

CULTURE'S PLACE IN WELLBEING: MEASURING MUSEUMS WELLBEING INTERVENTIONS

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ABSTRACT

The museum sector is beginning to see their work in terms of the wellbeing benefits it can bring. Wellbeing is as ambiguous as museum 'learning' ever was and as individualised and personally 'constructed'. Can museums subtle work on wellbeing be measured? Can we bring museums' experience in evaluation and articulating value to the measurement of wellbeing? This paper looks at one example of evaluating a museum wellbeing project, UCL Museums & Collections' *Heritage in Hospitals*. It describes how the research methodology was chosen and put into practice to measure wellbeing in five healthcare contexts and reviews its success. It concludes that mixed qualitative and quantitative methodology, using psychological scales and grounded theory, works well with a cultural wellbeing intervention, but has to be adapted to the capabilities of patients and the healthcare environment.

Keywords

Wellbeing; museums; culture; research methodology; museum learning; wellbeing scales

INTRODUCTION

Culture has historically been treated as an 'added-extra' by many local and central governments, although its instrumental value to other government priorities has begun to be recognised in the past few decades. However, with the introduction of 'wellbeing' as a priority, the means of achieving it in the population has been seen as much more diverse including a role for culture. For museums, heritage and arts organisations who have been struggling to show their worth in the funding maelstrom for decades and losing out to 'harder' imperatives such as education, health and the economy, the amorphousness and enveloping nature of the new priority 'wellbeing' is a boon. Those who work in museums and culture have known that the outcomes of their work contribute in subtle and idiosyncratic ways to individuals' and communities' health and wellbeing for a long time, "Rather than the cherry on the policy cake to which they are so often compared, the arts should be seen as the yeast without which nothing will rise" [18]. But now with wellbeing at the top of most governments' agendas, the time has come to attempt to capture, measure and advocate this effect. Museums have a history of showing impact in instrumental outcomes such as regeneration, social inclusion and, in particular, education. But can this experience be put to use in understanding and measuring cultural wellbeing outcomes? This paper looks at museums previous evaluation experience, mainly in 'learning' and reports on a attempt to measure wellbeing in a museum project based in several hospitals, *Heritage in Hospitals*.

LEARNING FROM MUSEUM 'LEARNING'

Museums have always been designated educational institutions from the foundation of the first public museums. As Britain came through the Thatcher and then the Blair years, cultural organisations, along with other publicly funded institutions, were asked to justify their subsidies. Education or 'learning' as it became known, including 'lifelong learning', was brought to the fore as a large contribution many museums were making to government priorities. Anderson's 1997 report, revised in 1999, 'A Common Wealth' [19] set up museums as education providers but also recommended they improve these services to become more consistent and better quality. Since then, many museums have upgraded their offerings and 'learning in the museum' has become mainstream.

Museum learning is idiosyncratic, free-choice, non-prescriptive and different for everyone. It is influenced by personal experience and background, by motivation, by the social circumstance of the museum visit and even by the impact of the physical surroundings and environment. Falk and Dierking described this with their concept of the Interactive Learning Experience [11]. The education theory of Constructivist Learning chimed well with the type of learning that happened in museums, it saw visitors constructing their own experience and taking what they wanted from a museum visit according to their interest and levels of previous learning. This theory presumed that testing visitors on the content of an exhibition on exit would not capture all the learning that had happened. Museum learning was in danger of being underestimated because it was so different from the traditional concept of how learning happened and what it was. In order to acknowledge the type of learning that was happening in museums, a new practice of evaluation of outcomes developed. Museum learning evaluation uses observation methods such as tracking and timing visitors and qualitative methods such as interviews, focus groups and accompanied visits to try to understand how people learn from a museum encounter.

In 2004 the Museums, Libraries and Archives council launched Inspiring Learning for All [22], a set of learning standards and principles that museums, archives and libraries could aim to organise their learning programmes around as well as an evaluation template that was based on constructivist theory. Museums could now use a loose set of evaluation techniques including qualitative and quantitative methods to assess whether their programmes had achieved new 1) Knowledge and Understanding; 2) Skills; 3) Enjoyment, Inspiration and Creativity; 4) Attitudes and Values; and 5) Actions, Behaviour and Progress. Collectively these were known as the Generic Learning Outcomes or GLOs. With many museums using these evaluation ideas "museums, archives and libraries a means of understanding, analysing and talking about learning. The development of a conceptual framework" [27]. At the same time a central government funding stream for regional museums – Renaissance in the Regions – was being implemented with education as a major priority of its aims (and a major promise on the side of the museums). 'What Did you Learn in the Museum Today?' [28] was an evaluation of the education outcomes of the museum hubs receiving Renaissance money and it utilised the GLO scheme of evaluation.

