeing has been empirically tested in hundreds of studies using various psychometric and epidemiologic measures designed for individual, community and nationwide populations. Dodge et al. (2009) echo Deiner's previous conclusions from 25 years earlier that a definition of wellbeing remains elusive. In their review of wellbeing theories, Dodge and colleagues contend that most attempts to classify wellbeing have focused on describing dimensions of wellbeing rather than on defining what it is. The resulting definition they put forth, brings together previous descriptive accounts but also provides three defining concepts: "the idea of a set point for wellbeing; the inevitability of equilibrium or homeostasis; and the fluctuating state between challenges and resources" (p. 229-230). Although there continues to be a lack of theoretical consensus about what underpins subjective wellbeing, Huppert and So (2013) in a large scale non-clinical European study, identified ten features of positive wellbeing by conceptually examining the opposite criteria for depression and anxiety (i.e. feeling and functioning). The authors contend that the ten positive components, identified as "features of flourishing", lend support for a multi-dimensional measure of positive wellbeing that includes assessment of "competence, emotional stability, engagement, meaning, optimism, positive emotion, positive relationships and resilience" (p. 842-843). For people with dementia, depending on the specific dementia diagnosis, many of these components can change in rapid and/or gradual non-linear ways over the course of the disease. In addition, as dementia progresses, obtaining subjective accounts of wellbeing or any other social-psychological construct becomes more challenging, and requires methodological flexibility and sensitivity to the impact of measurement on research participants and patients. Yet, Huppert and So's conceptual framework, based on large samples for many European countries, does indeed provide a new contribution about how to conceptually consider subjective wellbeing in dementia.

For the purposes of our theoretical understanding of subjective wellbeing in dementia, the “fluctuating state between challenges and resources”, is a particularly useful concept considering the degree of cognitive, emotional and behavioural fluctuation present over the course of the disease. Conceptualised as a biopsychosocial process, subjective wellbeing in dementia involves (1), various fluctuating internal states (e.g. mood, language, sight, memory, self-esteem, identity, optimism, competence, confidence) that (2), are experienced in numerous ways across the different types of dementia and where (3), the accessibility and use of external resources (e.g. stimulating activities that engage the senses combined with social support), can help mitigate internal states (challenges) and increase wellbeing.

## **Methods**

### **Participants and recruitment**

We recruited people with mild to moderate levels of impairment as determined by a Clinical Dementia Rating (Morris, 1993) of 1.0 to 2.0 on a .50 to 3.0 scale. Participants were required to be able to give consent or to be given proxy consent by a family member. An a priori power calculation using G\*Power statistical software (Erdfeider, Faul & Buchner, 1996) indicated to detect a medium effect size ( $f = .25$ ) with 80% power and alpha .05 two-tailed, the between-subjects factor required  $N = 78$ ; the within subjects factor required  $N = 22$ ; the interaction required  $N = 34$ . A total of 80 participants aged between 54 and 89 years ( $M = 74.81$ ,  $S.D. = 7.6$ ) took part in the study (53 males) that had been diagnosed with dementia for an average of just under five years ( $M = 4.75$ ,  $S.D. = 1.98$ ) and included the following diagnoses: Alzheimer’s ( $n = 37$ ), vascular ( $n = 24$ ), frontotemporal ( $n = 4$ ), mixed-types ( $n = 13$ ) and HIV-related ( $n = 2$ ). A majority of participants (50) were categorised as having early stage dementia (impairment level 1.0) while the other 30 had mid-stage dementia (impairment level 2.0). Recruitment took place in a community setting at a local branch of the Alzheimer’s Society in southeast England and sought people that could participate in a group environment. Individuals were approached by researchers and a member of staff with a one-page handout that briefly described the project. They were asked to take the handout home to discuss with family or friends before making a decision. A longer written and verbal description of the project was then provided to those interested, along with a consent form. Remarkably, all but two people approached to participate agreed to take part in the study. Only those with a confirmed diagnosis of dementia were included in recruitment. The study was approved by an ethics panel at Canterbury Christ Church University (MMC/v75) and the national research office of the Alzheimer’s Society.

