



CREATE

Canterbury Research and Theses Environment

Canterbury Christ Church University's repository of research outputs

<http://create.canterbury.ac.uk>

Copyright © and Moral Rights for this thesis are retained by the author and/or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder/s. The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given e.g. Solway, Rob (2014) Developing a psychological understanding of museum object handling groups in older adult mental health inpatient care. D.Clin.Psych. thesis, Canterbury Christ Church University.

Contact: create.library@canterbury.ac.uk



ROB SOLWAY BSc Hons

**DEVELOPING A PSYCHOLOGICAL UNDERSTANDING OF
MUSEUM OBJECT HANDLING GROUPS IN OLDER ADULT
MENTAL HEALTH INPATIENT CARE.**

**Section A: Material objects and psychological theory: A
conceptual literature review**

Word Count: 9,042

**Section B: A thematic analysis of museum object handling groups
in older adult mental health inpatient care**

Word Count: 7,988

Overall Word Count: 17,726

**A thesis submitted in partial fulfilment of the requirements of Canterbury
Christ Church University for the degree of
Doctor of Clinical Psychology**

JUNE 2014

**SALOMONS
CANTERBURY CHRIST CHURCH UNIVERSITY**

Acknowledgements

I am grateful to the participants and facilitator of the nine sessions. I would like to thank my supervisors, Linda Thomson, Paul Camic and Helen Chatterjee for their guidance, support and for giving me this opportunity. I am indebted to the library staff at the Hayloft and St Augustine House and the administration team at Salomons for their help. I have appreciated all the friends and colleagues and who have supported and wished me well. Finally I would like to thank to my lovely family.

Summary of the MRP Portfolio

Section A is a conceptual review of literature, exploring material objects and psychological theory with an emphasis on clinical applications. The review is structured into seven broad categories, each relating to different areas of psychology that have explored an effective role for material objects in research or clinical work. Methodological limitations in the literature are discussed and the review concludes with recommendations for further clinical work and research involving the use of material objects.

Section B describes a qualitative study of a museum object handling group using thematic analysis. Nine sessions were held in an older adult psychiatric inpatient setting with 42 participants. Five main themes were identified, four of which were congruent with existing research associated with short term benefits from the intervention. The final theme, imagination and storytelling, represented a new finding. These findings contribute to an emerging body of evidence related to museum object handling and the paper concludes with a discussion of research and clinical implications.

Table of contents

Section A: Literature Review

Abstract	2
Introduction	3
Aim of the review	3
Structure	3
Methodology	4
Inclusion and exclusion criteria	4
Results	5
Psychoanalytic thinking and material objects	5
Transitional objects.	5
Transitional objects and borderline personality disorder.	5
Transitional objects in therapy.	7
Found objects	7
Clinical applications of found objects.	8
Touch	10
Touch and development.	10
Touch and emotion.	12
Touch and triple coding.	13
Material objects in art therapy	14
Art therapy and Post Traumatic Stress Disorder.	14
Group processes.	15
Valued possessions	16
Valued object choice.	16
Valued object choice and affect.	16

Valued object choice and alexithymia.	17
Material objects and identity	18
Ethnicity and culture.	18
Homed and homeless.	19
Culture, age and stage of life.	21
Heritage in Health: museum object handling interventions	22
Museum object handling sessions and touch.	28
Engagement with the objects.	29
Engagement with facilitators.	29
Discussion	30
Implications for research	30
Implications for practice	31
Conclusion	32
References	33

Section B: Empirical Paper

Abstract	2
Introduction	3
Research into museum object handling sessions	3
Theoretical base for museum object handling	5
The present study	7
Method	9
Participants	9
Procedure	10

Ethical considerations	10
Data Analysis	11
Statement of personal position.	11
Thematic analysis.	11
Quality assurance	12
Sensitivity to context.	13
Commitment and rigour.	13
Transparency in the analysis of data.	13
Impact and importance.	13
Results	13
Responding to object focused questions	14
Guided discovery, guessing games and questions.	15
Shared exploration and discovery.	15
Talking about the task including rules and rule breaking.	15
Learning about objects, learning from each other	15
Learning new things.	16
Careful examination of the object.	16
Story of the object:	17
Bringing the past alive.	17
Enjoyment, enrichment through touch and sense of privilege	18
Enjoyment.	18
Sense of Privilege.	18
Touch.	19
Group culture.	20
Memories, personal associations and identity	21

Objects as memory triggers.	21
Objects as prompts for disclosure.	22
Objects as reminders of identity.	23
Imagination and story telling	24
Storytelling.	25
Imagination and role play.	25
Further analysis of themes and codes	27
Discussion	27
Wellbeing and engagement processes	27
Group processes	30
Limitations	31
Implications for further research	32
Implications for clinical practice	32
Conclusion	33
References	35

List of tables

Section A:

Table 1: Effectiveness of Museum Object Handling sessions (MOHS) quantitative studies	25
Table 2: Effectiveness of Museum Object Handling sessions (MOHS) quantitative and qualitative studies	26
Table 3: Effectiveness of Museum Object Handling sessions (MOHS) qualitative studies	27

Section B:

Table 1: Themes and codes	13
---------------------------	----

List of appendices

Section C:

- A Example flow chart
- B Concept map
- C Literature search results
- D Criteria for assessing quality of papers, Greenhalgh (2010), Yin (2009)
- E Details of participant attendance per session
- F Details of loan box contents
- G Museum object handling session protocol
- H Ethics letter and contract
- I Example consent form and information leaflet
- J Annotated transcript
- K Records of theme development
- L Nascent thematic maps
- M Final thematic map with relational details
- N Excerpts from quotation list for code
- O Reflective research diary (abridged)
- P Notes on presentation of preliminary findings
- Q Submission guidelines for chosen journal – Journal of Mental Health

Material objects and psychological theory: A conceptual literature review

Accurate word count: 9,042

Abstract

This review gives a conceptual summary and critique of psychological theories and research concerning the use of material objects and their possible role in clinical work. Studies relating to the theory and use of material objects in different contexts and interventions were identified through a search of several databases. The 33 papers that met inclusion criteria fell within seven broad categories: psychoanalytic thinking and transitional objects, found object theory and clinical use, developmental and neuropsychological perspectives on touch, material objects in art therapy, valued object choice, the relationships of material objects to identity and museum object handling interventions. A range of effective roles for material objects in research and clinical work was identified throughout the literature, in particular nine studies found that museum object handling sessions offered short term benefits in wellbeing and engagement to a variety of clinical populations. A number of methodological limitations were identified throughout this literature. The review concludes with recommendations for further research and clinical application of material objects.

Keywords: material objects, touch, psychological interventions, museums

Introduction

Surprisingly little attention has been paid in psychology to the unique relationship human beings have with material objects (Camic, 2010). The term “material objects” refers to the physical items that fill our environment throughout our lives that we use, possess, wear, covet, discard, and experience in a myriad of ways every day. Human beings are mostly unique as a species in our acquisition and uses of material objects for purposes beyond the purely functional (Martin & Jones, 2009). Exploring the complexities of the relationship between people and material objects opens potential for both psychological insight and application for therapeutic benefit.

Aim of the review

This review is intended to give an overview of psychological theories and research regarding material objects, with particular emphasis on examining the evidence base for interventions using material objects with a range of modalities and client groups.

Structure

The following areas of literature and psychological thinking are reviewed:

- Psychoanalytic views of transitional objects in association with personality disorder and their use in therapy
- Recent research into found objects and their potential role in clinical practice
- The act of touching objects with respect to developmental psychology, neuropsychological research and theories of memory and cognition
- The theory and use of material objects in art therapy, in particular in group contexts and in working with post traumatic stress disorder
- Valued possessions in terms of recent research and links to pathology

- Aspects of identity that may be explored through material objects, including ethnicity, life events and stage of life
- Museum object handling sessions, an object based intervention used in some healthcare settings
- A discussion of clinical and research implications

Methodology

A conceptual review of the literature was conducted in order to synthesise areas of conceptual knowledge pertaining to a better understanding of the issues raised by the research question (Jesson, Matheson & Lacey, 2011). This was implemented by electronically searching databases: Psycinfo, Applied Social Sciences Index and Abstracts (ASSIA) and Cochrane Database of Systemic Reviews. The search terms used and their permutations were as follows: object or objects and either material, physical, handling, found, valued, heritage or museum. Manual searches of the reference lists of relevant articles were performed (see appendix A). The papers were then structured into the seven areas detailed above using Hart's (1998) protocol for developing "concept maps" (p.155) in literature reviews (see appendix B). This entailed moving from declarative knowledge of the key concepts, theories and findings in the material to procedural knowledge focussed on the relationships and connections between the various elements of the identified literature (Hart, 1998).

Inclusion and exclusion criteria

Articles were included if they made reference to objects with physical properties in relation to psychological theory or intervention. In light of the paucity of literature no time parameters were imposed. Articles were excluded if they were not written in the English language. A total of 33 papers were selected (see appendix C). The quality of the selected papers was assessed in terms of the criteria suggested by Greenhalgh (2010) with additional reference to Yin's (2009) framework for assessing case studies (see appendix B).

Results

Psychoanalytic thinking and material objects

Within the psychoanalytical tradition under certain circumstances, internal psychological processes may be manifested in external material objects, in particular “transitional objects” (Winnicott, 1953).

Transitional objects. Winnicott (1953) coined the term “transitional object” to describe an item such as a toy or piece of cloth that assumes a great importance to a child, particularly when going to sleep. Winnicott listed several qualities unique to the relationship between the child and the transitional object. The child assumes rights and control over the transitional object which must remain unchanged by anyone except the child. It must survive being hated and mistreated as well as being loved and cuddled. It must seem to the child to possess its own vitality, such as by giving warmth, moving or having texture. Winnicott understood the transitional object as a defence against anxiety and viewed the transitional object as part of a developmental stage. There is a paradox in that the transitional object simultaneously exists and is created by the child; “it involves the use of objects from the outer world in the service of projects originating in the inner world” (Jones 1992, p. 225). The use of transitional objects may continue through adulthood and has been the subject of clinical research and enquiry, in particular drawing on contemporary theoretical understanding of borderline personality disorder in relation to the use of transitional objects.

Transitional objects and borderline personality disorder. The concept of borderline personality disorder is associated with individuals who experience difficult and unstable personal relationships (Aaronson, Bender, Skodol & Gunderson, 2006), emotional instability (Levy, 2005), fears of abandonment and difficulties being alone (Bender, Farber & Geller, 2001). While the aetiology of this disorder is not fully understood, evidence of there having been problematic attachment relationships with childhood caregivers and adversity in childhood are considered

salient (Fruzzetti, Shenk & Hoffman, 2005; Levy, 2005). Childhood exposure to uncaring, inconsistent and over controlling caregivers is believed to contribute to the formation of problematic attachment styles and maladaptive relationship schemas that have been cited as key features of borderline personality disorder (Bateman & Fonagy, 2003; Levy, 2005). This suggests that people with borderline personality disorder may be especially driven to seek attachments that offer security, comfort, consistent availability, relief from distress and have less potential for abandonment. In light of this Hooley and Wilson-Murphy (2012, p.180) posited that “people with borderline personality disorder might use transitional objects in a different manner than people who do not have borderline personality disorder”. The available evidence is sparse but supports some relationship between borderline personality disorder and transitional object attachment, with high percentages of people with the diagnosis using transitional objects (e.g. Arkema, 1981; Cardasis, Hochman & Silk, 1997; Labbate & Bennedek, 1996). This relationship was the focus of a unique study involving a non-clinical sample of 80 participants by Hooley and Wilson-Murphy (2012), who found “people who reported intense current attachments to transitional objects were significantly more likely to meet criteria for borderline personality disorder diagnosis than those who did not” (p.179). Clinically validated measures were used in the study but nonetheless great care should be exercised in generalising the results from this small non-clinical sample of volunteers to a broader population. While the existing body of research is not extensive, there is a sound theoretical base supporting the suggestion that there is a relationship between an intense emotional reliance on transitional objects in adulthood and borderline personality disorder. This possibility could inform clinical work in terms of exploring an individual’s relationship with transitional objects in the course of an assessment, or to be receptive to the use of transitional objects in helping with transitions. Another potentially worthwhile use of transitional objects may also be in formal psychotherapy which is explored more fully in the following section.

Transitional objects in therapy. Transitional objects may be used in psychotherapy and contribute to a positive outcome (Hobson, 1985). Resch, Pizzuti and Woods (1988) suggested a mechanism for this may lie in the development of a transitional object during therapy indicating a move towards maturity. Arthern and Madill (2002) also looked in detail at the process of how transitional objects might work in psychotherapy. The study involved semi-structured interviews with six adult clients in humanistic psychotherapy in which transitional objects had been introduced. A grounded theory methodology was used to explore the client's perspective, which suggested a five-phase process of "holding" was involved. This process moved from an inability of the client to hold the therapist in mind between sessions to a phase where the therapist held the client, for example by holding the client in mind between the sessions and communicating this to them. In the next phase the transitional object held the memory and meaning of being held by the therapist in various ways. This then moved to a phase whereby repeatedly physically holding the transitional object enabled the client to internalise and gain access cognitively and affectively to that memory and meaning of being held by the therapist. The final phase shifted to the client being able to have a stable sense of the therapist and therapy between sessions without using the transitional object. The participants' explanation of the five phase process drew on the successful integration of three themes; the transitional object helping them develop a sense of, "a) continuity of the therapist's existence, b) connectedness with the therapist, and c) the development of a new sense of self" (Arthern & Madill, 2002, p. 369). The study is well executed with researcher positions clearly stated and alternate explanations for results explored but limited by the small, all female sample and exclusive focus on a single therapeutic approach.

Found objects

One psychological aspect of material objects is related to the found object, defined as an item of low economic value that is often discarded as rubbish, abandoned, purchased in second-

hand shops and so on but takes on personal value to their discoverer when found. Camic (2010) posits a found object process based on a grounded theory analysis of qualitative survey data from a non-clinical population of 65 participants. The study looked at how participants located objects, the significance the objects held for the individuals and the uses to which the items were put. The found object process was described as consisting of five superordinate categories. The first, “discovery and engagement”, captured an excitement in seeking out a new discovery followed by enjoyment at the point where the object was discovered and then an active response in realising what potential uses the object may have had. The second category, “history and time past” where there was speculation about the history of the object and its previous owner(s), may have trigger personal memories in the finder. The third category, “symbolic and functional”, identified a number of ways the object may have held value: by being aesthetically pleasing, symbolic in evoking memories or by being of practical use. The fourth category “psychological processes”, included social processes in discussing the object and the effect it can have on emotion, cognition and memory. The final category, “ecological affirmation”, located the process in environmental concerns in reusing or recycling unwanted objects. A strength of this research was the unusually large sample size of 65 participants coming from an international sample of eight countries, and the use of both theoretical saturation and theoretical sufficiency in theory building. A limitation was the lack of any negative sampling, which could have added further parameters to the emerging theory.