During the last couple of decades museums have also been more involved in their communities. This is partly driven by government imperatives mainly from Department of Culture, Media and Sport (DCMS) and partly from an internal realisation among the sector that development of new audiences required innovative approaches to different types of people. Expecting people to visit from traditionally non-visiting groups was futile, museums needed to reach out into the community and show people what they could gain from involvement in their heritage. The impacts of these gradual changes in approaches were felt in terms of regeneration of areas, community cohesion, social inclusion and other social improvements. The instrumental benefits of museum work became a mainstream expectation finding its way into DCMS [7] and Heritage Lottery Funding [15] conditions.

Where learning theory was beginning to broaden its definition of how learning could and did happen a few years ago, the healthcare sector and local governments are now at the stage where they are re-examining what is meant by good health and healthy communities and looking to preventative medicine, multi-agency approaches and promotion of wellbeing: perhaps a critical time for museums to promote their own contribution to this newly broad agenda, as they did with learning before. However, a new approach to evaluation may be necessary as with museum learning. Wellbeing

shares with museum learning an individual nature and indeed a constructivist one. Each individual's wellbeing resources (including health and education for example) and experiences are different and wellbeing will be constructed from a person's own starting point. Measuring an increase or improvement in wellbeing will need to be as flexible and versatile as measuring museum learning.

MUSEUMS AND WELLBEING

Before we begin to measure wellbeing as a result of a museum intervention or programming we also need to understand how museums could contribute in this area. Why would museums be a legitimate part of a wellbeing programme? Understanding the nature of museum objects and what is already known about how people respond to them, it might be surmised that objects intrinsic power as well as the activities that the museum institutions arrange for participants (exhibitions, outreach, debates, art classes, volunteer scheme etc) will have specific wellbeing outcomes. One might also say the neutral and inviting space and environment plays a part in increasing wellbeing "The spatial importance of museums, libraries and archives should not be underestimated...They are notable, safe, open, public accessible spaces in the community which exist to help or enlighten people rather than oppress them or cost them money" [33].

Museum sector bodies have been exploring health and wellbeing as a result of museum activity for several years. The appearance of the term wellbeing in UK museum policy and strategy can be traced back through the Museums Libraries and Archives Council (MLA) commissioned research into Generic Social Outcomes or GSOs [2], and the New Directions in Social Policy documents [20]. The GSOs, a framework for museums to evaluate their programmes were developed with a major strand called 'health and wellbeing', with an aspiration to fill in those gaps found in the BOP research. The GSO's sub-outcomes within this included 'encouraging healthy lifestyles and contributing to mental and physical wellbeing', 'supporting care and recovery', 'supporting older people to live independent lives' and 'helping children and young people to enjoy life and make a positive contribution' [21].

In the last few years museums' role in wellbeing is beginning to be recognized both by the health and the museum sectors. Museums, as well as libraries, have been involved in health literacy such as the Health Matters exhibition at the Science Museum, London, the Wellcome Collection's exhibition programme and several exhibitions exploring and displaying issues around mental illness (e.g. Museum of Croydon, Manchester Art Gallery, Great North Museum, The Lightbox, Woking). Beyond health literacy, museums contribution to wellbeing could be very important in terms of building personal resources, prevention of mental problems and de-medicalising health and wellbeing. This view is increasing among the highest levels of the medical establishment, as the editor of the British Medical Journal was quoted in a recent report:

"Indeed the physical aspects of health may be the least important. We will all be sick, suffer loss and hurt, and die. Health is not to do with avoiding these givens but with accepting them, even making sense of them. If health is about adaptation, understanding and acceptance then the arts may be more potent than anything medicine has to offer" [6]

An advocacy report presenting evidence of museums' role in underwriting mental health and emotional wellbeing, *Museums of the Mind* [6] lists the special characteristics of museums in terms of emotional wellbeing as: their pedigree in philosophy, poetry and art – happiness-promoting phenomena; their collection of the stories and artefacts that are the meaning of life; their strength in 'perspective', perspective of time and their various visitors' perspectives; they see the person, not the illness; they have artefacts which communicate in 3D and spark emotions and imagination; they do not sell anything; museum spaces are calm sanctuaries; museums are a collective memory bank and an anchor for our mental health; museums are not medicalised or compulsory [6]. This resonates with much of what museum workers know when they witness people exploring their museums. They know museums are free-choice (and therefore accessible) learning environments and deal in identity, memory, the senses and insight; all valuable for mental health including dementia. The intrinsic

power of objects themselves is a strength yet to be fully explored in wellbeing although University College London (UCL) Museums & Collections held a series of workshops in 2008 and has published two books [4] [26] exploring the power of touching objects. This special engagement, long noted in museum learning evaluations, it is suggested can also contribute to wellbeing.

The idea of community wellbeing in museum practice is much wider and might include what policy makers variously name as community cohesion, neighbourhood renewal, civic engagement, local participation, safe spaces and environmental sustainability. Work that museums currently do with their local communities, hard-to-reach and excluded audiences might nearly all be included in local governments' 'social wellbeing' remit and museums' role in regeneration, built heritage, tourism and retail can relate to 'economic' and 'environmental' wellbeing. These community issues, in turn are seen more and more to influence preventative mental health and individual wellbeing. The potential contributions to community wellbeing are too numerous to list and originate from nearly every museum but they have mostly not been seen or evaluated as such. The synergy between wellbeing and museums, culture, communities and healthcare is conceptualized in Figure 1.