## Procedure and data collection

The study took place over seven months. This period of time was necessary to achieve the desired sample size in order to meet power analysis assumptions and to account for scheduling necessities of the partnering organisations. After consent was obtained dates were scheduled and the groups arranged. Staff from the partnering museum, who had received dementia awareness training, facilitated the museum object handling sessions. Sessions took place at the Alzheimer's Society day care centre and at a museum and were 55 to 75 minutes in length, averaging about 60 minutes and consisted of 12 groups of four to eight people with dementia and two to three Alzheimer's Society staff. Five to six objects were chosen for each session. Previous research (Johnson et al., 2015), had determined this to be the optimal number of objects to be able to touch and discuss within the designated time period. Each object was presented to the group, shown to all members without first informing them about the function or name of the object. The object was then handed to a member of the group so that each individual was given time to have a tactile experience with the object and to have a closer look. As the object was passed around, the facilitator asked a series of non-memory related questions (e.g. Would you have this as a decoration in your home? What do you think it might be made of? How old do you think it is? Would you give this as a gift to a friend? How does this object make you feel? Do you like it?). As each member of the group shared their feelings and opinions, the facilitator encouraged participants to speak more about their responses while holding the objects. When each object made a circuit around the group it was placed in the centre of the table for all to continue to view. Thus, objects were purposively selected that were not easy to identify or were unlikely to have previously encountered. As museum collections are often rich with oddities and unusual items this was easily achievable (e.g. a tiger's skull, fossilised seaweed, Victorian candle snuffer, preserved cotton bud, Stone Age New Zealand hand axe, Egyptian mummy wrapping sample, 19<sup>th</sup> century biscuit tin, Islamic porcelain, Roman mosaic floor and Tunbridge Ware).

A good deal of consideration was given to object selection. We did not include objects that would, by historical association, strive to trigger personal or socially shared memories (e.g. reminiscence-oriented discussions). The reminiscence approach, whilst often used in object handling and photo elicitation sessions, can be stressful for some (Woods et al., 2012) and potentially isolating for those from different cultural and ethnic backgrounds that do not share the same memories (e.g. of a "sensuous" 1959 Jaguar), or for whom previous memories may be painful (e.g. recalling the "glory" days of WW II). As

one participant remarked, “Thank you for not thinking us old people are only interested in remembering our pasts. Even though I’m 82 I am still interested in learning. I might not remember it tomorrow, but I do remember the experience and that makes me feel really good”. Reminiscence, when it did occur, was not discouraged, but we did not want to create a group environment that was primarily focused on memory recall but rather, allowed the possibility for learning, curiosity, intrigue and humour.

Immediately before and after each session the Canterbury Wellbeing Scales (CWS) (Johnson et al., 2015) were administered. The CWS is a self-report easy to administer visual analogue style questionnaire selected to measure subjective wellbeing (EuroQol Group, 1990) in people with dementia. It takes about one to two minutes to complete and draws on theoretical and empirical aspects of subjective wellbeing pertinent to dementia (confidence, engagement, optimism) and other aspects of wellbeing common to other scales (happiness, wellness). Participants were asked to make a mark on each of five vertical subscales between 0 – 100 of how happy/sad, well/unwell, interested/bored, confident/not confident, and optimistic/not optimistic they were feeling at that moment in time. Scores were tallied for each subscale and for a composite wellbeing score. Previous ratings were not made available in an attempt to control for demand characteristics to report an improvement. Visual analogue scales (VAS) have been shown to be able to assess change across brief time periods, have validity within subjects and are generally easily administered (Wewers & Lowe, 1990), a key concern in working with people with dementia. Considering we sought to measure an ‘in the moment’ experience of a one-hour museum object handling session, an easy to administer measure for people with a range of dementia-related impairments, was a primary consideration. We also required a measure that provided minimal distraction, was not unpleasant or difficult to complete for most people, and could be used in a range of community-based programmes. Although the use of VAS for people with dementia is conceptually similar to the general population (Arons, Krabbe et al., 2012), it remains an underutilized measure in health promotion. Sessions were also audio-recorded for future qualitative analysis.