Clinical applications of found objects. One clinical application for the use of found objects is in their introduction to therapy for adults with mental health diagnoses. The extant literature is sparse but spans a number of therapeutic models: one to one and group psychotherapy, art therapy and the use of recovery based practice with younger adults. Camic, Brooker and Neal (2011) carried out a thematic analysis of data from 14 participants (clinicians and patients) who were introduced to found objects in their individual or group therapy. The utilisation of found objects was seen as a

useful overall tool with further clinical potential; 19 themes were identified in four domains. The first domain was “clinical rationale” where clinicians cited benefits such as engagement with therapy and enhancing clients' awareness of their environment. “Client responses to found objects”, the second domain encompassed the use of the objects as a “psychological bridge” (p. 155) from an individual's internal world to the external. The third domain “impact of found objects” was in increasing engagement with therapy and as a tool for both identifying emotions and facilitating change and transformation. The fourth domain “function of found objects” included reducing anxiety, helping to manage difficult feelings and increasing self-confidence and sense of agency. The study benefited both from a sophisticated embedded case study design (Yin, 2009) and analysis that was subject to a high degree of quality control. This contributed to the paper achieving the stated aim of providing at least preliminary evidence for the use of found objects in clinical practice; a limitation was the lack of a comparison group or a longitudinal design, which could have addressed the potential novelty effect of the objects.

Adopting a similar approach to clinical practice in a single case study of an adult with severe and enduring mental health problems, Brooker (2010) reported that the use of found objects in art therapy had benefits in terms of mental and emotional well-being. The benefits were reported to occur through “bridging psychological barriers to engagement” with the client's outer world, allowing acknowledgement and processing of thoughts, feelings and emotions. The case study is well presented and highlights unusual person-material object theoretical ground, although the outcome measures used were entirely subjective and the study was limited to one case.

The clinical use of objects was also central to a Canadian study by Romano, McCay and Boydell (2011) which involved ten young adult participants who had experienced a first episode of schizophrenia. Participants were asked to select and photograph material objects that symbolised to them their process of recovery during their first episode and then to describe the meaning of the

objects in semi-structured interviews. The researchers found that the selection and discussion of objects was an effective way for participants to explore and express issues relating to their recovery, personal attributes and values: “for some participants, it was only by reflecting on their material objects that a unique aspect of recovery was revealed” (p. 76). For example one participant selected his wristwatch as symbolic of time, reflecting on the importance of time in the process of recovery from schizophrenia. Although the stated objective of the paper was an exclusive focus on material objects, it should be noted that multiple data sources were used. For example the impact of combining photography with the use of objects was unclear and this weakened the conclusions that were made. The extant literature is not extensive but lends cautious support to the clinical application of found objects with adults with mental health issues, whereby the objects may be viewed as acting as a psychological bridge between inner and outer worlds.

Touch

An obvious but intrinsic facet of interacting with material objects is the use of the sense of touch. Giachritsis (2008, p.75) argues that possibly touch can be considered the “ultimate sense which allows us to build a complete representation of the world” because of the unique capacity of touch to confirm the physical presence of an object; an infant may turn its head to a sound or look closely at an item of interest, but needs to grasp an object to establish it physically exists. Touch is discussed below from a developmental perspective and in terms of touch as a nexus of emotion, cognition, memory and other psychological processes. Literature is also presented examining the theoretical impact on given interventions that combine touch with other sensory modalities.

Touch and development. Material information is considered a key property of the physical world, while learning about the properties of the physical environment and using this knowledge to guide actions is an important step in human development (Paulus & Hauf, 2011). Material properties including object characteristics such as rigidity and texture are important aspects of our

interaction with objects (Klatzky & Lederman, 1993). For example, we know that a cement object is preferable to a flower for use as a paperweight. Studies have indicated adults use material information to guide their reaching movements (Fleming, Klatzky, & Behrmann, 2002) and adapt their movement time, slowing when reaching for a slippery object (Fikes, Klatzky & Lederman, 1994).

Less is known about children's developmental changes in the use of material information to guide their actions. It has been established by the literature on perception-action accounts of sensorimotor development that objects are laden with rich information about the actions they afford (Adolf, Eppler & Gibson, 1993; Gibson & Pick, 2000; Lockman, 2000). Within the first year of life infants acquire behaviours that assist them in gathering information about a range of object properties. For instance, studies have found that infants squeeze soft objects more than rigid ones (e.g. Bourgeois, Khawar, Neal & Lockman, 2005; Fontenelle, Kahrs, Neal, Newton & Lockman, 2007; Palmer, 1989; Rochat, 1987). Evidence from studies concerning perceptual development show that infants are able to differentiate between different material properties from a young age (Sann & Streri, 2007; Stack & Tsonis, 1999) and integrate this information into their play behaviour. A study by Paulus and Hauf (2011) of 32 healthy term infants (16 boys and 16 girls) demonstrated 11 month old infants' capacity to use an object's material information about weight to choose a lighter and more playable object. These studies favour designs without control groups and sample sizes vary, nonetheless it is important to note that the aim of this research was in establishing when (not if) infants begin to use material properties in this way. The touching of material objects is an important part of the sensory array an infant deploys in exploring, playing and problem solving in the physical world. A newborn baby will have contact with material objects from an extremely early point in life: "across divergent cultural and socioeconomic groups, material objects play important roles in an infant's development of self-awareness through tactile, visual, auditory and olfactory

means” (Camic, 2010, p.83, commenting on Vygotsky, 1933/2002).

Touch and emotion. As an adult the sense of touch continues to guide and inform close interactions with the immediate environment (Critchley, 2008). The exploratory act of handling an object engages the haptic system which integrates cutaneous signals (such as temperature and texture) and kinaesthetic signals (such as size and shape) via cutaneous receptors in the skin and proprioceptive receptors in the muscles (Giachritsis, 2008; Schiffman, 2000); these receptors (collectively termed mechanoreceptors) convert the mechanical effects of contact forces to electrical impulses in the nerves (Wing, Giachritsis & Roberts 2007). Recent evidence suggests that beyond pure discrimination of geometry, weight, and texture the sense of touch also conveys an emotional aspect sometimes termed affective touch (McGlone 2008; McGlone, Vallbo, Olausson, Loken & Wessberg, 2007). Touch may convey pleasurable feelings, for instance as is commonly experienced holding silk material (McGlone, 2008). Critchley (2008) noted that the process of object handling may confer significance and emotional meaning independent of functionality. Sensations of emotional touch, according to Critchley, travel to the brain by a different pathway to conventional discriminative touch, and the information bypasses the somatosensory cortex to directly access emotional regions of the brain (limbic system) believed to support emotional states, guide behaviour and reinforce memories. The studies indicating affective touch draw on a range of anatomical, psychophysical, electrophysiological and neuroimaging techniques using robust procedures such as microneurography and functional magnetic resonance imaging (fMRI). Nonetheless affective touch is not as established as the other sensorimotor features of the haptic system. For instance the presence of CT-afferents (slow conducting although unmyelinated nerves associated with the posterior insular cortex) in humans is not contentious; however they may be viewed as a vestigial system rather than one of the mechanisms of emotional touch. In addition, epistemologically the hypothesis of affective touch requires rejection of the Cartesian duality

separating mind and body (or perhaps mind and brain) which remains integral to many psychological approaches.

Touch and triple coding. It must be noted that the sense of touch is part of the human multi-sensory experience, with a large body of cognitive neuroscience research supporting the view that haptic perception of an object is heavily influenced by what we hear, see or smell when touching, evaluating or exploring it (e.g. Demattè, Sanabria, Sugarman, & Spence, 2006; Ernst & Banks, 2002; Gepstein, Burge, Ernst & Banks, 2005, Helbig & Ernst, 2007; Spence, 2008).

Thomson et al.'s (2012a) discussion of heritage in health sessions, which included tactile stimulation (such as holding museum objects), considered the interaction of touch with the verbal and visual sensory modalities involved and proposed a “triple coding” rather than a dual coding model (Baddeley, Eysenck and Anderson, 2009; Paivio, 1986). Paivio (1986) coined the term “dual coding” where “verbal and visual material are connected in a short term store or ‘working memory’ during encoding and integrated with material retrieved from long-term memory” (Thomson et al. 2012a, p.67); Simmons (2006) proposed that dual coding might be ameliorated by the contiguity effect which was described as performance being enhanced when verbal and visual explanations are not presented separately but instead coordinated (Clark & Paivio, 1991). Triple coding also draws on a levels of processing approach (Craik & Lockhart, 1972; Lockhart & Craik, 1990), theorising that greater elaboration of physical material leads to deeper encoding and the deeper an item is encoded the better it will be remembered.

In the context of heritage in health interventions, Thomson et al. (2012a) posited that triple coding involves elaborative processing and the “modality effect” of combining touch with visual and verbal information to expand the sensory capacity of working memory. It is pertinent to note that the dual-coding model of memory is not universally accepted and different theories exist, such as a reliance on abstract propositional representations as a foundation of cognition (Paivio, 1991). It

is, however, well established that touch is a powerful multidimensional exploratory sense and as such when combined with other sensory modalities may theoretically provide an enhanced and profound impact upon psychological constructs such as emotion, memory and cognition.

Material objects in art therapy

A wide range of material objects may be actively used to create art and artworks, though a full discussion of this falls beyond the scope of this review. Of particular interest in terms of psychological thinking and clinical benefit is art therapy in which material objects are widely employed.

Art therapy and Post Traumatic Stress Disorder. The use and manipulation of material objects is a central aspect of art therapy; materials provides a medium for non-verbal communication and the unique art objects often produced in art therapy interventions may form a focus for discussion and reflection or a repository for memories of the creative process, relationship with the therapist and other experiences (Case & Dalley, 2006). Art therapy has been associated with a psychoanalytical orientation but within and beyond this has encompassed a range of different theoretical frameworks including the humanistic, Gestalt and Freudian traditions; nonetheless the use of physical materials remains a constant across art therapy (Rubin, 2009). One way that this particular use of physical objects and materials may be of potential benefit is in offering a mechanism for processing traumatic memories (Kozłowska & Hanney, 2001; O'Brien, 2004). Much but not all current theoretical literature and evidence suggest that inefficient encoding and processing of traumatic memories is considered to be a key feature of post-traumatic stress disorder (PTSD) (e.g. Ehlers & Clark, 2000; Geuze, Vermetten, Ruf, de Kloet & Westenberg, 2008). It is posited that emotional 'memories' of a traumatic event may be stored in the amygdala of the brain rather than the hippocampus (Hayes et al. 2011; Layton & Krikorian, 2002; Nadel & Jacobs, 1998). The trauma memories in the amygdala are thought to remain in a non-verbal, affect laden state that

drives many of the flashbacks, intrusive thoughts and other symptoms of PTSD (Ehlers & Clark, 2000; Hayes et al., 2011). The use of physical materials in art therapy interventions potentially provides a relatively safe, controlled and contained means to access the memories and facilitate a move to processing them more calmly and rationally in the hypothalamus, transcending the symptoms of trauma (Buschel & Madsen, 2006; Lai, 2011; Malchiodi, 2003; Mills & Kellington, 2012). It is theorised that this may be effective for adults or children who have experienced trauma (Kozłowska & Hanney, 2001; Malchiodi, 2008). The use of found objects in therapy has been termed a psychological bridge between inner and outer worlds (e.g. Booker, 2010); to stretch this metaphor further, the use of physical materials in art therapy for PTSD is posited to be transformative in that the very process of using that psychological bridge results in beneficial changes for the individual making the crossing. Nonetheless the art therapy studies detailed here, like much of art therapy research, consists entirely of small group case study data which is of varying quality, particularly in the frequent use of subjective measures. This restricts the generalizability of the results and hampers the development of theoretical propositions, and it should be noted that various other factors might be at play; one of the most significant may be group processes, which are considered in the following section.

Group processes. Art therapy may involve one to one sessions but is often offered in group sessions. (Rubin, 2009). Once again art therapy groups draw on and combine a varied range of approaches and influences such as Bion's (1961) ideas on group dynamics and Yalom's (1975) work on the potential curative factors in groups (Case & Dalley, 2006). Nonetheless, the use of physical materials remains a constant across art therapy groups and Case & Dalley (2006) noted this offers unique opportunities to enhance communication and social processes in the group through at least two potential mechanisms. The first is that the materials used and objects produced may be vehicles to express, share, withhold or comment on emotions that are unacceptable or too

distressing to explore verbally. The second potential mechanism lies in the physical materials within the group forming a key aspect of the group's unique cultural lexicon; some of the things in the room become incorporated into a unique shared language.

Valued possessions

The psychological mechanisms whereby we attribute value to possessions have been subject to empirical research, as outlined below.

Valued object choice. Surrounding oneself with valued possessions appears to be a distinctive human characteristic (Camic, 2010). Norman (2004) suggested that the choice to possess objects is associated with three separate psychological processes: the appearance of the object (related to reactive processing), its usability (related to behavioural processing) and its potential to evoke memories (related to reflective processing). Norman hypothesised that the latter ability to evoke memory and emotion is the most important. Jones and Martin (2006) investigated this in a study in which a series of experiments tested which of these three processes dominated in participants' choices among their recall of valued objects. The study involved 288 male and female adult participants from both the UK and the USA of diverse ages. The results consistently indicated that the dominant characteristic of the objects that people valued in their everyday life was a capacity to evoke memories, which had primacy over financial or social importance. This is of interest in terms of the apparent paradox which has been highlighted by authors such as Diener and Biswas-Diener (2002) and Easterlin (2003) whereby wealth seems to have a relatively minor effect on subjective well-being in society. The affective factor in an object's mnemonic properties (ability to evoke memory) was alluded to but not investigated in the Jones and Martin study.

Valued object choice and affect. A further study by Martin and Jones (2009) again investigated participants' choice among valued objects in terms of Norman's three processes, but did have a further focus on addressing the possible role of affective factors. Norman hypothesised

that in terms of potential for reflective processing; an object's links to emotion has psychological dominance over its capacity to evoke memories. The study by Martin and Jones involved two experiments with 215 UK adult participants. The first experiment gauged the levels of participants' emotion, appearance, usability, memory, social and financial salience associated with a personal valued object. In the second experiment, the field of emotional salience was more widely sampled, with four additional affective saliences. The findings were consistent with establishing memory salience and emotional salience as the primary determinant of an object's psychological value. Furthermore, the second experiment indicated that affect saliences collectively outweigh memory salience as the most important determinant of value. The study also employed predictive modelling incorporating factors of affective valence, degree of affect and a specific personality construct indicated by the authors' review of the literature, alexithymia.

Valued object choice and alexithymia. In psychological terms, alexithymia is defined as a construct that includes a person's difficulties in identifying their emotions and difficulties communicating their feelings to others, combined with an externally orientated thinking style and limited imaginal processes (Lumley, Neely & Burger, 2007; Martin & Jones, 2009; Meins, Harris-Waller & Lloyd, 2008; Taylor & Bagby, 2004). The study by Martin and Jones (2009) found that affective factors including both euphoric and dysphoric emotion played a dominant role in predictive modelling of valued object choice that was significantly modulated by alexithymia. Higher levels of alexithymia were linked to current dysphoria as a unique significant contributory factor to object choice, as opposed to those with lower levels of alexithymia; those with higher levels of alexithymia favoured valued objects that were associated with negative affect. Although not fully understood, longitudinal and treatment studies indicate a relationship between alexithymia and psychopathology (Taylor & Bagby, 2004) including an association with depression (Honkalampi, Hintikka, Tanskanen, Lehtonen & Viinamäki, 2000) and unhealthy compulsive

behaviours (Lumley et al., 2007). The studies by Jones and Martin (2006) and Martin and Jones (2009) favour experimental designs without control groups and largely include young student participants which limit the generalizability of the results. In addition power calculations were not included in either study, and as sample sizes were relatively small, ranging from $n=74$ to $n=109$, the likelihood is they would only have detected larger effect sizes.