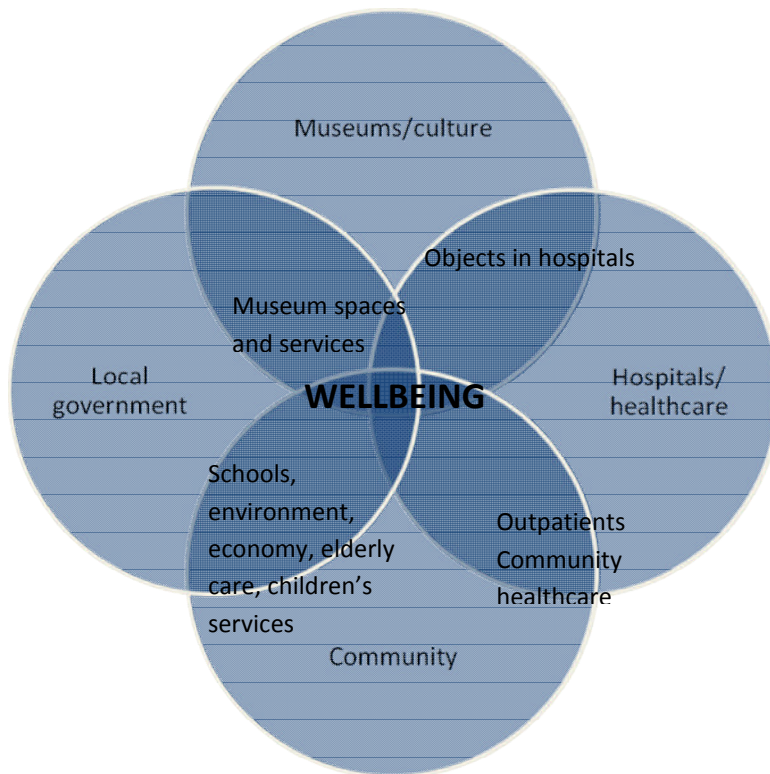


Figure 1. Wellbeing in (museum) practice

Another way of looking at museums and wellbeing would be to use the 'Five Ways to Wellbeing' developed by the New Economics Foundation [24]. The Five Ways are:

- Connect - with the people around you
- Be Active
- Take Notice – Be curious, catch sight of the beautiful, remark on the unusual
- Keep Learning – Try something new, rediscover an old interest
- Give – Do something nice for a friend or a stranger (including volunteering) (NEF 2011)

One can immediately see that museums can provide opportunities and encouragement for people to connect with other people around them, take notice and keep learning – mainly through their exhibitions and community and education programming. Museums long pedigree in learning may in fact be contributing to wellbeing; they appear to be highly related, according to the NEF. Perhaps less obviously museums also touch on being active and giving – mainly through their volunteer programmes – for example conserving parts of a building or garden, providing a dance or music workshop connected with an exhibition, giving a guided walk or having a friends or volunteer programme where people can meet and give their time for the local heritage charity.

APPROACHES TO MEASURING WELLBEING

How could museums find a way of measuring this contribution to wellbeing, as an evaluation and advocacy tool? There is no accepted way to measure wellbeing, its amorphous and indefinable nature proving an obstacle. Different disciplines have taken routes that suit their needs and research paradigms. A few approaches are outlined here to explore their 'fit' with culture and museums.

Economists most often define wellbeing as happiness or life satisfaction, either generally or satisfaction with a number of life domains [12]. They tend to look at it in terms of population rather than individuals and connect it with wealth (utilitarianism). Can a score on someone's level of life satisfaction actually explain someone's experience of life? The fact that 'happiness' levels have stayed flat while GDP has risen in the last century in western democracies [1] [16] [24] suggests the wealth/happiness correlation is no longer valid. Economists are now looking at population-scale indexes other than GDP.

The New Economics Foundation a think-tank directed at policy-makers, is part of a new cohort of researchers who define wellbeing along two or more dimensions, not just life satisfaction or emotion. In particular there is another essential component of wellbeing, something that the NEF [23] term 'personal development' in their evaluation of wellbeing. According to the NEF's research into young people's wellbeing in the city of Nottingham[23], at least two of these dimensions - life satisfaction and personal development - can operate independently of each other, with some people, when measured, scoring much higher or lower on one dimension than the other. The 'meaningfulness' element has been identified and developed by others too, such as Seligman who sees 'the good life' or working towards 'gratifications' with some element of skill and challenge as essential to wellbeing alongside 'the pleasant life' [30]. Lane [16] includes life satisfaction, human development and justice as elements of wellbeing, a 'Trinity of Good'. Ryff [29], has validated her theory and scale of six dimensions of wellbeing, including autonomy, purpose in life and personal growth, which all relate to the personal development dimension of wellbeing, rather than just 'feeling good' or pleasure.