### **Data analysis**

A two way (5 x 2) repeated measure ANOVA and post-hoc tests were run on the five individual wellbeing scores at Times 1 and 2 to test for differences of wellbeing across domain and time. A second mixed ANOVA (2 x 2 x 2) was performed on composite wellbeing scores to compare the effects of Time (within subjects factor) across groups of patients of different gender and with different stages of dementia (both as between subjects factors).



## Results

The five subscale scores of the CWS (Happy, Well, Interested, Confident, Optimistic) were added to obtain an overall composite wellbeing score ranging from 0 to 500. Participants largely showed a marked and statistically significant positive change in overall wellbeing scores following the intervention. People with both early stage and moderate dementia showed positive increases, regardless of the type of dementia but those with early stage dementia showed larger positive increases in wellbeing. The results mean that we can feel confident that most people with early to middle stage dementia will experience an increase in subjective wellbeing from handling museum objects in a supportive group environment, either at a museum or at a day care centre.

A chi-square test indicated that there were a significantly higher number of male participants with early stage dementia ( $\chi^2(1) = 5.67, p < .02$ ). Female participants were on average significantly older than male participants ( $M = 78.11, S.D. = 6.03$  and  $M = 73.13, S.D. = 7.8$  respectively)  $t(78) = 2.90, p < .006$ , but had been diagnosed with dementia for about a year less than their male counterparts:  $t(76) = -2.27, p < .03, M = 4.10, S.D. = 1.53$  and  $M = 5.06, S.D. = 2.10$ .

Mean scores for each of the five VAS subscales at Time 1 and Time 2 are shown in Table 1 and summarised in Figure 1. A two way repeated measures ANOVA and post hoc tests conducted on the five subscales scores at Time 1 and Time 2 shows that participants felt more Happy, Well and Interested than Confident and Optimistic at Time 1. Measures on the same subscales at Time 2 show a similar pattern with exception for ratings of Well, which in post-hoc analyses, are not significantly different from reported levels of Confidence and Optimism.

Table 1 here

Figure 1 here

Reliability analyses showed good internal consistency at Time 1 ( $\alpha = .81$ ) and Time 2 ( $\alpha = .88$ ). Composite scores were therefore computed separately for Time 1 and Time 2 measurements by adding the five individual VAS subscale scores, their respective means and standard deviations, also shown in Table 1. Given that the distributions of all subscales and composite scores (Time 1 and Time 2) indicated slight deviations from normality, when testing the effects of the intervention in following analyses, we performed

and report parametric significance tests (t-test and ANOVA) as well as non-parametric Bootstrap corresponding tests. When several tests are run in parallel, Bonferroni corrections are applied and the reported significance levels refer to the Bonferroni corrected familywise significance level. A significant improvement in overall wellbeing was observed when comparing composite scores at Time1 and Time 2 ( $t(76) = -9.79, p < .001, d = .77$ ). Participants reported higher levels of Wellbeing at Time 2 ( $M = 405.68; S.D. = 76.25$ ) than at Time1 ( $M = 347.86; S.D. = 74.62$ ). Similar tests conducted on each of the five subscales obtained the same results were scores at Time 2 were significantly higher than those at Time 1 for each of the domains (see Table 1 subscripts).

Differences in wellbeing were also further investigated by testing the effects of gender and stage of dementia (early vs. mid stage) in a 2 by 2 by 2 mixed design ANOVA with gender and stage as between subject factors and time as the within subject factor. The main effect of time, as already tested by the previous analyses, resulted in significant support for the effectiveness of the intervention across genders and stages ( $F(1,73) = 74.14, p < .001, \eta^2 = .50, \text{power} = 1$ ). The main effect of stage was also significant pointing at an overall higher level of wellbeing in early ( $M = 434.60, S.D. = 63.91$ ) as opposed to mid stage ( $M = 352.11, S.D. = 68.61$ ) when collapsing across time measurement and gender ( $F(1,73) = 10.54, p < .003, \eta^2 = .13, \text{power} = .90$ ). There were no significant gender differences ( $M = 419.62, S.D. = 77.12$  for males and  $M = 376.68, S.D. = 66.88$  for females) in overall wellbeing when collapsing across time measurements and stage levels ( $F(1,73) = .835, p = .36, \eta^2 = .01, \text{power} = .15$ ). The effects of time and therefore the effectiveness of the intervention were also maintained in the two-way interaction between time and stage ( $F(1,73) = 8.15, p < .007, \eta^2 = .10, \text{power} = .80$ ) indicating that the intervention was more effective in early stage patients than in mid stage ones (although significant improvements were detected in both subgroups) as also shown in Figure 2.