There may be potential for further research into the choices and relationships with material objects in terms of increasing understanding of the alexithymia construct and associated psychopathologies, and the study by Martin and Jones (2009) raises the possibility of investigating clinical interventions using material objects for those with high levels of alexithymia.

Material objects and identity

A substantial body of literature exists on the significance of material objects as personal possessions, stemming from disciplines including anthropology, consumer research, archaeology, philosophy and psychology (Camic, 2010; Berger, 2009). Camic et al. (2011) noted from a psychological perspective, the value in examining Richins' (1994, p. 504) description of possessions as having a "role in defining the self and creating a sense of identity". Material possessions have been associated with a range of aspects of identity, in particular ethnicity and culture, a sense of home, age and stage of life.

Ethnicity and culture. One perspective lies in looking at possessions in terms of their inherent meaning with regard to ethnicity and culture. Mehta and Belk (1991) carried out a thematic analysis of interviews with 38 adults of Indian descent, comparing relationships to valued possessions and identity between Indian immigrants in the United States and Indians living in India. For Indian immigrants, artefacts, mementos and heirlooms brought from India acquired an important symbolic role in retaining a distinct Indian identity, whereas for non-immigrant Indians equivalent objects held less symbolic value with regard to self-identity. Similarly, Wallendorf and

Arnould (1988) used surveys, focus groups and interviews to sample 343 participants (45 from Niger, 298 from the United States) with regard to the form and meaning of their attachments to favourite objects. The authors reported that, in comparison to the Nigerian sample, a much higher proportion of the American sample found the meaning of the value of a favourite object was because of its capacity to symbolise other people, memories and experiences. Both of these studies seemed well executed with clear procedures and results although they were each hampered by an absence of detail about how the respective analysis had been undertaken. In a critique of the two studies, Camic (2010) speculated that there is a complex interaction of capitalism and materialism often present in Western capitalistic societies whereby “objects take on important symbolic significance and are therefore more psychologically valued” (p. 84); and that furthermore Wallendorf and Arnould's findings “makes it possible to consider that the psychological importance of material objects can be both independent of social relationships and also linked to them through symbolic means” (Camic, 2010, p.84).

Homed and homeless. Hodgetts et al. (2010) presented an ethnographic single case study of a 44 year old homeless man in New Zealand, focusing on the significance of his portable possessions in building links between senses of self and place. Many accounts suggests that a predominant aspect of the experience of homelessness is a struggle to preserve self-identity in order to avoid “losing oneself to the street” by becoming psychologically unanchored (Snow and Anderson, 1993). For men leading transient lives, material objects have particular significance in fostering a sense of self by providing personal anchorage points (Hodgetts et al., 2008). The participant in Hodgetts et al. (2010) attributes a nexus of meanings to a book he carries with him. It served several functions for him in providing entertainment, information and escapism when reading. Furthermore the book is the primary tool in accessing a significant region of his literal and psychological topography, the public library. Crucially, the participant also uses the book in places

like the library to crystallise an aspect of his identity that is important to him, “as a ‘normal’ person who has an interest in books and reading” (p. 294). This was a good quality study with an extensive range of evidence presented and close links to theory and research, but falls short of presenting alternative perspectives on the data. Exploring a similar theme, Digby (2006) employed a narrative analysis in a single case study of a seasoned traveller with a box of small salvaged objects that had roles “to play in the construction and maintenance of his identities during this period of mobility” (p.177). The items and the stories he told about them imbued the objects with meaning. As an example, the stub of a proof correcting pencil signified an important aspect of his identity as a writer. Digby posited that this small, portable collection of objects played a “key role in the creation of home, a place of refuge” (p.183), and that this is a widespread and cross-cultural phenomenon. Digby views object-based story telling as “part of the human condition” (p.181) and contends that for both homed and homeless peoples, the selection and placement of objects within their space, regardless of the physical dimensions of that space, serves to establish identity and a sense of home. The author’s conclusions drew on research into homelessness from a number of perspectives, but should be tempered by the limitations of the data that was available (published and unpublished newspaper columns). It what may be considered an illustration of Digby's argument, Lynch (2008), in relation to the use of heritage objects with diaspora communities, gave an anecdotal account of a refugee woman who passed around her mother’s battered metal pot which she had brought with her when she had fled Somalia with the words “here I am, this is me” (p. 270). A further examination of the use of objects in establishing identity in terms of a sense of home was provided by Hurdley (2006) who applied a narrative-orientated analysis to interviews with two female British participants, finding that a mechanism for the expression of self-identity was at the personal and social intersection of retelling stories attributed to objects displayed on the respective domestic mantelpieces. Strengths of this paper lay in the thorough rationale of the methodology and the

inclusion of alternative perspectives. These papers by Hodgetts et al. (2010), Digby (2006) and Hurdley (2006) differ in subject and methodologies but concur in highlighting examples of material objects enhancing or establishing the participants' anchoring of their identity in having a home.

Culture, age and stage of life. Camic (2010) observed that across cultures, meanings of self will differ and this may affect the types of possessions particular cultures value highly “and how these may be used within the given social context” (p.152). This resonates with authors such as Dittmar who have suggested that factors including gender (Dittmar, 1989) and employment status (Dittmar, 1991) may also impact on the meaning of personal possessions. In a similar vein, age and stage of life may be another significant factor in the way an individual uses material objects to establish, preserve and present their identity (e.g. Csikszentmihalyi & Rochberg-Halton, 1981). In considering the psychological aspects of ageing, caution should be exercised in the use of labels such as “older people” for those over 65 years old because of the heterogeneity within the group (James, 2010, p.33). Erikson (1982) posited eight life stages characterised by pairs of polar opposites, with old age associated with the resolution of tensions between integrity and despair. This stage was not indicated at a particular age, but was driven by the extent that the previous stages had been resolved and had the adaptive goal of the achievement of wisdom. Within contemporary British culture certain changes and transitions that may impact on identity are associated with growing older, such as retirement or a move to supported accommodation (Raynor, 1978; Victor, 1994). Focussing on the latter, Rowlands (2008) presented four case studies of older people in the UK moving to cared environments, interrogating the relationships with their more valued possessions. He identified a process of transformation for participants into “holders of memory”, whose artefacts, souvenirs and mementos created “shrines of material culture that family and friends may visit in a state of some reverence” (p.198). In addition it was identified that the participants were still curating their lives, a continuation of the lifelong process of using objects,

clothes, furnishings, photographs etc. to narrate their own life story, and reported that for participants the opportunity to exercise choice and agency over their possessions was essential to their sense of identity and wellbeing. There are a number of good qualities to this study but it would have been helpful to have indicated how these four cases were selected from a pool of 60; this perhaps illustrates a lack of exploration into different perspectives on the data. It is also noteworthy that Rowland's study centred on a non-clinical population. Older people are "the major consumers of health care services across the developed world" (Victor, 2005, p. 103), often accessing hospital care for a range of physical and mental health issues. As an example, advanced age may be associated with increased rates of depression and anxiety (Marcoen, Coleman & O'Hanlon, 2007); older people in hospital with mental health issues such as these are likely to have longer hospital stays (Academy of Medical Royal Colleges, 2008). A hospital admission at a later stage in life may provoke a shift from "being an older person to a perpetual patient" (Macfalane, 2012, p. 274). The research into the capacity of objects to reinforce aspects of identity such as having an anchor to a sense of home (Hodgetts et al. 2010) or the telling of a life story (Rowlands, 2008) opens the possibility of using object based interventions in hospital to counter the experience of being a perpetual patient. A physical object could be potentially employed as a platform to explore aspects of a service user's identity in the course of an intervention such as museum object handling, which is addressed in the following section.

Heritage in Health: museum object handling interventions

It has been posited that a museum object has the capacity to provoke memory, emotion and other psychological processes, particularly when touched and held (Chatterjee & Noble, 2013). It is possible to speculate in psychological terms about descriptive accounts of heritage objects. Walters (1997) described Vietnam War era Zippo lighters issued to American soldiers. There were individual inscriptions on the lighters reflecting a range of attitudes from patriotism to humorous

irreverence, an example of a material object being (in this case literally) marked with emotional valences, a phenomenon Martin and Jones (2009) describe. Seeing and holding one of those Zippos in the present day may remind someone of seeing news reports, documentaries or war films about the Vietnam conflict, drawing on an object's potential to evoke memory (e.g. Thomson et al. 2012). It may resonate with the personal identity of an ex-smoker who used to own a Zippo. It could potentially lead to speculation as to the original owner; Ennis and Dillon's (1997) fictional protagonist is driven to find the story behind his Father's Vietnam Zippo, tapping into ideas of object based story telling (Digby, 2006). The Zippo may be a receptacle for strong emotions, tapping into the psychoanalytic process described by Lanceley et al. (2013). For instance accounts and footage of American soldiers burning Vietnamese villages with such a lighter exist (e.g. Hess, 2009). This author speculates that holding a lighter that was actually used in such an attack would confer a more intense quality of experience than merely seeing a picture of the offending object.

Chatterjee (2008) discussed the therapeutic potential of handling objects from museums, drawing on a pilot study undertaken by Chatterjee and Noble (2009) which investigated the benefits to 24 hospital inpatients who received one to one museum object handling sessions from medical students. Quantitative measures showed an increase in participants' rating of their overall well-being and health status, and qualitative benefits were reported in terms of the sessions enhancing the relationships between patients and ward staff and the experience of everyday ward life. Following this successful pilot a protocol was developed for museum object handling sessions in a range of health care settings including hospitals and care homes (Ander et al., 2011). The protocol detailed the practical steps in arranging these sessions which included necessary health and safety precautions when handling items from the museum collections. Facilitators used a semi-structured interview with open question format to establish a process of "collaborative discovery" focused on the objects.

Thomson, Ander, Menon, Lanceley and Chatterjee (2011) reviewed scales for assessing the potential effects of museum object handling on clinical populations and having identified two optimum measures of well-being, undertook preliminary research with 40 female oncology patients which further confirmed the effectiveness of the measures. The scales included the positive and negative affect schedule (PANAS) (Watson, Clark and Tellegen, 1988) for psychological well-being and the visual analogue scale (VAS) (EuroQol Group, 1990) for quality of life and health status.

A number of further studies have emerged looking at the therapeutic benefits of object handling with individuals with both mental and physical health issues. Salient details of these studies are presented below (Tables 1, 2 and 3).

Table 1

Effectiveness of Museum Object Handling sessions (MOHS) – quantitative studies

<u>Study</u>	<u>Sample</u>	<u>Intervention</u>	<u>Research Design</u>	<u>Duration</u>	<u>Benefits/outcomes</u>
Thomson, Ander, Menon, Lanceley & Chatterjee, 2012	N=158 (42 male, 116 female), service users from a National Health Service (NHS) Trust hospital, neurological rehabilitation units (NRU) and a care home.	One to one MOHS or one to one sessions discussing photographs of the objects	Quasi experimental with pre and post outcome measures, object handling vs photographs (control)	One session	Statistically significant improvements on measures of wellbeing and happiness. An advantage for MOHS over the visual condition.
Thomson, Ander, Menon, Lanceley & Chatterjee, 2012	N=100, female oncology and non-oncology hospital inpatients	One to one MOHS or one to one sessions discussing photographs of the objects	Quasi experimental with pre and post outcome measures, object handling vs photographs (control)	One session	Significant improvements on measures of positive emotion, well-being, and happiness in MOHS condition compared with the control condition for both oncology and non-oncology patients.
Thomson, Ander, Menon, Lanceley & Chatterjee, 2011	N=40 female in-patients from oncology hospital wards,	One to one MOHS	Repeated measures design using pre and post measures	One session	Effective measures for MOHS were identified

Table 2

Effectiveness of Museum Object Handling sessions (MOHS) – quantitative and qualitative studies

<u>Study</u>	<u>Sample</u>	<u>Intervention</u>	<u>Research Design</u>	<u>Duration</u>	<u>Benefits/outcomes</u>
Chatterjee and Noble, 2009	N=24 hospital inpatients	One to one MOHS	Quasi experimental using pre and post outcome measures. Semi-structured interview subject to thematic analysis	One session	Statistically significant increases on measures of well-being and health status. MOHS seen as a positive distraction from everyday ward life.
Chatterjee, Vreeland, & Noble, 2009	N=32, hospital inpatients	One to one MOHS	Quasi experimental using pre and post outcome measures. Semi-structured interview using constant comparative method for analysis	One session	Nonstatistically significant increase on measures of life satisfaction and health status. Two major recurring themes emerged: “impersonal/educational” and “personal/reminiscence”.
Paddon,Thomson, Menon, Lanceley, & Chatterjee, 2013	N=57, hospital patients	One to one MOHS	Quasi experimental using pre and post outcome measures, thematic analysis	One session	Statistically significant improvements on measures of wellbeing and happiness. Thinking and meaning making opportunities for participants.

Table 3

Effectiveness of Museum Object Handling sessions (MOHS) – qualitative studies

<u>Studies</u>	<u>Sample</u>	<u>Intervention</u>	<u>Research Design</u>	<u>Duration</u>	<u>Benefits/outcomes</u>
Ander, Thomson, Noble, Lanceley, Menon, Chatterjee, 2012	N= 185 From physical and mental healthcare settings	One to one MOHS and group MOHS	Grounded theory analysis	One session	Well-being processes included improved mood and confidence Engagement processes included active motivation and concentration.
Ander, Thomson, Blair, Noble, Menon, Lanceley, Chatterjee, 2013	N=90, From physical and mental healthcare settings	One to one MOHS and group MOHS	Constant comparative method based on constructivist grounded theory	Up to 8 sessions	Eight emergent themes included increase in positive emotion
Lanceley, Noble, Johnson, Balogun, Chatterjee, Menon, 2012	N=10, service users with physical health issues	One to one MOHS	Analysis using the constant comparative method framed by Kleinian theory	One session	Aid to discussion with patients and had potential as an intervention approach or an assessment platform for therapeutic work

Although the quantitative studies did not involve randomised control trials, two did have control groups and pre and post measures were used in six studies, four of which used established clinical instruments. The four studies employing a qualitative approach utilised four different techniques for analysis and encompassed participants from a wide range of healthcare settings. A limitation of the research is the lack of any longitudinal studies, and the prevalence of single session interventions in all but one intervention. It is also pertinent to note that in seven of the nine papers the sessions were facilitated by museum staff rather than healthcare professionals (the exceptions were Chatterjee & Nobel 2009 and Lanceley et al. 2012); the likelihood is that this would have inhibited the intensity of any directly therapeutic direction undertaken in the sessions. Overall the Heritage in Hospitals studies focussed on a model of wellbeing which was explicitly informed by the criteria provided by a UK Government think tank, the New Economics Foundation (NEF) (e.g. Paddon et al. 2013), although reference is made to psychological theory throughout the body of literature (e.g. Lanceley et al. 2012 employed analysis framed by Kleinian theory). Taking consideration of these methodological issues, the studies summarised in the above tables are consistent in indicating that museum object handling sessions offer at least short term benefit to adults with a range of physical and mental health needs in a variety of health care settings including hospital wards and care homes for older people. The literature highlights a number of elements that may contribute to this.