A psychologist may work on an individual level but may or may not equate happiness with wellbeing. Experimental psychologists and healthcare researchers have developed a quantity of scales that attempt to quantify wellbeing in an individual. An example of a wellbeing scale is the Psychological General Well-being Scale [9] that consists of eighteen items within six dimensions (anxiety, depression, positive wellbeing, self-control, vitality, general health). Respondents are required to rate statement items (e.g. Has your daily life been full of things that were interesting to you?) on a scale of one to six. However, these scales may neglect the individual's own experience of wellbeing. Although they can indicate anomalies in wellness or illness, from which action or treatment could be instituted, in standardising what psychological wellbeing is there is little room for the voice of the individual which may have a very different perspective on what makes them happy or well. The scales also do not indicate why the individual has a certain wellbeing level.

Some cultural evaluations have used qualitative research as a way to capture the subtle nature of both wellbeing changes and culture on an individual. Arts-in-health, a related field, of interest to museums, has often used this approach. Often evaluation is undertaken with a few individuals taking part in a programme, and the changes within them as a result of an arts intervention can sometimes only be explained in words not numbers. These words are then interpreted to show wellbeing (e.g. work by the North West Culture Observatory [25]; Manchester Metropolitan University [17], Stickley, Hui & Duncan at University of Nottingham, 2011[32]). These approaches although producing more

valid descriptions of what is happening within individuals has problems with causality and generalisability – needed for policy change. Although healthcare trusts are beginning to accept these ‘soft’ approaches ‘hard’ data is often better understood by a sector that works on cost-benefit systems. Staricoff’s review of arts-in-health research [31] covers many evaluations which use numerical, statistical and physiological data to prove benefits. These evaluations could be a learning point for museums wishing to evaluate their work.

CHALLENGES TO MEASURING WELLBEING IN MUSEUM WORK

Measuring the effect of culture and in particular museums, on wellbeing is afflicted by several difficulties: a lack of definition of wellbeing; the subtle and unique nature of museum experiences making it difficult to apply a hypothetical, laboratory style research method; the lack of theory that relates culture to wellbeing.

Although the word ‘wellbeing’ appears to be ubiquitous there are very few definitions either in academic literature, policy documents or everyday use and this provides the first difficulty when compiling evidence. Wellbeing is often conflated with ‘health’, ‘quality of life’ and ‘happiness’. A literature review compiled for the Scottish Government on cultural indicators of Quality of Life (QOL) and wellbeing admits that “QOL is a vague and difficult concept to define, widely used but with little consistency... “well-being” is even more ambiguous, abstract and nebulous a term...Put simply, an accepted, uniform definition of either term does not exist” [12].

The New Economics Foundation (NEF) defines wellbeing as “most usefully thought of as the dynamic process that gives people a sense of how their lives are going, through the interaction between their circumstances, activities and psychological resources or ‘mental capital’ ” (NEF 2009). A much broader and more subjective definition, they suggest that in order to achieve wellbeing people need:

- “a sense of individual vitality
- to undertake activities which are meaningful, engaging, and which make them feel competent and autonomous
- a stock of inner resources to help them cope when things go wrong and be resilient to changes beyond their immediate control.

It is also crucial that people feel a sense of relatedness to other people, so that in addition to the personal, internally focused elements, people’s social experiences – the degree to which they have supportive relationships and a sense of connection with others – form a vital aspect of well-being.” [24]

Beyond definition problems, the subtle, individual and focused approach needed in the measurement of culture outcomes sits in conflict with the needs of policy and healthcare service evaluation.

“Public policymakers world-wide require research that demonstrates causal relationships between cultural participation and desired policy outcomes and for these to be single-causal outcomes.....Another key issue for public policy makers is the need for research whose results can be extrapolated or *generalised* to the population as a whole....the majority of individual level studies of culture and sport and QOL do not allow this” [13].

Data that evidences cultural transformation or experience or indeed changes in individual feelings of wellbeing tends to be subtle, fugitive and qualitative, it has to be teased out of conversation and behaviour, rather than asked point-blank. As cultural programmes work with small numbers so sample sizes tend to be small and difficult to make predictions or generalise. People engage with culture in a myriad of different ways, sitting alongside all other aspects of their life such as family, health, education, job, holidays etc. The difficulty of isolating the effect of culture in one's life means

attributing the cause of change or transformation to culture (causality) is also difficult. In gathering evidence for culture's affect on wellbeing a clash between validity and policy needs exists. Policy dictates what needs to be measured and yet:

"When researchers impose the domains of life to be measured, they risk omitting important aspects that may have greater relevance to that person or imposing aspects that have little or no relevance. The results therefore may have little validity" [8]

The risk of underestimating culture and arts' influence on wellbeing may occur as happened when using orthodox methods of measuring learning. Galloway and Bell in concluding their literature review suggest that Quality of Life (and well-being within it) may be:

"just not a fruitful subject for research: useful as an "organising concept" but just too complex to be "do-able". Alternatively, these points might lead to the view that the natural science research model, of which notions of 'causality' and 'generalisability' are part, may not be the most useful for this type of research subject" [14].