Figure 2 here

The three way interaction between time, stage and gender was not significant ( $F(1,73) = 2.40, p = .126, \eta^2 = .03, \text{power} = .333$ ).

We calculated an overall index of change in wellbeing by subtracting composite scores at time 1 from the corresponding composite scores at time 2. A positive value on the resulting variable would therefore indicate an increase in overall wellbeing after the intervention. On average participants increased 57.81,  $S.D. =$

51.83 points on a potential range of 500. Change scores were normally distributed and correlated negatively with the age of participants ( $r = -.25, p < .03$ ) indicating that younger participants reported higher levels of positive change in Wellbeing following the intervention. There was no correlation between change scores and years since diagnosis, nor between age and years since diagnosis.

### **Discussion**

This is the first known study that we are aware of, which compared subjective wellbeing across different types of dementia and across low and moderate impairment levels (stages) on the same activity (museum object handling). This study sought to explore if the activity of object handling in small groups, increasingly a part of museum programming, would increase subjective wellbeing for people at different levels of dementia impairment. If museums are to offer programmes supporting wellbeing as part of health promotion strategies for dementia care, accumulating further empirical evidence of the effect of museum activities can offer additional support for their participation as non-clinical health-promoting institutions in dementia care that can potentially partner with local health, social care and charities to offer more joined up programming in local communities (Camic & Chatterjee, 2013).

The results offer support that museum object handling in small group settings had a positive impact on the subjective wellbeing of people with different types of dementia at both mild to moderate levels of impairment, with those at milder levels of impairment showing the greatest wellbeing improvements. Although participants at both mild to moderate levels of impairment took up the activity with apparent enthusiasm and curiosity, those with moderate levels of impairment generally required more encouragement that it was permissible to touch the objects, and once touching began, they did not need to quickly pass the object to another person as some attempted to do. It may have also been desirable to have had more objects for these participants to touch in that a greater number of objects (e.g. rather than 5 or 6, perhaps offering 8 to 10) would have provided additional visual stimulation and opportunities for engagement with different objects, but for briefer amounts of time per object. This would also have necessitated less discussion about each object on the part of the facilitator and more opportunities for kinaesthetic experiences within the session. The results have also shown that museum object handling appears to be an activity that is useful for both men and women at different levels of impairment, another finding not previously reported. These results also provide evidence for the use of museums as places that can provide learning and social engagement opportunities for people with

different types of dementia across early to middle stages of impairment, thus providing a vast community resource available to communities with a museum. From a public health perspective and following on from Camic and Chatterjee's (2013) 'culture and health framework', this could substantially expand health promotion activities associated with dementia care by offering non-stigmatising physical places within communities that provide visual and tactile stimulation in a supportive social environment. Additional research is warranted in order to further explore the public health opportunities that museums and art galleries (MacPherson, 2009) may be able to provide.

Particular components of this intervention worth noting included it taking place in a group environment in non-clinical, community settings. Often dementia care is considered to be exclusively in the purview of memory clinics and older peoples clinical services. Whilst these are indeed necessary components of dementia assessment and psychological care they also run the risk of overly medicalising how we think about dementia (Zeilig et al., 2014), which discounts a person-centred social model of care (Kitwood, 1997). As Kitwood so aptly considered, we are not treating a singular disease but a syndrome of symptoms and all too often the daily wellbeing needs of people with dementia are forgotten in the rush to find a cure. Cultural institutions, such as museums, art galleries, theatres, cinemas, libraries and art centres, can also play a role as they are now beginning to do across the United Kingdom and in other countries (Camic & Chatterjee, 2013). This present study has shown support for one activity, commonly undertaken by museums, which can be part of a community-wide dementia support initiative.