Museum object handling sessions and touch. With the physical handling of the museum objects an integral part of interventions, the hypothesis of triple coding recurs as a theoretical foundation for these studies (e.g. Paddon et al., 2013; Thomson et al., 2012a). The suggestion is that the interaction of sensory modalities (vision, touch and hearing) contributes to the effectiveness of object handling by enhancing understanding and learning. The medium of touch reveals unique information such as the weight and texture of the objects (Chatterjee et al. 2009). One reported benefit of the studies provided distraction and stimulation in often highly institutionalised settings.

Beyond this, however, two studies found tactile conditions to be significantly more effective than visual interventions in terms of reported wellbeing. Some of the qualitative evidence suggested another positive associated with touch, the pleasurable experience of tactile stimulation (Ander et al. 2013). It is posited that “discussion between facilitator and participant was enhanced by inclusion of the tactile sense implicated in object handling” (Thomson et al., 2012b, p.738).

Engagement with the objects. Another pertinent factor was the potential effect of a sense of privilege or entitlement for the participants in being permitted to handle items that are normally only viewed (Chatterjee et al., 2009). Curiosity and speculation about the objects was reported (Ander et al. 2012) and there was an educative element in acquiring new knowledge about the artefacts. This learning may have produced a positive effect on mood (Thomson et al. 2012b) and is flagged as a theme in several of the qualitative papers.

Engagement with facilitators. Five of the studies also reported increases in engagement with facilitators. It was highlighted in several papers that the objects sometimes served as a catalyst for novel thoughts and associations with the participants’ own experiences and memories (e.g. Thomson et al. 2012a) which were explored with the facilitators. The projection of meaning onto the museum objects (Paddon et al. 2012) resonates with the concept of material objects as a psychological bridge between internal and external world (Camic et al, 2011). Lanceley et al. (2011) posit that object handling sessions may be utilised as a platform for assessment or standalone interventions in their own right. The majority of sessions reported here were delivered in single one-to-one sessions, however, group processes encompassing the use of the museum artefacts may have occurred in the group sessions and influenced or enhanced the outcomes and participant experiences. In terms of future clinical practice and research, having clinical psychologists or other healthcare professionals act as lead facilitators may provide greater scope to enhance, pursue and explore beneficial psychological elements of the object handling and group processes.

Discussion

The psychophysical methods used by Paulus and Hauf (2011) to investigate the development of reaction to material properties came from a positivist doctrine quite distant from the constructionist position Digby (2006) took in a narrative analysis of objects and identity. Given the ubiquitous presence of material objects in everyday life, it is perhaps unsurprising that the literature reviewed spans a wide range of approaches and orientations. There are limitations to the existing literature, most notably in terms of generalizability to wider populations and other methodological issues such as the absence of any randomised control trials and the prevalence of case study data. These restrictions are less pertinent to the propagation of some of the theoretical propositions raised. In light of the aim of this review, implications for research and practice will be presented below.

Implications for research

Despite the methodological issues discussed, the study by Martin and Jones (2009) suggests that further research into valued object choice is a way of providing increased understanding of the alexithymia construct and associated psychopathologies. Another potentially fruitful area for further research stems from the preliminary study by Hooley and Wilson-Murphy (2012), which posited a relationship between an intense emotional reliance on transitional objects in adulthood and borderline personality disorder. Further research may promote understanding of the disorder. While many of the sensorimotor elements of the haptic system are well established, additional research into the neuropsychological mechanisms of touch and affect may inform arts and heritage based interventions using material objects (Critchley, 2008; Thomson et al., 2012a). Qualitative studies into material objects and aspects of identity have highlighted a number of worthwhile options for future research. Investigating material possessions in terms of ethnicity and culture identified the

capacity of objects to take on particular symbolic significance has not been widely documented in psychological literature (Camic, 2010; Mehta & Belk, 1991; Wallendorf & Arnould 1988). In addition, the admittedly sparse literature available supports exploring material objects as a vector to increase understanding of issues of aging (Rowlands, 2008) and gain insight into the experiences of homeless, marginalised or transient individuals (Digby, 2006; Hodgetts et al. 2010; Hurdley, 2006). The nine studies centred on museum object handling have produced an emerging body of evidence that would benefit from further research into the delivery and effectiveness of the intervention, such as an investigation of processes potentially present in groups rather than one to one sessions or longitudinal studies (e.g. Ander et al. 2013).

Implications for practice

The use of material objects is an integral component of art therapy interventions, and focussing attention on the relationships and uses of material objects in therapy sessions can assist with understanding and formulating art therapy work with post traumatic stress disorder and other presenting issues (Mills & Kennington, 2012). The use of material objects may be developed in other psychotherapy approaches. Preliminary evidence by Camic et al. (2011) gave a methodologically sound rationale for the role of found objects in therapy and wider clinical practice. Arthern and Madill (2002) identified a process operationalising the use of transitional objects in humanistic therapy. Outside of formal psychotherapy, findings by Romano et al. (2011) suggested the use of material objects might enhance service users' facility to express themselves in mental health care contexts. A series of nine studies have indicated that museum object handling sessions offer short-term benefits to adults in a number of different health care settings with a range of physical and mental health needs. Both qualitative and quantitative studies highlighted gains in terms of wellbeing and engagement, with further positive impact on communication between staff

and service users. The emerging evidence supports further development and research of museum object handling (e.g. Chatterjee & Noble, 2009; Thomson et al., 2012a).

Conclusion

With the caveat that there is a paucity of literature into the clinical applications of material objects, the extent that these dimensions consolidate in the research regarding the therapeutic use of museum objects is notable. Consideration has been given to the impact of physically handling objects on memory and cognition (Thomson et al. 2012a) as well as the potential psychological and symbolic use of the objects in exploring identity (Paddon et al. 2013), cultural issues of privilege in society (Chatterjee et al. 2009) and personal health (Ander et al. 2012). Further research into museum object handling sessions is desirable, in terms of longitudinal studies to gauge any longer term benefits and more study of the processes that may be present in group sessions (as opposed to one to one interventions) or the effects of attending several museum object handling sessions. The intervention is currently positioned to offer wellbeing and engagement outcomes in health care settings but has the potential as a therapeutic intervention in its own right (Lanceley et al. 2011).

References

- Aaronson, C. J., Bender, D. S., Skodol, A. E., & Gunderson, J. G. (2006). Comparison of attachment styles in borderline personality disorder and obsessive-compulsive personality disorder. *Psychiatric Quarterly*, 77, 69-80. doi:10.1007/s11126-006-7962-x
- Academy of Medical Royal Colleges. (2008). *Managing urgent mental health needs in the acute trust: A guide for practitioners for managers and commissioners in England and Wales*. London: Royal College of Psychiatrists.
- Adolph, K. E., Eppler, M. A., & Gibson, E. J. (1993). Development of perception of affordances. *Advances in infancy research*, 8, 51-98. <http://psycnet.apa.org/psycinfo/1993-37009-001>
- Ander, E.E, Thomson, L.J, Blair, K., Noble, G., Menon, U., Lanceley, A., & Chatterjee, H.J. (2013). Using museum objects to improve wellbeing in mental health service users and neurological rehabilitation clients. *The British Journal of Occupational Therapy*, 76, 208-216. doi: 10.4276/030802213X13679275042645
- Ander, E.E, Thomson, L.J, Noble, G., Lanceley, A., Menon, U. & Chatterjee, H.J. (2011). *Heritage in health: A guide to using museum collections in hospital and other healthcare settings*. London : University College London.
- Ander, E.E, Thomson, L.J, Noble, G., Lanceley, A., Menon, U. & Chatterjee, H.J. (2012). Heritage, health and wellbeing: Assessing the impact of a heritage focused intervention on health and well-being. *International Journal of Heritage Studies*, 19, 229-242. doi:10.1080/13527258.2011.651740

- Arkema, P. H. (1981). The borderline personality and transitional relatedness. *American Journal of Psychiatry*, 138, 172-177. <http://ajp.psychiatryonline.org/article.aspx?articleID=158805>
- Arthern, J., & Madill, A. (2002). How do transitional objects work? The client's view. *Psychotherapy Research*, 12, 369-388.
<http://www.tandfonline.com/doi/pdf/10.1093/ptr/12.3.369>
- Baddeley, A., Eysenck, M., Anderson, M. (2009). *Memory*. Hove: Psychology Press.
- Bateman, A. W., & Fonagy, P. (2003). The development of an attachment-based treatment program for borderline personality disorder. *Bulletin of the Menninger Clinic*, 67(3: Special Issue), 187-211. doi:10.1521/bumc.67.3.187.23439
- Bender, D. S., Farber, B. A., & Geller, J. D. (2001). Cluster B personality traits and attachment. *Journal of the American Academy of Psychoanalysis and Dynamic Psychiatry*, 29, 551-563. <http://guilfordjournals.com/doi/abs/10.1521/jaap.29.4.551.21545>
- Berger, A. A. (2009). *What objects mean: An introduction to material culture*. Walnut Creek, CA: Left Coast Press.
- Bourgeois, K. S., Khawar, A. W., Neal, S. A., & Lockman, J. J. (2005). Infant manual exploration of objects, surfaces, and their interrelations. *Infancy*, 8, 233-252.
doi:10.1207/s15327078in0803_3

Brooker, J. (2010). Found objects in art therapy. *International Journal of Art Therapy*, 15, 25-35.

doi:10.1080/17454831003752386

Buschel, B. S., & Madsen, L. H. (2006). Strengthening Connections Between Mothers and Children. *Journal of aggression, maltreatment & trauma*, 13, 87-108.

doi:10.1300/J146v13n01_05

Cardasis, W., Hochman, J. A., & Silk, K. R. (1997). Transitional objects and borderline personality disorder. *American Journal of Psychiatry*, 154, 250-255.

<http://journals.psychiatryonline.org/data/Journals/AJP/3673/250.pdf>

Camic, P. M. (2010). From trashed to treasured: A grounded theory analysis of the found object.

Psychology of Aesthetics, Creativity, and the Arts, 4, 81-92. doi:[10.1037/a0018429](https://doi.org/10.1037/a0018429)

Camic, P.M., Brooker, J., & Neal, A. (2011). Found objects in clinical practice: Preliminary evidence. *The Arts in Psychotherapy*, 38, 151-159.

<http://www.sciencedirect.com/science/article/pii/S0197455611000396>

Chatterjee, H.J (2008). Introduction. In Chatterjee, H. (Ed.). *Touch in museums: Policy and practice in object handling* (pp. 1-5). Oxford: Berg

Chatterjee, H. J., & Noble, G. (2009). Object therapy: A student-selected component exploring the potential of museum object handling as an enrichment activity for patients in hospital.

Global Journal of Health Science, 1, 42-49 <http://www.ccsenet.org/gjhs>

Chatterjee, H., & Noble, G. (2013). Museums, health and well-being.

Chatterjee, H.J, Vreeland, S., & Noble, G. (2009). Museopathy: Exploring the healing potential of handling museum objects. *Museum and Society*, 7, 164-177.

<http://touchandwellbeing.co.uk/reading-room/essays-and-articles/chatterjee-vreeland-noble.pdf>

Clark, M., & Paivio, A. (1991). Dual coding theory and education. *Educational psychology review*, 3, 149-210. doi:10.1007/BF01320076

Craik, F. I., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research.

Journal of verbal learning and verbal behavior, 11, 671-684. [http://ac.els-](http://ac.els-cdn.com/S002253717280001X/1-s2.0-S002253717280001X-main.pdf?_tid=cee8bfca-b997-11e3-bb8a-00000aab0f26&acdnat=1396354921_b4a7025954abdacf80e533053472e9fb)

[cdn.com/S002253717280001X/1-s2.0-S002253717280001X-main.pdf?_tid=cee8bfca-b997-11e3-bb8a-00000aab0f26&acdnat=1396354921_b4a7025954abdacf80e533053472e9fb](http://ac.els-cdn.com/S002253717280001X/1-s2.0-S002253717280001X-main.pdf?_tid=cee8bfca-b997-11e3-bb8a-00000aab0f26&acdnat=1396354921_b4a7025954abdacf80e533053472e9fb)

Critchley, H. (2008). Emotional touch: A neuroscientific overview. In Chatterjee, H. (Ed.). *Touch in museums: Policy and practice in object handling* (pp 61-71). Oxford: Berg

Csikszentmihalyi, M., & Rochberg-Halton, E. (1981). *The meaning of things: Domestic symbols and the self*. Cambridge: Cambridge University Press.

Demattè, M. L., Sanabria, D., Sugarman, R., & Spence, C. (2006). Cross-modal interactions between olfaction and touch. *Chemical senses*, 31, 291-300. doi:10.1093/chemse/bjj031

Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being? *Social indicators research*, 57, 119-169. doi: 10.1023/A:1014411319119

Digby, S. (2006). The casket of magic: Home and identity from salvaged objects. *Home cultures*, 3, 169-190. doi: [10.2752/174063106778053219](https://doi.org/10.2752/174063106778053219)

Dittmar, H. (1989). Gender identity: related meanings of personal possessions. *British Journal of Social Psychology*, 28, 159-171. doi:10.1111/j.2044-8309.1989.tb00857.x

Dittmar, H. (1991). Meanings of material possessions as reflections of identity: Gender and social-material position in society. *Journal of Social Behavior & Personality*, 6, 165-186.
<http://psycnet.apa.org/psycinfo/1992-01457-001>

Ennis, G., & Dillon, S. (1997). *Preacher: Proud Americans*. New York, NY: DC Comics.

Ernst, M. O., & Banks, M. S. (2002). Humans integrate visual and haptic information in a statistically optimal fashion. *Nature*, 415, 429-433. doi:10.1038/415429a

Easterlin, R. A. (2003). Explaining happiness. *Proceedings of the National Academy of Sciences*, 100, 11176-11183. <http://www.pnas.org/content/100/19/11176.short>

Erikson, E. H. (1982). *The life cycle completed: A review*. New York: Norton.