At a practical level where might museums go from here? How can museum wellbeing impacts be measured in order to persuade a healthcare or local authority that museum participation will increase wellbeing? How can museums use the language and paradigms of a medical and/or policy-based evidence base while staying 'true' to the subtle and subjective wellbeing benefits museums deliver? Perhaps once again museums can learn from 'learning'. This too seemed so diverse, free-choice and individual that a 'one-size-fits-all' standard for what people should be achieving in museums could not be built, "it would be inappropriate for museums, archives and libraries to set specific learning outcomes for learners to achieve. They do not know the prior knowledge of their users and so would be unable to make judgments about how much users had learnt. Users themselves, however, are capable of making such judgments about their own learning" [27]. The museum evaluators need to look at *relative* improvement in people's wellbeing under their own standards and in the dimensions they feel are important to them, while attempting to isolate somewhat the role of culture or museums.

HERITAGE IN HOSPITALS PROJECT

As an example of how museums might measure their impact in terms of wellbeing the AHRC-funded, UCL Museums & Collections project, *Heritage in Hospitals*, is described here. The project took museum objects into hospitals and researched their effect on patients' wellbeing. Reviewing the success of the research methodology allows an insight into evaluating wellbeing in cultural interventions.

University College London Museums & Collections (UCL M & C), with partners from Reading Museum, the British Museum and Oxford University Museums (OUM), aimed to research wellbeing outcomes in healthcare patients who used museum objects. The project focused on adult patients in a number of different healthcare settings and focused the museum activity on object handling sessions at bedsides or on wards. It worked in a general hospital, a psychiatric hospital, two neurological rehabilitation hospitals and a residential care home for the elderly. A mixed-methodology of quantitative and qualitative research was used to both quantify a hypothesised change in mood, happiness and wellbeing and capture unknown outcomes in this newly studied area.

The basic protocol was to provide volunteer patients with a facilitated museum handling session in the ward or at the bedside with a box of six museum objects from the UCL M&C collections (or OUM in one context). They were mixed objects representing geology, zoology, archaeology, art and items. They were small enough to be portable, had a tactile dimension and were sufficiently robust enough to be carried into hospital and handled without contravening infection control rules. The session would comprise recruitment; explanation and consent; wash hand; baseline wellbeing measures; a

facilitated, recorded session with the objects; wash hands; and a second set of wellbeing measures. The session was audio recorded and sometimes further conversation or interview was undertaken by the facilitator to collect qualitative data. Facilitators employed a standardised session protocol which offered ways of interacting with the patients and gave a prescribed order for the sessions so that most sessions were sufficiently similar to compare. At two contexts – the residential care home for the elderly and the psychiatric hospital the protocol was adapted slightly in consultation with staff since group sessions, rather than one-to-one sessions, were conducted.



Figure 2. A bedside museum handling session

The *Heritage in Hospitals* research drew on psychological wellbeing scales for its quantitative wellbeing measures. Measurement scales for psychological wellbeing, quality of life and health status were reviewed for their suitability to evaluate wellbeing occurring from an object handling session at patients' bedsides. Measures were short-listed using selection criteria of internal and external validity, practicality and sensitivity. Focus on the extent of usage in healthcare, breadth of application, ease of administration and degree of responsiveness informed the recommendation of optimum measures for the research. Measures indirectly related to wellbeing (e.g. physical disability and social support) or unlikely to reflect change after a short intervention (e.g. symptoms worsening with age) were omitted from the review.

Three short wellbeing scales for use immediately before and after the handling sessions with patients were chosen comprising: the Positive Affect Negative Affect Scale (PANAS:[34]) a mood adjective list, requiring patients to self-assess 10 negative and 10 positive emotions on a 1-5 Likert scale (1 not at all to 5 extremely) according to the strength of their mood at that moment; and two Visual Analogue Scales [10] asking participants to indicate their levels of 'wellbeing' and 'happiness' on a vertical scale of 0 to 100. Prior to their use the facilitator took the patient through the scales so any misunderstandings or language issues could be addressed. The results were analysed using multivariate analysis of variance with SPSS software.

Visual Analogue Scale
Please draw a line from the box before the session to indicate how happy you are feeling at the present moment.

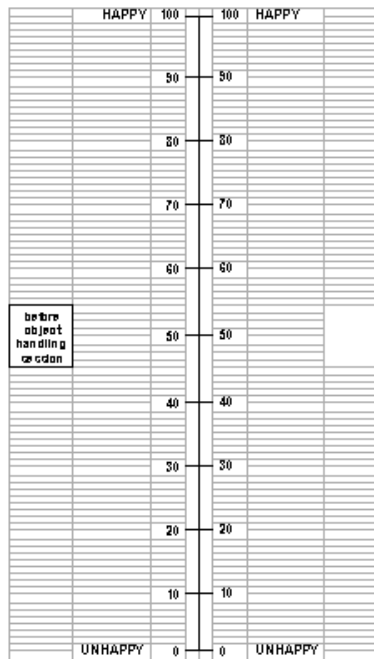


Figure 3. A Happiness VAS scale used in the research

Mood Adjective Cards

Please write a number from 1 to 5 by each of the words below to indicate how you are feeling at the present moment. Please refer to the scale below to select the most appropriate number for each word, e.g. If you feel moderately alert then you should write '3' in the box beside the word alert.