Another component that is also important to note is the role of the group facilitator. An engaging attitude toward working with this population, knowledge of the museum objects used in the programme, a basic understanding of dementia, training in group facilitation skills and creating an atmosphere where discussion is framed by encouraging curiosity (e.g. What do you think this object is made of?), being informative (e.g. Yes, it was once wood, but has become petrified and is now a fossil and it may be 10,000 or more years old) and when helpful, humorous (It's even older than you are!) all contribute to help put participants at ease and to facilitate conversation. Museums are often experts at communication of their collections, whether engaging with students or tour groups, so are in a good position to facilitate dementia related health promotion activities. Museum staff will require, however, additional training to work with people with dementia in order to gain an understanding about the different types of dementia and how their knowledge and skills can best serve this population. In addition, health promotion activities as part of museum programming also offer the possibility to involve

volunteers in facilitating object handling groups. This can create further wellbeing benefits for volunteers through their engagement of supporting and also facilitating groups, thus expanding the resources a museum can offer to local communities.

### **Limitations**

There are several limitations to the present study that need to be considered. The sample consisted of people who volunteered to participate. Although most (69 out of 80) self reported they had not been to a museum or art gallery in the past 5 years they may have been more interested in museums and the objects they contain than the general dementia population, thus coming to the study with a greater degree of interest and curiosity. In addition, because this was a quasi-experimental, non-controlled study, we cannot assert that the museum object handling activity definitively caused an increase in wellbeing. Although there were wellbeing increases for people at both mild and moderate levels of impairment, the increase may have been related to the engaging in a novel activity or demand characteristics in order to please the facilitator and researchers. A randomised controlled trial (RCT) would be able to more robustly control for these uncertainties. The study also did not directly solicit participant's responses to the programme, which would have allowed for a formal qualitative analysis using thematic or discourse analysis, for example. Mixed methodological studies, whilst more complex and costly to undertake, can provide valuable information often missed by only using a single methodological approach.

### **Future research**

There are several directions that future research could build upon in order to further examine the health promotion potential for community-based activities within the cultural sector for this population. Methodologically, realising that RCTs are complex, costly to undertake and not always warranted, a matched controlled study comparing object handling to other group-based arts or cultural activities, such as gallery tours, painting or singing groups would provide further information about the impact of these types of activities on wellbeing. We suspect, however, that impacts may be similar across different cultural activities as has been shown by participant responses in a recent study crossover design (Johnson et al., 2013). Rather than compare one type of cultural activity with another, it may be more fruitful to look at a specific geographical location (e.g. a town, borough or section of a county) and undertake an ethnographic study to discover the processes and nuances involved in longitudinal involvement in cultural activities across levels of

dementia impairment. A study such as this would go beyond researching a single programme or intervention and look more holistically about involvement in health promoting activities.

### **Conclusions**

The present study investigated the widely-offered museum activity of object handling as a wellbeing activity for people with dementia at mild and moderate levels of impairment. Seeking to broaden clinically oriented dementia care activities, offered in memory clinics and older adult services, to community-based health promotion activities, this study questioned whether touching and talking about original museum artefacts in small groups would have a positive impact on subjective wellbeing. Statistically significant results demonstrated that subjective wellbeing increased after a museum object handling session for both men and women across different types of dementia with mild or moderate levels of impairment. This study lends further empirical support for the use of museum related activities as part of a community-based health promotion strategy for people with dementia. Taken together with other cultural activities such as group singing, viewing and discussing visual art in galleries, storytelling and poetry workshops, museum object handling can help contribute to increases in subjective wellbeing for those with dementia and become part of a community's health promotion resources in dementia care, whilst also providing important public health opportunities to involve the heritage sector in wellbeing practice and research by expanding our understanding of where and public health services can be offered.

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