EuroQol Group. (1990). EuroQol: A new facility for the measurement of health-related quality of life. *Health Policy*, 16, 199-208. <http://www.ncbi.nlm.nih.gov/pubmed/10109801>

- Fikes, T. G., Klatzky, R. L., & Lederman, S. J. (1994). Effects of object texture on precontact movement time in human prehension. *Journal of motor behavior*, 26, 325-332.
doi:10.1080/00222895.1994.9941688
- Fleming, J., Klatzky, R. L., & Behrmann, M. (2002). Time course of planning for object and action parameters in visually guided manipulation. *Visual Cognition*, 9, 502-527.
doi:10.1080/13506280143000557
- Fontenelle, S. A., Kahrs, B., Neal, S., Newton, A., & Lockman, J. J. (2007). Infant manual exploration of composite substrates. *Journal of experimental child psychology*, 98, 153-167. [doi:10.1016/j.jecp.2007.07.001](https://doi.org/10.1016/j.jecp.2007.07.001)
- Fruzzetti, A. E., Shenk, C., & Hoffman, P. D. (2005). Family interaction and the development of borderline personality disorder: A transactional model. *Development and Psychopathology*, 17, 1007-1030. [doi:10.1017/S0954579405050479](https://doi.org/10.1017/S0954579405050479)
- Gepshtein, S., Burge, J., Ernst, M. O., & Banks, M. S. (2005). The combination of vision and touch depends on spatial proximity. *Journal of Vision*, 5, 1013-1023. doi: 10.1167/5.11.7
- Giachritsis, C. (2008). The use of haptic interfaces in haptic research. In Chatterjee, H. (Ed.). *Touch in museums: Policy and practice in object handling* (pp 75-90). Oxford: Berg
- Gibson, E.J., & Pick, A.D. (2000). *An ecological approach to perceptual learning and development*. Oxford: University Press.

Greenhalgh, T. (2010). *How to read a paper: The basics of evidence-based medicine* (4th ed.).

Chichester: Wiley-Blackwell.

Hart, C. (1998). *Doing a literature review: Releasing the social science research imagination*.

London: Sage Publications.

Helbig, H. B., & Ernst, M. O. (2007). Optimal integration of shape information from vision and touch. *Experimental Brain Research*, 179, 595-606. doi:10.1007/s00221-006-0814-y

Hess, G. R. (2009). *Vietnam: Explaining America's lost war*. Malden, MA: Blackwell Pub.

Hobson, R. F. *Forms of feeling: The heart of psychotherapy*. London: Tavistock.

Hodgetts, D. J., Stolte, O., Chamberlain, K., Radley, A., Groot, S., & Nikora, L. W. (2010). The mobile hermit and the city: Considering links between places, objects, and identities in social psychological research on homelessness. *British Journal of Social Psychology*, 49, 285-303. doi: 10.1348/014466609X450465

Hodgetts, D., Stolte, O., Chamberlain, K., Radley, A., Nikora, L., Nabalarua, E., & Groot, S. (2008). A trip to the library: homelessness and social inclusion. *Social & Cultural Geography*, 9, 933-953. doi: 10.1080/14649360802441432

Honkalampi, K., Hintikka, J., Tanskanen, A., Lehtonen, J., & Viinamäki, H. (2000). Depression is strongly associated with alexithymia in the general population. *Journal of psychosomatic research*, 48, 99-104. doi: [10.1016/S0022-3999\(99\)00083-5](https://doi.org/10.1016/S0022-3999(99)00083-5)

Hooley, J. M., & Wilson-Murphy, M. (2012). Adult attachment to transitional objects and borderline personality disorder. *Journal of personality disorders*, 26, 179-191.

doi:10.1521/pedi.2012.26.2.179

Hurdley, R. (2006). Dismantling mantelpieces: Narrating identities and materializing culture in the home. *Sociology*, 40, 717-733. doi: 10.1177/0038038506065157

James, I. A. (2010). *Cognitive behavioural therapy with older people: Interventions for those with and without dementia*. London: Jessica Kingsley Publishers.

Jesson, J., Matheson, L., & Lacey, F. M. (2011). *Doing your literature review: Traditional and systematic techniques*. London: SAGE.

Jones, G. V., & Martin, M. (2006). Primacy of memory linkage in choice among valued objects. *Memory & Cognition*, 34, 1587-1597. doi: 10.3758/BF03195922

Klatzky, R. L., & Lederman, S. J. (1993). Toward a computational model of constraint-driven exploration and haptic object identification. *Perception-London*, 22, 597-597.

doi:[10.1068/p220597](https://doi.org/10.1068/p220597)

Kozlowska, K., & Hanney, L. (2001). An art therapy group for children traumatized by parental violence and separation. *Clinical Child Psychology and Psychiatry*, 6, 49-78.

doi:10.1177/1359104501006001006

Labbate, L. A., & Benedek, D. M. (1996). Bedside stuffed animals and borderline personality.

Psychological Reports, 79, 624-626. doi: 10.2466/pr0.1996.79.2.624

Lai, N. H. (2011). Expressive Arts Therapy for Mother–Child Relationship (EAT-MCR): A novel model for domestic violence survivors in Chinese culture. *The Arts in Psychotherapy*, 38, 305-311. doi: [10.1016/j.aip.2011.08.001](https://doi.org/10.1016/j.aip.2011.08.001)

Lanceley, A., Noble, G., Johnson, M., Balogun, N., Chatterjee, H., & Menon, U. (2012).

Investigating the therapeutic potential of a heritage-object focused intervention: a qualitative study. *Journal of health psychology*, 17, 809-820. doi: 10.1177/1359105311426625

Levy, K. N. (2005). The implications of attachment theory and research for understanding borderline personality disorder. *Development and Psychopathology*, 17, 959.

[doi:10.1017/S0954579405050455](https://doi.org/10.1017/S0954579405050455)

Lockhart, R. S., & Craik, F. I. (1990). Levels of processing: a retrospective commentary on a framework for memory research. *Canadian Journal of Psychology*, 44, 87-112.

doi:[10.1037/h0084237](https://doi.org/10.1037/h0084237)

Lockman, J. J. (2000). A perception–action perspective on tool use development. *Child*

Development, 71, 137-144. doi: 10.1111/1467-8624.00127

Lumley, M. A., Neely, L. C., & Burger, A. J. (2007). The assessment of alexithymia in medical settings: implications for understanding and treating health problems. *Journal of Personality Assessment*, 89, 230-246. doi:10.1080/00223890701629698

- Lynch, B. (2008). The amenable object: Working with diaspora communities through a psychoanalysis of touch. In Chatterjee, H. (Ed.). *Touch in museums: Policy and practice in object handling* (pp 261-272). Oxford: Berg
- Macfarlane, A. (2011). Reflections and views from older people on health and social care. In Reed, J., Clarke, C., & Macfarlane, A. (Ed.s), *Nursing older adults: Partnership working* (pp. 273-290). Maidenhead: McGraw-Hill.
- Malchiodi, C. A. (2003). Art therapy and the brain. In Malchiodi, C. A. (ed.), *Handbook of art therapy* (pp 16 – 24). New York: The Guildford Press.
- Malchiodi, C. A. (2008). A group art and play therapy program for children from violent homes. In Malchiodi, C. A. (ed.), *Creative interventions with traumatized children* (pp 246 – 263). New York: The Guildford Press.
- Marcoen, A., Coleman, P. & O’Hanlon, A. (2007). Psychological ageing. In Bond, J. (Ed.), *Ageing in society: European perspectives on gerontology* (pp. 38-67). London: Sage Publications.
- Martin, M., & Jones, G. V. (2009). Affect and alexithymia determine choice among valued objects. *Emotion*, 9, 340-349. doi: [10.1037/a0015247](https://doi.org/10.1037/a0015247)
- McGlone, F. (2008). The two sides of touch: Sensing and feeling. . In Chatterjee, H. (Ed.). *Touch in museums: Policy and practice in object handling* (pp 41-60). Oxford: Berg

- McGlone, F., Vallbo, A. B., Olausson, H., Loken, L., & Wessberg, J. (2007). Discriminative touch and emotional touch. *Canadian Journal of Experimental Psychology*, 61, 173.
doi:[10.1037/cjep2007019](https://doi.org/10.1037/cjep2007019)
- Mehta, R., & Belk, R. W. (1991). Artifacts, identity, and transition: Favorite possessions of Indians and Indian immigrants to the United States. *Journal of Consumer Research*, 17, 398-411.
doi: [10.1086/208566](https://doi.org/10.1086/208566)
- Meins, E., Harris-Waller, J., & Lloyd, A. (2008). Understanding alexithymia: Associations with peer attachment style and mind-mindedness. *Personality and Individual Differences*, 45, 146-152. doi: [10.1016/j.paid.2008.03.013](https://doi.org/10.1016/j.paid.2008.03.013)
- Mills, E., & Kellington, S. (2012). Using group art therapy to address the shame and silencing surrounding children's experiences of witnessing domestic violence. *International Journal of Art Therapy*, 17, 3-12. doi:10.1080/17454832.2011.639788
- Noble, G. & Chatterjee, H.J. (2008). Enrichment programmes in hospitals: Using museum loan boxes in university college London hospitals. In Chatterjee, H. (Ed.). *Touch in museums: Policy and practice in object handling* (pp. 215 - 223). Oxford: Berg
- Norman, D. A. (2004). *Emotional design: Why we love (or hate) everyday things*. New York: Basic books.
- Paddon, H.L., Thomson, L.J., Menon, U., Lanceley, A.E., & Chatterjee, H. J. (2013). Mixed methods evaluation of well-being benefits derived from a heritage-in-health intervention with hospital patients. *Arts & Health*, 6(1), 24-58. doi:10.1080/17533015.2013.800987

Paivio, A. (1986). *Mental representations: A dual coding effect*. New York: Oxford University Press

Paivio, A. (1991). Dual coding theory: Retrospect and current status. *Canadian Journal of Psychology*, 45, 255. doi:[10.1037/h0084295](https://doi.org/10.1037/h0084295)

Palmer, C. F. (1989). The discriminating nature of infants' exploratory actions. *Developmental Psychology*, 25, 885. doi: [10.1037/0012-1649.25.6.885](https://doi.org/10.1037/0012-1649.25.6.885)

Paulus, M., & Hauf, P. (2011). Infants' use of material properties to guide their actions with differently weighted objects. *Infant and Child Development*, 20, 423-436.
doi:10.1002/icd.704

Rayner, E. (1978). *Human development: An introduction to the psychodynamics of growth, maturity and ageing* (6th ed.). London: Allen & Unwin.

Resch, R. C., Pizzuti, S., & Woods, A. (1988). The later creation of a transitional object. *Psychoanalytic Psychology*, 5, 369. doi: [10.1037/0736-9735.5.4.369](https://doi.org/10.1037/0736-9735.5.4.369)

Richins, M. L. (1994). Valuing things: the public and private meanings of possessions. *Journal of Consumer Research*, 504-521. <http://www.jstor.org/stable/2489689>

- Rochat, P. (1987). Mouthing and grasping in neonates: Evidence for the early detection of what hard or soft substances afford for action. *Infant Behavior and Development*, 10, 435-449. [doi:10.1016/0163-6383\(87\)90041-5](https://doi.org/10.1016/0163-6383(87)90041-5)
- Romano, D., McCay, E., & Boydell, K. (2012). The use of material objects in understanding the process of recovery from a first episode of schizophrenia. *Arts & Health: An International Journal for Research, Policy and Practice*, 4, 70-82.
[doi:10.1080/17533015.2011.584882](https://doi.org/10.1080/17533015.2011.584882)
- Rowlands, M. (2008). Aesthetics of touch among the elderly. In Chatterjee, H. (Ed.). *Touch in museums: Policy and practice in object handling* (pp 187-198). Oxford: Berg
- Sann, C., & Streri, A. (2007). Perception of object shape and texture in human newborns: evidence from cross-modal transfer tasks. *Developmental science*, 10, 399-410.
[doi:10.1111/j.1467-7687.2007.00593.x](https://doi.org/10.1111/j.1467-7687.2007.00593.x)
- Schiffman, H.R. (2000). *Sensation and Perception*. New York: Wiley.
- Simmons, L. L. (2006). *Interactive art therapy: 'No talent required' projects*. New York: Haworth Press.
- Snow, D. A., & Anderson, L. (1993). *Down on their luck: A study of homeless street people*. Los Angeles: University of California Press.

Spence, C. (2008). Making sense of touch: A multisensory approach to the perception of objects.

In Chatterjee, H. (Ed.). Touch in museums: Policy and practice in object handling (pp. 45-61). Oxford: Berg.

Stack, D. M., & Tsonis, M. (1999). Infants' haptic perception of texture in the presence and absence of visual cues. *British Journal of Developmental Psychology*, 17, 97-110.

doi:10.1348/026151099165177

Taylor, G. J., & Bagby, R. M. (2004). New trends in alexithymia research. *Psychotherapy and*

Psychosomatics, 73, 68-77. doi:10.1159/000075537

Thomson, L. J., Ander, E. E., Menon, U., Lanceley, A., & Chatterjee, H. J. (2011). Evaluating the therapeutic effects of museum object handling with hospital patients: A review and initial trial of well-being measures. *Journal of Applied Arts & Health*, 2, 37-56.

[doi:10.1386/jaah.2.1.37_1](https://doi.org/10.1386/jaah.2.1.37_1)

Thomson, L. J., Ander, E. E., Menon, U., Lanceley, A., & Chatterjee, H. J. (2012a).

Quantitative evidence for wellbeing benefits from a heritage-in-health intervention with hospital patients. *International Journal of Art Therapy*, 17, 63-79.

doi: 10.1080/17454832.2012.687750

Thomson, L. J., Ander, E. E., Menon, U., Lanceley, A., & Chatterjee, H. J. (2012b). Enhancing

cancer patient well-being with a nonpharmacological, heritage-focused intervention. *Journal of Pain and Symptom Management*, 44, 731-740. [doi:10.1016/j.jpainsymman.2011.10.026](https://doi.org/10.1016/j.jpainsymman.2011.10.026)

- Victor, C. R. (1994). *Old age in modern society: A textbook of social gerontology* (2nd ed.). London: Croom Helm.
- Victor, C. R. (2005). The epidemiology of ageing. In Johnson, M. L. (Ed.), *The Cambridge handbook of age and ageing* (pp. 95 -105). Cambridge: Cambridge University Press.
- Vygotsky, L. (2002). Play and its role in the mental development of the child. *Psychology and Marxism Internet Archive*. <http://www.marxists.org>. (Original work published 1933).
- Wallendorf, M., & Arnould, E. J. (1988). " My Favorite Things": A Cross-Cultural Inquiry into Object Attachment, Possessiveness, and Social Linkage. *Journal of Consumer Research*, 531-547. <http://www.jstor.org/stable/2489159>
- Walters, I. (1997). Vietnam Zippos. *Journal of material culture*, 2(1), 61-75.
doi: 10.1177/135918359700200103
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063. doi: [10.1037/0022-3514.54.6.1063](https://doi.org/10.1037/0022-3514.54.6.1063)
- Wing, A., Giachritsis, C., & Roberts, R. (2007). Weighing up the value of touch. In Pye, E. (Ed.). *The power of touch: Handling objects in museum and heritage context* (pp 31-44). California: Left Coast Press

Winnicott, D.W. (1953). Transitional objects and transitional phenomena. In D.W. Winnicott, (1971).
Playing and Reality (pp 1-34). London: Routledge

Yin, R. K. (2009). Case study research: Design and methods (4th ed.). Thousand Oaks: Sage
Publications.