1	2	3	4	5
not at all	a little	moderately	quite a bit	extremely

please choose a number to indicate how you feel at the present moment

<input type="checkbox"/> active	<input type="checkbox"/> afraid
<input type="checkbox"/> alert	<input type="checkbox"/> ashamed
<input type="checkbox"/> attentive	<input type="checkbox"/> distressed
<input type="checkbox"/> determined	<input type="checkbox"/> guilty
<input type="checkbox"/> enthusiastic	<input type="checkbox"/> hostile
<input type="checkbox"/> excited	<input type="checkbox"/> irritable
<input type="checkbox"/> inspired	<input type="checkbox"/> jittery
<input type="checkbox"/> interested	<input type="checkbox"/> nervous
<input type="checkbox"/> proud	<input type="checkbox"/> scared
<input type="checkbox"/> strong	<input type="checkbox"/> upset

Figure 4 The PANAS scale used in Heritage in Hospitals

The scores for the positive PANAS moods and the negative PANAS moods were analysed separately, as the PANAS is designed to measure negative and positive moods as separate phenomena. Watson et al found little correlation between positive and negative mood adjectives implying the two dimensions are orthogonal, representing independent aspects of emotion. Furthermore the PANAS was successfully tested on factors concerned with reliability (e.g. test-retest reliability) and validity (e.g. construct validity). A possible disadvantage of the PANAS, however, was

that some mood adjectives such as 'afraid' and 'scared' or 'guilty' and 'ashamed' could be interpreted as the same emotion particularly within a hospital environment. The score before the session was compared to that afterwards and could be combined with the whole sample (and sub-samples) to investigate average changes in mood as a result of the session and test whether this was significant (i.e. it was more likely caused by the session than chance). The VAS scores were also input into SPSS 17.0 and analysed.

Although it was important to produce numerical results, particularly for the healthcare partners, the nature of the research area was also ideal for qualitative research: there was little existing theory about museums and wellbeing to support a hypothetical approach; the intervention was subtle, individual and cultural; and the outcomes were unknown. A qualitative research approach could aim to understand (rather than quantify) phenomena and inductively generate new theory. Grounded theory method [3] [5] was identified as the best analysis approach to generate new theories in this unexplored research area. To collect qualitative data, recordings were made of the handling sessions, fieldnotes were written by facilitators to record the contexts and the participant behaviours and interviews were conducted with patients, healthcare staff and museum professionals. Staff could give an insight into wellbeing outcomes among patients particularly where data were difficult to gather because of depressive symptoms or cognitive/attentional deficits.

The transcribed qualitative data were entered into nVivo, (qualitative analysis software) and firstly open coded, focusing to core theme coding and memoing was used to generate relationships between themes, particularly session processes, outcomes and wellbeing. Constant comparison was used to compare sessions, patients and contexts. Figure 5 shows the analytic process for the qualitative data.

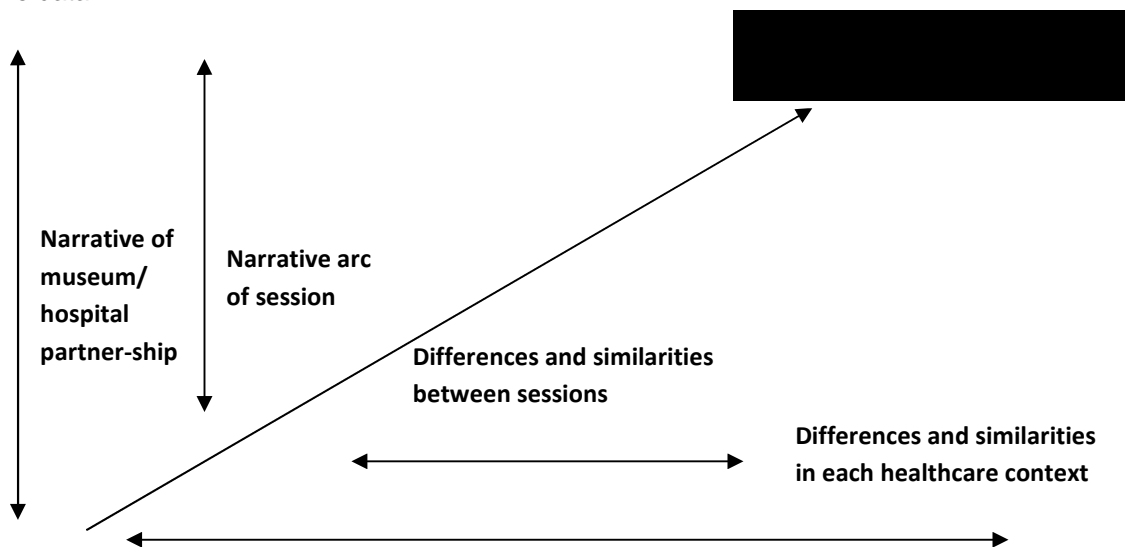


Figure 5. Analysing qualitative data from Heritage in Hospitals

The core themes that emerged were evidence of 'engagement' in the sessions from patients, 'wellbeing' outcomes observed and patient 'background'. The range and nature of these phenomena were coded for and descriptions and relationships emerged. In many ways the handling sessions in hospitals might look similar to ones one would evaluate for 'learning'. Through conversation and sensory perception one can pick up participant 'engagement' in the museum objects. However, the research was looking for engagement that led to 'wellbeing' rather than 'learning' (although in fact these were related to each other). The wellbeing was also inextricably linked to the context we found participants in. Their wellbeing had already been altered by a hospital or medical experience, and any wellbeing benefits of handling objects was looking for an improvement in this altered state.

It was not always possible to use theoretical sampling [3] [5] as one ideally would with grounded theory, due to the constraints of the quantitative data collection needs, but because of the amount of sessions completed theoretical sampling happened to some extent from within the data from over 200

sessions. This meant core themes could be explored from within the collected sample itself when needed.

REVIEW OF METHODOLOGY

The project worked within a number of hospitals and healthcare contexts, each with their own characteristics. This multi-centre research allowed for the contrast and comparison of results as well as the research methodology between different environments, staff systems and dominant medical conditions. These differences had significant effects on patient background, engagement and wellbeing but also showed that the research methodology was not appropriate or useful in all circumstances.

The research contexts were a general hospital, a psychiatric hospital, two neurological rehabilitation hospitals (in London and Oxford), and a care home for the elderly and they varied along spectrums of:

- Length of stay
- Cognitive impairment
- Physical impairment
- Sensory impairment
- Beginning, middle or end of illness/accident trajectory
- Amount of professional medical attention/monitoring
- Schedule of treatment or therapies
- Low mental or physical health
- Provision of 'living' quarters or communal areas
- Size of institution
- Staff support level
- Critical or long term condition
- Patient familiarity with hospital
- Existence of treatment/therapy goals – criteria for discharge

These characteristics affected aspects such as when we could do the research and respondents ability to take part in the research. The main challenges encountered with using the methodology were connected to patient impairment – particularly cognitive and attentional deficit in the elderly care home residents and the neurological rehabilitation patients. These patients found it difficult to understand the quantitative scales and at the same time were not always capable of showing 'engagement' in the activity, even though wellbeing might have occurred. With these participants the researcher needed to be aware of more subtle behavioural signs, helped by the medical staff and background knowledge of the patient's symptoms and conditions. The researcher memos from the field became more important in the data collection. The research team also concluded that even simpler and quicker wellbeing scales were needed with these groups of people. The scales were also difficult to use with group handling sessions. They took too long and required too much individual explanation. A shorter and more readily understandable set of scales would be preferable when undertaking a group session.

There were several parts of data collection that were more difficult to collect. In the general hospital interviews with patients after the session (a day or two afterwards) to understand the impact over their time in the hospital, was difficult due to high turnover and surgical timetables. Also at the general hospital the inconsistency of staff made staff interviews with staff who had been present while the sessions were taking place nearly impossible. The museum researchers worked around, rather than with, medical staff. Compared with other healthcare contexts, staff at UCH were less observant with shallower, shorter term (although not necessarily less caring) personal relationships with their patients and therefore provided less insightful comments. This had implications for the success of the sessions as well as for data collection. However, at other healthcare contexts the team worked much more closely with medical and pastoral staff who were able to give a good insight in the impact they

felt the sessions were having. The healthcare context, and in particular staff availability had a large influence on the quality of data collection.

Another challenge within the data collection framework was finding a way to record how people touched the objects. As a major part of the handling session, it was felt it could have a special impact on wellbeing. The qualitative data of observation and session recordings recorded these tactile interactions somewhat, but researcher memories can be inaccurate on such a nuanced experience and due to the fact that little research has been done in this area there was no checklist of tactile behaviours to look for. Photography and videoing patients was attempted in a few cases and there was potential to use this more extensively in the future. The NHS guidelines on patient consent through the however made it slightly more onerous to obtain different 'media' from patients on a large scale. The bulk of consent, scales and other paper work was already an issue with many patients and provided a barrier to engagement with others.

A researcher/facilitator was found to be necessary to administer the scales in a valid way. Participants were eager to answer according to their personalities or traits, but they needed to answer according to their, albeit transitory, mood. A researcher there on-hand very much helped with this aspect of validity. It was also found that although the VAS scales are in the form of a 100-increment scale, most people fill them in as if they were a 10 or 20-increment scale. People may well be not able to conceptualise their wellness or happiness in such subtle intervals of 100ths, or they may just find it quicker and easier to point to a multiple of 10. The staff at the psychiatric hospital confirmed that their patients found it difficult to conceptualise their own wellbeing, even on such a simple scale of one to 100. Furthermore, several participants had difficulty in assessing their wellbeing directly being unable to dissociate their psychological perception from their physical state.