A Thematic Analysis of Museum Object Handling Groups in Older Adult
Mental Health Inpatient Care

Accurate word count: 8,684

For submission to the
Journal of Mental Health

Abstract

Background: An emerging body of evidence indicates that museum object handling sessions offer short term benefits to people in health care settings.

Aims: The aim of this study was to further understanding of the psychological and social aspects of a museum object handling group held in an older adult mental health setting.

Method: Older adults (N = 42) from a psychiatric inpatient ward with diagnosis of depression or anxiety took part in one or more of a series of nine museum object handling group sessions. Audio recordings of the sessions were subjected to a thematic analysis.

Results: Five main themes were identified: “responding to object focused questions”, “learning about objects and from each other”, “enjoyment, enrichment through touch and privilege”, “memories, personal associations and identity” and “imagination and storytelling”. The first four themes were congruent with existing literature associated with positive wellbeing and engagement outcomes. Imagination and storytelling was a new finding in the group context.

Conclusion: This study offers preliminary support for museum object handling group sessions as an intervention in this healthcare setting. There may be potential to develop the therapeutic aspects of the sessions. Further research is recommended and areas for enquiry discussed.

Declaration of interest: None.

Keywords: museum object, older adult, wellbeing, engagement.

Introduction

The role of the arts in the promotion of health and wellbeing in clinical settings is an area of growing interest. In a review of medical literature Staricoff (2004) found evidence of arts interventions producing beneficial therapeutic and medical outcomes which included reduced use of medication, decreases in length of hospital stay, reductions in both anxiety and depression and lowering of blood pressure and hormonal indicators of stress. A wide range of arts and cultural activities aim to enhance healthcare environments and delivery (Clift et al., 2009; Cox et al., 2010; Sonke, Rollins, Brandman & Graham-Pole, 2009; Wreford, 2010) and as such there is an ongoing need for further research to expand the growing evidence base for these activities (Clift et al. 2009). Museum object handling can be considered one of these interventions and has a relatively long history of being associated with health benefits; Classen (2007) noted that in the late seventeenth and early eighteenth centuries some objects were obtained by museums entirely because of what were considered their medicinal properties. In recent times the practice of museums using their collections to promote wellbeing, health and social inclusion is on the increase and often involves taking the objects from the museum site to other settings, including hospitals (Ander et al. 2013). Nonetheless there has tended to be a lack of research into the use of museum collections in hospitals and care homes (Noble & Chatterjee 2008) which has only begun to be addressed in the last six years.

Research into museum object handling sessions

Chatterjee and Noble (2009) undertook a pilot study whereby 24 hospital inpatients received one to one museum object handling sessions from medical students. The object handling sessions used loan boxes with a variety of items from across University College London (UCL) Museums including natural history and geology specimens, artworks and archaeological artefacts. The purpose of the activity was to enhance patients' wellbeing and

staff communication skills. Participants were invited to explore these items with a medical student facilitating. The study showed an overall improvement in patients' perception of their health status and wellbeing and qualitative analysis found that patients felt positive about the sessions which in turn benefited relationships amongst staff and patients. Chatterjee, Vreeland and Noble (2009) carried out bedside museum object handling sessions for 32 hospital inpatients following a similar procedure and found that self-report measures of life satisfaction and health status increased after the sessions and two major themes of education and reminiscence were identified in the qualitative analysis. Subsequently Thomson, Ander, Menon, Lanceley and Chatterjee (2011) identified clinically accepted psychometric measures of psychological well-being and health status suitable for quantifying the impact of museum object handling sessions in healthcare settings. The intention was to facilitate further empirical research into museum object handling and similar heritage based interventions.

Thomson, Ander, Menon, Lanceley and Chatterjee (2012a) used these measures in a study of 158 participants in a variety of healthcare settings including hospital wards, two neurological rehabilitation units and residential care. Participants were randomly allocated to either museum object handling sessions or equivalent sessions which used photographs of the objects instead. There were significant improvements in measures of wellbeing and happiness, with an advantage for the condition using objects rather than photographs.

Thomson et al. (2012b) found that for both oncology and non-oncology settings, participant levels of positive emotion, happiness and well-being increased significantly following a museum object handling session in comparison with a control condition which substituted photographs of the objects, as in the previous study. These findings are encouraging but limited in that they only capture short term benefits of single, one to one museum object handling sessions.

Lanceley et al. (2011) undertook qualitative research that focused on experienced nurses carrying out one to one object handling sessions with female oncology patients. The analysis found that object use facilitated discussion with participants who used the objects as vehicles for emotional disclosure and communication, suggesting future therapeutic applications for object handling. Paddon, Thomson, Menon, Lanceley & Chatterjee (2013) noted that thinking and meaning making opportunities were utilised by hospital patients participating in museum object handling sessions, in conjunction with reporting significant enhancement of measures of happiness and wellbeing. Ander et al. (2012) used grounded theory to analyse museum object handling sessions carried out with participants in a range of healthcare settings comprising a psychiatric hospital, several chronic and acute hospital wards including oncology, acute elderly and surgical wards, a neurological rehabilitation unit and an elderly care home. The authors identified key outcomes from the museum object handling session they termed “engagement processes” such as learning about the object and “expressions of wellbeing” such as eliciting memories that led to a renewed sense of identity (p. 234). A qualitative study was carried out by Ander et al. (2013) on the impact of museum object handling sessions on participants from two healthcare settings, a neurological rehabilitation unit and an inpatient mental health service. The analysis highlighted a total of eight themes that contributed to the success of the sessions, including enhancing conversational and social skills and enjoyment of the sessions.

Theoretical base for museum object handling

From a theoretical perspective, a number of psychological phenomena have been potentially associated with museum object handling sessions. Thomson et al. (2012a) posited that in physically holding objects during the sessions a “triple coding” (p.66) effect comes into play. Triple coding draws on dual coding ideas about memory (Paivio, 1986) and the contiguity effect described by Clark and Paivio (1991) which both relate to the combination

of verbal and visual material enhancing memory processes. Triple coding adds the sense of touch and suggests that the multisensory combination of holding, looking and talking about objects in the handling sessions has the effect of stimulating cognitive processes for the individual. Lanceley et al. (2011) explicitly cite Melanie Klein's psychoanalytic approach as underpinning their observation that museum objects used in these sessions potentially hold symbolic meaning for participants for whom the physical items may act as "a repository or container for projections of different and difficult states of mind" (p. 810). Thomson et al. (2012a) postulate that communication in the sessions is enhanced by the verbal and non-verbal dynamics between facilitator, participant and object that are analogous to the triangular relationship found in art therapy theory linking client, therapist and artwork (e.g. Case & Dalley, 2006; Schaverien, 2000).

One of the first studies to use material objects in a therapeutic intervention for people with mental health problems, Camic, Brooker & Neal (2011), posited that physical objects may be helpful in acting as a "psychological bridge" between the inner psychological world and outer environment for an individual with a mental health diagnosis (p. 34). Rowlands (2008) found that individuals in older people's healthcare described their use of material objects as vehicles to express their identity from two perspectives. The first was in acting as the holders of mementos and souvenirs that represented extensive shared family history, and the high regard that visiting friends and relatives placed on this. The second was using their possessions to curate their lives, providing tangible points of narration for their life stories which reinforced aspects of their history and identity beyond that of simply being recipients of healthcare. The implication is that the impact of museum handling sessions in mental health settings for older people may be a fruitful area for further investigation. This has at best been only partially addressed in the extant literature, where the two studies which include participants from older mental healthcare settings (Ander et al., 2012; Ander et al.,

2013) favour designs that merge the diverse clinical populations involved for the purposes of analysis. It may also be pertinent to note that the majority of literature regarding museum object handling sessions concerns one to one sessions, with the exception of Ander et al. (2012) and Ander et al. (2013) where neither of which distinguish between group and one to one interventions in their design. As museum object handling sessions have been observed to enhance communication between staff and patients (e.g. Chatterjee & Noble, 2009), it is reasonable to investigate the impact on group dynamics and interactions in group sessions.

The present study

Population and context of the intervention used. The participants in the present study were older adults in an NHS hospital who had been given primary diagnoses of depression and anxiety. The third sector organisation AGE UK cited depression as the most common mental health problem affecting older people (Godfrey & Denby, 2004). Woods (1999) posited that declining physical health, lack of social support and adverse life events may be key factors that underlie depression in older adults. The National Institute for Health and Care Excellence (NICE) has not produced specific advice regarding the treatment of depression in older people; the guidance available is for all adults and advocates a stepped care model whereby inpatient care is one of the indicated interventions for instances of the most severe and complex depression (NICE, 2009a; 2009b). The British Psychological Society (BPS) reported that in 2013 close to a third of hospital admissions for anxiety involved women over the age of 60, positing that this may be related to other health problems that older people may face (BPS, 2014). Charlesworth and Carter (2011) reported that mixed anxiety and depression is a common presentation in older people in contact with mental health services, more prevalent than either diagnosis alone. NICE advised that there are a number of anxiety disorders which most commonly occur in conjunction with depression and one another rather than in isolation. Taking the examples of generalised anxiety disorder and

panic disorder, NICE guidance has been produced for an adult population which favours a stepped care model with inpatient care, pharmacological and high intensity psychological interventions as some of the courses of action suggested for the more severe occurrences (NICE, 2011).

Older people in hospital with mental health problems are prone to longer hospital stays, multiple contacts with different staff and are the most likely patients to experience significant mortality and morbidity (Academy of Medical Royal Colleges, 2008; Holmes & House, 2000; Pratt & Burgess 2011; Royal College of Psychiatrists, 2005). The Kings Fund produced a report on English health care provision for frail older people with complex multiple needs including those in hospital with mental health diagnosis (Cornwell, 2012); key recommendations included a need to actively seek innovative methods of reengaging staff with patients' subjective experience and putting a greater emphasis on service users' mental wellbeing.

To date studies of museum object handling sessions in healthcare settings have almost exclusively been driven by an initiative termed "Heritage in Hospitals" which emphasised the links between arts in health and wellbeing outcomes (Thomson et al. 2012a). A consistent and comprehensive definition of wellbeing is elusive (Ander et al. 2012); psychological literature makes a distinction between two types of wellbeing: hedonic wellbeing, a subjective experience of pleasure, enjoyment and positive affect and the more complex and nuanced concept of eudaimonic wellbeing which describes the degree to which an individual is fulfilling their potential (Ryan & Deci, 2001; Waterman, 1993). The Heritage in Hospitals museum object handling studies drew on a definition of wellbeing offered by a UK Government think tank, the New Economics Foundation (NEF) (e.g. Paddon et al. 2013). NEF defined wellbeing 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, p.3). The NEF proposed five actions to improve wellbeing: be active, connect, keep learning, give and take notice (NEF, 2008). This eudaimonic perspective on wellbeing resonates with the NICE definition of mental wellbeing of older people which includes elements such as “life satisfaction, optimism, self-esteem, feeling in control, having a purpose in life, and a sense of belonging and support” (NICE, 2013, p.1). It highlights a holistic approach to the care of hospital patients recognising the reliance of health and wellbeing on interconnections between psychological, physical and social functioning (Paddon et al. 2013).

Aim and research questions. The aim of the present study was to address the gaps in the literature detailed above by posing the research question “what are the psychological and social aspects of a museum object handling group held in an older adult mental health setting?” In addressing the main aim, two further questions were considered. The first of these was whether beneficial processes associated with wellbeing and engagement highlighted in previous research encompassing one-to-one sessions would be present, such as enjoyment, tactile stimulation, recalling personal memories and identity (e.g. Paddon et al., 2013; Ander et al., 2013). The other question was whether focusing exclusively on group interventions would highlight particular dynamics within the group processes that supported enrichment and therapeutic benefits brought about by museum object handling sessions.

Method

Participants

The data used in the present study had previously been collected but not analysed. Participants were a subset of those recruited as part of the Heritage in Hospitals research programme which received an Arts and Humanities Research Council funding award, AH/G000506/1: Heritage in Hospitals: Exploring the potential of museum object handling as an enrichment activity for patients (e.g. Thomson et al., 2012a; Ander et al., 2013).

Participants were all volunteers from an older adult inpatient mental health ward located in a UK National Health Service (NHS) psychiatric hospital. There were 42 participants (29 women) of mixed social background and ethnicity who had received a diagnosis of clinical anxiety and/or depression. A total of nine group sessions were held with the number of participants varying from five to 12 (mean= 6.9, see appendix E for further details). A total of 20 participants only attended a single group session; the remaining 22 participants took part in between two and five sessions, determined by their preferences and discharge dates. The exact details of these patterns of attendance were unavailable beyond that which could be inferred from audio recordings.

Procedure

Each group session used one loan box from University College London Museums containing six objects selected from geology, zoology, archaeology, art and Egyptology collections. The contents of the box differed from session to session (see appendix F for photographs and details of the items). The sessions were facilitated by a museum professional who was joined by an occupational therapist in the majority of the sessions. The protocol involved publicising the sessions on the ward in advance and then recruitment by the facilitator on the day of the session. The sessions began with a general introduction and further explanation as requested. Written consent was obtained from those who wished to participate. A facilitated object handling session was conducted whereby the facilitator led activities and asked questions about handling and discussing the objects. The sessions were recorded using a digital audio recorder. The protocol used was based on that devised by Ander et al. (2011) for one to one sessions but adapted for group sessions; for details of the protocol see appendix G. The audio recordings of nine group museum object handling sessions were collected for subsequent analysis, which are reported in the present study.

Ethical considerations

Ethical approval for the original data collection was given by an NHS local research ethics committee who specified that the data, with personal identifiers removed, may be transferred to researchers with the approval of the research lead, Dr Helen Chatterjee. This clause was included on patient information leaflets and consent forms for all participants (appendix I). In order to secure Dr Chatterjee's approval for access to the data a contract with terms and conditions was signed by the author and his lead supervisor (appendix H).

Data Analysis

Statement of personal position. At the outset of this research my intention was to potentially adopt a descriptive phenomenological approach to the analysis, which would investigate the psychological meanings of the experience for participants (Giorgi & Giorgi, 2003). It was, however, apparent that the facilitator of the sessions had not adopted an entirely phenomenological perspective in their questioning. Through consultation with my supervisors and engagement with relevant literature, I moved to approach the analysis from a "contextualist" position, which retains some emphasis on reporting the meanings of the experience to participants, while encompassing constructionist views on social interactions defining the phenomenon. Thematic analysis is well suited to facilitate this epistemological position (Braun & Clarke, 2006, p. 81).

Thematic analysis. An inductive thematic analysis was conducted of the nine group sessions in that no a priori codes were used with codes generated directly from the data. However, direct reference was made to comparable research throughout the code and theme development, in line with the assertion that truly inductive analysis is not feasible once literature has been engaged with and utilising hybrid deductive/inductive thinking may result in more robust analysis (Braun & Clarke, 2006; Boyatzis, 1998; Fereday & Muir-Cochrane, 2006). The method used was informed by Braun and Clarke (2006, 2012) and entailed the following process:

A process of familiarisation with and immersion in the data: listening to and transcribing the recordings, re-reading transcriptions and making notes of any initial areas of potential interest.