Review of scales

Examination of the correlations between measures suggested that positive and negative PANAS scores represent independent aspects of emotion where increase in positive mood is not associated with decrease in negative mood or *vice versa*. The correlation matrix, however, showed redundancy in administering the PANAS and both VAS scales as PANAS scores correlated highly with wellbeing and happiness ratings. Happiness and wellbeing correlated significantly highly with each other though happiness produced the highest post-session mean with a significant proportion of participants reporting an increase in post-session happiness in the absence of wellbeing as measured by the VAS scales.

Certain of the PANAS mood words made a significantly greater contribution to the difference between pre- and post-session than others. "With the positive mood adjectives, the words 'alert', 'enthusiastic' and 'inspired' contributed 67% of the difference between pre-and post-session scores, with the words 'active' and 'excited' adding a further 3%. With negative mood adjectives, the words 'scared', 'nervous', 'irritable', 'distressed' and 'upset', constituted 89% of the difference between pre- and post-session scores" [34]. A shortened mood adjective list would be possible in the future and aid quick administration of the scales. However, different healthcare contexts produced different mood changes, so use of the full scales would be advisable before shortening in any context.

Reliability and validity have two different meanings in terms of quantitative and qualitative research. For the former, isolating variables is necessary to ensure a claim of causality or at least correlation, in this case between museum handling and wellbeing. The scales and measures also need to be measuring what they say they are. For qualitative research minimising bias of the facilitator and data collector are important, recording all analysis and data collection decisions to make them accountable and understandable to others (although not necessarily repeatable) and ensuring that the participants are being given voice in the research.

The quantitative research was the most difficult to maintain validity and reliability for, because of a number of inherent but unavoidable circumstances associated with the project: the hospital environment is very far from an ideal experimental laboratory environment. For example a selected sample of participants with certain characteristics was not possible. The participants were patients who were well enough and willing to take part. It was also not possible to control the environment,

that is the hospital system works around the handling sessions with visitors, procedures, doctors' visits, medication etc. Due to funding constraints the same people completed the 'intervention' as measuring the outcome. Perhaps most obviously though, as a social and cultural interaction, relying on personal significance and background, the intervention (handling session) itself is never the same twice. The session protocol endeavoured to mitigate some of these. So, for instance the use of the baseline measure of wellbeing *before* the session as the control for the change in wellbeing rather than matching wellbeing in one participant with another in the sample who has not had a handling session. Taking measurements immediately before and after the handling session meant that the effect of doctors, visitors, procedures etc on the measurement was minimised to only those ones that occur *during* the handling session. The filling in of the scales was made 'secret' (by using sealed envelopes), so that patients did not try to please the facilitator in their answers, in particular falsely claiming to feel better. It was found that the help of the facilitator though, was needed and made the scales more valid, so this was eventually continued.

Isolating variables for the handling sessions provoked several challenges as the sessions in fact introduced several variables – a social interaction, a tactile interaction and a heritage interaction. Which of these produced the wellbeing? The qualitative data would suggest that in fact all three of these were needed to be effective and the dynamic interaction of touching and talking about heritage objects produced a wellbeing outcome greater than the sum of its parts. The social and tactile interaction, far from being something that needs to be eliminated, is a full part of what was being measured. So the question becomes how is this type of interaction different from normal social interaction with a friend or relative perhaps or someone without museum objects as the focus of the interaction? A few manipulations in the protocol attempted to strengthen the findings in this respect. The researchers used control sessions of talking about objects with no objects or handling to understand if the social interaction had an effect. These confirmed that wellbeing was not an outcome of a purely social intervention. Participants have also commented on this in the qualitative data, specifically how the sessions are different from other visitors they have.

CONCLUSIONS

There is huge potential for museums to work within healthcare institutions and to create increased wellbeing among patients. Moving on from their experience in evaluating the subtle forms of museum learning, museums can begin to evaluate their worth in terms of wellbeing, another amorphous, subjective and individual phenomena. *Heritage in Hospitals* was a project that attempted to do that and the methodology has been reviewed here. The psychological scales used were useful in most contexts, and quantified an increase in wellbeing, but needed adaptation for certain types of patient, due to cognitive or attentional deficit. However, it was found that qualitative data was needed to explain many of the occurrences as the cultural museum sessions were not sufficiently isolated as experimental phenomena.

Using mixed methodology however does work towards decreasing the deficit of theory about culture and wellbeing, both revealing new relationships between phenomena and testing those and others. But working within a healthcare sector still requires an amount of negotiation between acceptable research paradigms, just as museums faced when reporting free-choice learning outcomes to schools. Museums need to continue to be confident of their worth, utilising new ideas about wellbeing, holistic medicine and multi-agency health approaches to develop an offering to users of healthcare institutions. Mixing qualitative and quantitative methodology works well to provide acceptable results for both sectors and a good evidence base.

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