Initial code generation: a systematic initial analysis of the data: line-by-line coding of each transcription was performed, whereby descriptive or interpretative labels were allocated to the text. Multiple codes were sometimes assigned to the same quotation. A qualitative data analysis software package, ATLAS.ti, was used throughout the analysis and facilitated an additional review of the entire data set whereby codes were further refined, with some codes combined, discarded or replaced (Friese, 2012).

Looking for themes: The coded data was reviewed for areas where similar or overlapping codes clustered with a view to identifying codes that may represent themes both significant to the research question and representative of a degree of patterned meaning within the data.

Initial thematic maps were generated.

The identified potential themes were reviewed: a recursive process which had two stages, first of checking the themes against the collated data and then against the entire data set. The checks were to ascertain if the themes had sufficient data supporting them, and that “data with themes should cohere together meaningfully, while there should be clear and identifiable distinctions between themes” (Braun & Clarke, 2006, p. 91).

The themes were defined and named, and a thematic map was finalised. A detailed analysis was written for each theme.

Quality assurance

Throughout this study Yardley’s (2000) four core principles for conducting qualitative research were adhered to.

Sensitivity to context. The protocol for the museum object handling sessions was tailored to the group context, and associated with positive short term gains in measures of participant wellbeing (e.g. Ander et al. 2013)

Commitment and rigour. When developing codes and themes, the data was reread and meticulous records were kept of the decisions to establish a clear audit trail. An annotated transcript, records of code development and nascent thematic maps were presented (Appendices J, K, and L). An established method was adhered to (Braun & Clarke, 2012).

Transparency in the analysis of data. I reflected on my own background and experience of delivering object handling sessions and explored this in formal and peer supervision. I kept a research diary throughout the process and presented my preliminary research findings to a local older people’s psychology team (appendices O and P).

Impact and importance. This analysis of a museum object handling group sessions represents new findings that could potentially be correlated with qualitative and quantitative data from one to one sessions to further refine protocols and efficacy of the intervention.

Results

A total of five overall themes were identified, comprising 16 subordinate codes (Table 1). Quotes from transcripts have been included to illustrate examples from themes and codes; names and identifying information have been removed. Numerical references are included for each quote, with transcript and line number (e.g. 5:16 refers to the transcript of the fifth session, line 16) and designated participant number (e.g. P1, P2, etc.) or facilitator (F).

Table 1. Themes and codes

Theme	Subordinate codes
Responding to object focused	Guided discovery, guessing games and questions

questions	Shared exploration and discovery
	Talking about the task including rules and rule breaking
	Careful examination of the object
Learning about objects, learning from each other	Bringing the past alive
	Learning new things
	Story of the object
	Enjoyment
Enjoyment, enrichment through touch and sense of privilege	Sense of privilege
	Touch
	Group culture
	Objects as memory triggers
Memories, personal associations and identity	Objects as prompts for disclosure
	Objects as reminders of identity
	Storytelling
Imagination and story telling	Imagination and role play

Responding to object focused questions

Questions and various tasks related to a given object were posed by the facilitator, following the principle of guided discovery about the objects defined by Ander et al. (2011). This procedure entailed the facilitator remaining in an expert position, holding the correct information. Within the group, however, participants would also collaborate on investigating the objects without the facilitator, a process of genuinely shared exploration where neither held specific prior information. Engaging with the questions and activities promoted social interaction within the group as the participants would discuss the parameters of the tasks with one another and sometimes look to break the rules. This theme was made up of three codes.

Guided discovery, guessing games and questions. The facilitator posing questions, setting tasks and inviting guesses or deductions; the participants' responses. This code includes the facilitator confirming or correcting guesses.

F: Any guesses about how old it might be?

P1: Pass

P2: Two thousand years

F: Two thousand years good, good bid anybody else got a guess

P3: 4,000 years

P1: I would of said a bit older than that (2:91)

Shared exploration and discovery. Participants sharing observations, thoughts and hypotheses about an object with one another.

P1: "I would have said that's a mineral so you are saying that it is an animal."

P2: "Yes I am saying that" (2.11)

Talking about the task including rules and rule breaking. Including participants reminding each other of rules and discussing the parameters of the task:

P1: "I wasn't listening to her about what we are actually doing"

P2: "See what it is"

P1: "See what we think because I think I know quite a lot about it so I don't want to influence you" (2.52)

Also included is discussing whether the task is easy or difficult:

P4: "I'm lost on this one, I'm not too good with insects" (3.21)

And attempts to cheat or break the rules:

P5: "I cheated I assumed you would have brought two of each [categorising objects to animal mineral or artefact]" (11.37)

Learning about objects, learning from each other

Participants were educated about an object both by the facilitator's expertise and by sharing their own knowledge, observations, speculation and impressions about the item. The vehicle for this learning was in focusing sustained attention on a particular object in terms of its physical properties and the emotional, intuitive or symbolic reaction it provoked in the examiner. Handling increased the participants' intellectual engagement with the object. Curiosity was raised as to the provenance and wider history of the specific object being assessed. Another aspect of this theme was when the object acted as a literal and vivid link to the past, which participants expressed as having been a profound experience. There were four codes within this theme.

Learning new things. Participants acquired new skill or knowledge to use:

F: "But there is one clue that tells you it isn't a goat's horn, because goat's horns are always straight and sheep's are always curved" (3.36).

The facilitator or participant gave facts or information:

F: [describing a fossil] "well it is probably closer to stone now than the bone because over the millions of years it is trapped in, it becomes stone essentially it changes its chemical make-up" (6:155).

F: "A snail bit horrible but then you take that out and it becomes a beautiful shell."

P5: "Isn't that a mother-of-pearl"

F: "Yes it is" (11:53)

Participants were curious and asked the facilitator about the object:

P9: "But why the two holes in the projections, what were they for?" (8:30)

Careful examination of the object. Participants described the physical properties of the object such as its weight, colour, shape and reactions to those properties:

P10: [examining abalone shell] "It's a beautiful colour on the inside" (13.43)

P12: "Yeah I am surprised how heavy it looks, it didn't look that heavy in the box" (13.12).

Participants shared their impressions and emotional reactions to the object:

P13: [examining Egyptian bronze figurine of the cat goddess 'Bastet'] "I respond with emotion to art, I think that is symbolic of something strong for that tribe or for those people, I know I've been taught nothing right I say I've never got, but this is symbolic of we are strong there's our baby hold on and protect the baby." (2:65)

P14: [looking at puma skull] "It's scary!" (4:92)

Story of the object: Questions were asked about the history of the specific object being handled such as how or where the object had been found:

P6: "So how did the museum come by it then?" (6:55).

P15: "Do you think in this country, do you think you'd find things like this in this country?"

P5: "Not sure"

P15: "No be interesting to find out if they know where it came from" (11.73)

An exclusion criterion was not to assign generic information about the objects to this code.

Bringing the past alive. The object provided a tangible connection to ancient peoples and past worlds:

P1: "I mean to think somebody's hands made this from nature" (2:104).

P6: "when you think that it's not that somebody had to actually work all these tiny little marks into the copper first it's quite a job I think" (3:164)

Participants discussed picturing the object as complete (artefacts) or the creature as alive (natural history specimens) and speculated about the object in its original habitat or context, including the object's value and/or what its function may have been.

F: [while handling a fossilised shark (Megalodon) tooth] "It's an ancient huge shark like a giant shark kind of related to the great white but I think even bigger"

P1: "Gracious"

P2: "Amazing" (2:132).

Enjoyment, enrichment through touch and sense of privilege

Mention was made of feelings of enjoyment and other positive emotions associated with handling the objects and participating in the group. The facility to touch the objects added a novel dimension of physical stimulation to the sessions. Another level was the mental engagement with the objects, in terms of interest in the items and a sense of privilege in having licence to handle the heritage objects used in the sessions. The facilitator framed the opportunity as in effect an initiation to an exclusive club of individuals permitted to touch the objects. Enjoyment at being involved in the social processes of the group was indicated by instances of humour and running jokes, recapping on shared group history and demonstrations of commitment to the group such as making requests for future groups or trying to prolong the sessions. There were four codes within this theme.

Enjoyment. Participants explicitly commenting on positive aspects of the experience.

P1: "I really enjoyed it"

P3: "Thank you very much"

P2: "Very interesting" (2:190).

P16: "It's been absolutely fabulous" (5:99)

P17: [about volcanic rock (obsidian)] "it's very interesting" (12:26)

Sense of Privilege. This was evoked by being able to physically touch the rare and uncommon museum objects;

P7: "Wow I can't believe I'm holding one of these things" [a flint axe head] (7:28)

P18: "I was saying it's lovely to be able to handle things that normally you would just see behind a glass cabinet in museums and it's great to be able to actually pick them up" (11:189)

The sense of privilege was emphasised by the facilitator:

F: "Well now you can say you have handled some Halif ware now it's called Halif ware from Mesopotamia" (11.112)

The age and condition of the objects contributed to the unique experience of handling them

P6: [holding fragment of statue] “It’s not bad for nearly two and half thousand years old”

(6:57)

In addition participants were offered behind the scenes insights and specialist information beyond that which would be freely available in a public museum:

F: There’s numbers on each object but they are the museum numbers whenever you see that every object that has been taken into the collection has a museum number or an accession number and sometimes several because curators work out their own systems [laughter]

P15: instead of copying the old

F: exactly (11.138)

Touch. Touch enriched the experience in terms of the tactile stimulation of physical contact with the objects:

P1: “Does it make a difference being able to really look at things in your hands, texture and weight?”

P2: “Oh yes yes its excellent” (5:40)

F: “Run your fingers over it”

P20: “Very smooth” (7:43)

Handling the objects could yield surprising information, enhancing the scope for the sessions to be engrossing for the participants:

P10: “It looks very light doesn’t it?”

F: “Yeah”

P10: “Feels quite heavy” (13.38)

Touch was a transformative experience for some participants:

F: It's quite interesting to ask people whether they like to hold the objects too rather than just [look at them]

P2: It's a bit better to hold, it takes you right away, right away from here, it takes you to another place. (2.192)

P11: "There's something lovely about touching things"

F: "Yes you do appreciate the touching that"

P11: "Just at the moment a sense of or my sense of feeling has changed you know." (13:60)

Group culture. Both facilitator and participants made humorous asides. Participants built or added to one another's jokes:

P8: [commenting on contents of loan box] "Can we get a few diamonds in there!" (2.119)

F: [commenting on the figurine of Bastet] "She is the Goddess of fertility among other things"

P1: "No!"

F: "Fertility and children and women and also sunrise and the moon"

P1: "She had a busy day! [laughter]"

P2: "What did she do in her spare time? [laughter]" (2.148)

Recapping what had happened contributed to developing an inclusive group culture:

F: [commenting on emu egg] Well I think that was very good because you got that it was an egg shape and kind of egg texture sort of it's got this texture on it and [participant's name] said she thought perhaps there was an animal inside of it and it had been perhaps blown out... (6:11)

Some participants made suggestions and requests to improve groups:

F: "Well I'm glad because I bought a box with an Egyptian object because I remembered you wanted Egyptian so I'm glad you came for that bit of it"

P21: "Oh yeah I love anything Egyptian or Greek" (7:215)

P10: I think you probably know half of what I say anyway cos I love this stuff but I'd actually go either for a slightly longer session if we could get it or you know have the same amount of time but with slightly fewer objects

F: Yeah yeah we never quite get around to the six do we no it's true. (13.56)

Memories, personal associations and identity

Various qualities of personal meaning making were expressed. A continuum of overt to more tenuous or subtle associations with the objects had the capacity to trigger memories and links with aspects of participants' lives, including reflections and recollection of personal histories, wider family networks and current situations. Issues of identity and aging were raised as participants drew on their personal resources within the sessions, such as hard-won expertise. Properties of the configuration of the group resonated with some participants, fuelling connections to other academic or educational experiences in their lives. This theme had three codes.

Objects as memory triggers. Participants voiced personal recollections of experiences related to similar or identical objects to those present in the sessions. These included reminders of present associations:

P21: "It's exactly like pot I have on my dressing table. Which I use to keep to keep rings in it" (4:8).

And times further in the past:

P3: "No no but I've seen, once I found one as good [referring to a flint axe head]"(2.37)

P20: [natural history specimen turtle shell] "I was once bitten by something like it" (7.121)

More subtle properties of the object such as colour or where it originated had capacity to trigger memories of personal experiences and the forging of connections to wider family members:

P17: [looking at mineral sample of sodalite] “When I was a child they had medicine bottles in that colour, that’s what it reminds me of.” (12:47)

P1: “Nefertiti that’s sort of Egyptian isn’t it”

P2: “Yes”

P1: “My daughter went to that when she was at school she learned all about it” (2.158)

P10: “My grandfather was out there in the First World War in that area” (12.97)

In interpreting personal orientations to the object, longer narratives emerged related to the object’s properties and provenance:

P5: [handling turtle shell/carapace] I always remember going to a restaurant when I was a very small girl well it was more like a café but it used to be a hotel and they had this huge um well I don’t know if it was turtle or tortoise shell huge thing...(2.171)

P10: Egypt not so bad it wasn’t when we went out there, there was a lot of trouble in Iran police and soldiers everywhere that was out in ’50 and ’46 when they were young I know we had to come back via Lebanon because of the troubles by ship (12.100)

The latter quote illustrates the participant reminiscing about visiting a part of the world close to where an object originated (Mesopotamian pottery fragment) and combined personal account with sharing thoughts and knowledge about the politics of that time.

Objects as prompts for disclosure. Although some items identified within this code could conceivably have been allocated to “objects as memory triggers”, a decision was made to preserve this separate code to capture participants disclosing personal information, such as thoughts about health issues stemming from the handling of an object:

P6: “It’s a bone” [fossil ‘ichthyosaur’ spine bone]

P11: “Oh oh is it”

P6: “Yeah yeah it’s a vertebrae bone”

F: “So it’s a back bone”

P11: "Oh it's heavy"

P6: "I would never guess that"

P11: "I've had two of mine joined together" (6.151)

Talking about regrets or difficult memories:

P1: I did half a degree in zoology at one time

F: Oh really ah right

P1: My first degree don't tell anybody it was half a degree. I got away without a first class honours degree actually. I have done a lot since

F: Oh right well it sounds like you are very knowledgeable about other things lots of things and there's a range of students these days

Participant: I think you are one of the first persons, people I have ever told that apart from my wife and family of course. (2.76)

Or the process of recovery from mental health issues:

P19: "The trouble is in our situation I think you just hope one day the emotions are stirred again and that might be the beginning of the way back". (13:69)

Objects as reminders of identity. Issues of identity were raised as individuals drew on their skills and knowledge to engage intellectually with the objects:

P1: "Clearly it's part of my business to know things like that I was an engineering geologist" (2:8)

In the following excerpt the male participant relates to the object he is handling in terms of his current role and by comparing his own resources with those of the artefact's creator:

P20: [studying an etching of Teddington Wier] The thing that fascinates me cos I am learning to be a web designer I am on my second qualification they teach you how to work with layers for images electronically and to get that kind of layered effect so you

can see the gate above is on the ship the boat the clouds it's like them all it's very very difficult to produce electronically. (7:211)

Thinking about the age of objects could provoke thoughts about aging, such as a sense of growing older and having lived through historical change:

P2: "Because they had turtle soup in my lifetime" (2:170)

P9: "When we were growing up when our children were growing up [there was] no television" (13:14)

or an appreciation of the broader passage of human history:

P8: Like you know when you go back to oh gosh was it Mesopotamia we were talking about they discovered things like mathematical principles that we in the West did not have until after the medieval period all of that knowledge that has been lost and re-lost (7:216)

The context of learning about the objects in groups with a facilitator mirrored other academic environments:

P1: "I'm behaving like the teacher now not the engineer" (2:14)

P6: "I always seemed to be in the top for history, as my youngest daughter is" (3:74)

Imagination and story telling

Anecdotes and narratives emerged from conversations about a given object, grounded in popular culture or personal knowledge and experience; stories were shared by one individual to the group. Conversely, often humorous imaginative fantasies about the objects used a template of dynamic social interaction whereby an individual would share an imaginative speculation with the group and others would collude, perhaps by spontaneously allocating themselves a role in the fantasy in order to expand the fiction for the group as a whole. This theme was composed of two codes.

Storytelling. Distinct from telling stories about memories and personal histories, narrative connections between objects and popular fiction or myths were made:

P21: [handling a nautilus shell] A nautilus

P15: I think there might be a submarine called the Nautilus too

P21: There is yes Jules Verne in one of his novels named a submarine Nautilus and from that I think one of the navies started naming their submarine the Nautilus.

(8:102)

P4: [handling ichthyosaur bone] “I remember reading something years ago they thought they were always talking about the Loch Ness Monster every few years and one of the candidates for the potential Loch Ness Monster was an ichthyosaur.” (6:152)

The stories took the object being handled as an initial reference point:

P19: [after handling turtle shell] And very briefly I have a great story that I acquired from Stephen Fry on the tortoise front when Darwin was in the Galapagos Islands they found one of those many species of giant tortoise they had at the time... (7:188)

Imagination and role play. Participants voiced fantasies of keeping the objects:

P4: “I’m going to keep it”

F: “Are you”

P4: “For future use”

P6: “What would you put in it? Maybe just a decoration?”

P4: “Probably nothing [laughter]” (3:113)

F: “Don’t expect people to get this but you might surprise me”

P17: “Do we get to keep it if we do?” (7:40)

and excitement at imagining the point of discovery:

P5: “It would be exciting to find something like that wouldn’t it?” (2:103)

P21: [handling shell] “in a way it’s beautiful isn’t it”

P15: “Mm mm”

P21: “Imagine [name of participant 3] finding that in the sea” (8:98)

Although there is arguably an overlap with other codes a decision was made to include incidents acting out imaginary roles from the past in this code, which moved to domains of the humorous and absurd:

P6: [discussing statue] “Gosh can you imagine carving all those folds? [alters tone of voice] ‘I am today’s fold specialist’ ” (6:61)

including giving agency to the object itself:

[handling statuette of Goddess Bastet]

F: She is depicted with kittens I wonder if that is her kitten bag

P1: Ah

F: I can’t see any kittens there now

P2: Well if she has all that work to do she needs something to carry [laughter]

F: Yes exactly she has [inaudible word] [laughter]

P2: The sun cream the sun hat you know, umbrella

P5: That’s classic

P2: Yes yes anyone for tennis? (2.155)

The group would work collectively on transforming an object by imagination:

P11: “It’s like an ashtray”

F: “Yes [laughter] that’s what somebody else said anybody who smokes I think automatically thinks”

P8: “As used by Julius Caesar on Thursday 21st of March” (6:140)

P21: [handling small mineral sample] “It’s like a pork chop [laughter]”

F: “That’s exactly the shape it’s a good description”

P20: “Yes”

P19: “It’s like a pork chop I’ve never heard that before”

P21: “Yes”

P20: “Yes this pork chop is 40 million years old [laughter]”

F: “But it’s even got the bit you know the sort of skin on the back bit”

P20: “Absolutely making me hungry now.” (7:85)

Further analysis of themes and codes

In their qualitative study of one to one museum object handling sessions Paddon et al. (2013) distinguished between facilitator and participant codes and themes. In the present study codes and themes have included participant and facilitator interaction, in keeping with the research aim of identifying meaningful patterns in the nexus of interactions during the sessions rather than comparing the two groups (facilitators and participants). Some of the codes that emerged from this study, however, exclusively refer to dialogue between facilitator and participant, while the remaining codes were categorised as exclusively participant codes or partially referencing facilitator dialogue. See appendix M for a thematic map of the themes and codes which includes a level of detail on these relationships.

Discussion

In order to address the overarching research aim, the findings will be considered in light of extant literature and theory and with regard to the research questions. Note will be made of limitations of the present study and implications for future research and clinical practice presented.

Wellbeing and engagement processes

A research question of the present study queried whether some of the processes identified in previous qualitative research into museum object handling sessions would be indicated in the findings of this study. It is important to note that the museum object handling

interventions described throughout this paper are primarily intended to provide therapeutic benefit to participants, rather than prosecuting an exclusively educational agenda in teaching participants about heritage objects (Chatterjee et al. 2009). Nonetheless the present study highlighted “learning about objects, learning about each other” as a major theme which maps onto findings in the extant literature. For example the grounded theory analysis by Ander et al. (2013) cited learning new things an element of museum object handling sessions that enhanced participants’ feelings of competence and confidence. In addition Paddon et al. (2013) reported that a large proportion of conversation in the sessions involved learning; one aspect Paddon et al. highlighted was termed “guessing game” (p. 40) which is closely related to the code “guided discovery, guessing games and questions” indicated above.

Previous studies that have contrasted individuals examining photographs in comparison to actual items have suggested that the physical presence of the object in question enriched the experience (e.g. Thomson et al., 2012b). The act of taking an object into one’s hands can be a powerful experience (Samuels, 2008), particularly in the context of a hospital environment where opportunities for tactile stimulation are often minimal for long periods of time (Ander et al. 2013). Activities involving touch in moulding clay have been associated with health and wellbeing benefits (Timmons & MacDonald, 2008) where participants cited touch as enriching the sessions. Thomson et al (2012a) suggested that the combination of visual, tactile and verbal information in handling sessions engages a triple coding effect that enhances memory encoding and wellbeing. A central tenet of cognitive stimulation therapy is the use of multisensory methods, which have been associated with increased cognitive processing and establishing new connections in the brain with people diagnosed with Alzheimer’s disease (Spector, Woods & Orrell, 2008; Yamanaka et al., 2013). It is feasible that handling and discussing museum objects results in equivalent levels of cognitive processing (Paddon et al. 2013) although mapping neuropsychological change falls beyond

the scope of the present study. Participants indicated that “a sense of privilege” enhanced the experience. Chatterjee et al. (2009) suggested having licence to physically hold rare and unusual heritage objects is an important feature of museum object handling sessions. Participants reported enjoyment in the sessions which paralleled findings by Ander et al. (2013) that the sessions were seen to promote positive emotion. This enjoyment has been partially attributed to the sessions providing a distraction from normal ward activities (Chatterjee & Noble, 2009); in addition distraction from negative emotions has been seen as another beneficial outcome (Ander et al. 2013; 2012).

A further aspect of using heritage objects is that their inclusion in museum collections implies a “museum-worthy” quality (Chatterjee et al., 2009, p. 174) that participants were curious about, coded above as “the story of the object”. While found objects of low economic value have been successfully used in therapeutic contexts (Camic et al., 2011; Romano, McCay & Boydell, 2012) Lanceley et al. (2011) suggest there is therapeutic value in using objects from outside participants’ everyday experience which may be ascribed a broad range of psychological meanings unencumbered by present-day associations.

Maroevic (1995) posited that museum objects may be perceived in a multi-layered manner that includes conceptual levels. Participants associated objects with personal memories and experiences as seen throughout the literature on museum object handling sessions (e.g. Paddon et al. 2013). For some participants the great age of several objects provoked thoughts about “the nature of time, change and the participants’ place in the world” (Ander et al., 2013, p. 212). Note has been made of the facility of object handling sessions to enable participants in healthcare settings to share information about their premorbid lives (Ander et al., 2013) and explore the meaning of their particular illness or health problems (Lanceley et al., 2011), reflected in the present study in codes “objects as prompts for disclosure” and “objects as reminders of identity”. There is an argument that an opportunity

for meaning-making in healthcare settings plays a vital role in adjusting to illness and other stressful events (Park, 2010). The hospital context can entail a loss of personal attributes and individuality, with periods of boredom, introspection and illness or diagnosis dominating an individual's personality (Ander et al., 2013, 2012; Watkins, 1997); the facility in the sessions for participants to share memories and personal qualities from other parts of their lives may bestow benefit to the individual and enhance communication and understanding with staff participating (Ander et al., 2013).

Group processes

A further research question enquired if focusing exclusively on group interventions would highlight particular dynamics within the group processes that supported enrichment and therapeutic benefits brought about by museum object handling sessions. The theme "imagination and storytelling" captured interactions not documented elsewhere in the literature, in particular the use of role play and fantasy. Chatterjee et al. (2009) referred to "imaginative touching" (p. 169), for instance making stabbing motions with a flint dagger. Participants collaborating in telling fantasies or stories about the object was a novel finding of the present study though it should be noted here this type of behaviour was more likely in a group than in one to one sessions. Digby (2006) regards object based story telling as "part of the human condition" (p.181); in terms of applied psychology and clinical gains, two interpretations are of relevance. The first is that mental health issues in older people are often associated with isolation and breakdown of social networks and social support from peers has been cited as a potentially beneficial factor (Forte, 2009; Smyer & Qualls, 1999; Woods, 1999). This aspect of the object handling intervention might have benefit in terms of building social networks between participants and reducing isolation. Furthermore on long-term hospital wards "social interactions with people other than close family and ward staff are important in feeling ready to live outside the ward and return to independence" (Ander et al.,

2013, p. 212). This conclusion resonates with ideas from art therapy where material objects are incorporated into a unique group culture (Case & Dalley, 2006). A second possibility is that the nature of the fantasies expressed may provide the basis of therapeutic work if viewed from a psychological perspective; for instance Lanceley et al. (2011) linked a desire for participants to keep the heritage objects to psychoanalytic ideas of transitional objects (e.g. Winnicott, 1953). A recurring motif was imagining discovering the object, which could be considered in light of the “discovery and engagement” domain of relationships to found objects suggested by Camic (2010).

Limitations

One of the limitations of the current study is the relatively small sample size, which indicates that caution should be exercised in applying results to wider populations. Recruitment to the groups was open ended and membership of the group fluctuated and changed across the sessions, presenting limitations in gauging commitment to the sessions and the potential impact of attending multiple groups. The lead facilitator tended to frequently interject with questions on the properties and provenance of the items examined, which limited the scope to expand on the psychological and social aspects of the discussions held by older participants in a mental health setting. Another consideration was the exclusive use of audio recordings, which do not provide information on non-verbal information such as facial expressions and how objects were handled. Chatterjee et al. (2009) found that the different ways in which participants in their studies handled objects was noteworthy; this information was unavailable in the present study. Although no data collection is flawless, a further limitation lies in the quality of the recording; during group discussions, some voices were inaudible or lost. The data from quantitative studies that underpins a central assumption of this study, that the processes identified enhance wellbeing, does not include longitudinal data; all gains reported in the studies cited were only measured in the short term.

Implications for further research

To date, no other known study has focused entirely on museum object handling groups. The present study builds on previous research into the efficacy of museum object handling sessions and highlights both commonalities and divergences between one-to-one and group sessions. Within the existing canon of research of material object handling this study provided encouraging pilot data about the potential benefits of object handling as part of a group intervention for older adult inpatients diagnosed with depression and/or anxiety. Undertaking further, larger scale studies within this population and context would greatly enhance the potential to generalise and apply the findings more widely; additional validity would be gleaned by the use of control groups offering alternative or no interventions. Further research into groups in other healthcare settings would be desirable to potentially investigate processes in different client groups' settings.

A novel finding of this study, the theme “imagination and story telling”, may be related to the group format of the sessions and further research into museum object handling groups may clarify this further. Given the beneficial nature of the intervention indicated by this study, further quantitative research to assess the impact, including longitudinal and randomised control trials would be worthwhile. It would also be helpful to include measures to assess the impact of single compared to multiple sessions.

Implications for clinical practice

This study offers cautious support of the potential for this novel intervention to improve wellbeing through increasing positive social interaction and by providing physical and mental stimulation for older people hospitalised with anxiety and/or depression. Providing museum object handling sessions for this client group in inpatient settings more widely and regularly may confer benefits in terms of wellbeing. In addition to a museum professional it would be helpful for a clinical psychologist to facilitate in order to more

actively nurture psychological and social meaning making in the groups. In light of the personal memories and reflections participants shared in the sessions, there is potential to develop a therapeutic dimension to the intervention. Although the use of material objects in therapy by clinical psychologists is largely unknown, there remains an unexplored potential in using museum object handling groups as a therapeutic intervention, compatible with a range of psychological models. The thematic map generated in this study, for example, may be of use for a psychologist facilitating such a group to hold in mind if they wish to direct the group through a mix of the processes identified. An additional positive component may lie in fostering opportunities for staff to explore service users' subjective experiences and sense of identity. A further implication might be related to service user involvement in co-facilitating the group. The findings presented here are tentative but emphasise participants sharing knowledge, working collaboratively and interacting socially as positives in the groups. Having a service user co-facilitate the sessions may potentially further enhance the levels of engagement and beneficial social dynamics in the groups.

Conclusion

This study aimed to explore the psychological and social aspects of museum object handling groups held in an older mental health inpatient setting. A thematic analysis of audio recordings of the sessions identified five overarching themes. These themes described how handling and discussing museum objects evoked potentially beneficial and therapeutic processes including enjoyment, learning, socialising with others, interest in the objects and active participation in the groups. Interacting with the objects triggered memories and may have given participants opportunities to renew aspects of their identity not routinely obvious in the normal healthcare setting. These results were in keeping with extant literature associating the sessions with wellbeing and engagement outcomes. A new finding in the study was in highlighting the object-based story telling that spontaneously occurred in

sessions. These findings contribute to a growing body of evidence indicating that museum object handling sessions are a novel but effective intervention and that there is potential for conferring additional advantages by conducting the sessions in a group setting.

References

- Academy of Medical Royal Colleges. (2008). *Managing urgent mental health needs in the acute trust: A guide for practitioners for managers and commissioners in England and Wales*. London: Royal College of Psychiatrists.
- Ander, E. E, Thomson, L. J, Blair, K., Noble, G., Menon, U., Lanceley, A., & Chatterjee, H. J. (2013). Using museum objects to improve wellbeing in mental health service users and neurological rehabilitation clients. *The British Journal of Occupational Therapy*, 76, 208–216. doi:10.4276/030802213X13679275042645
- Ander, E. E., Thomson, L. J, Noble, G., Lanceley, A., Menon, U., & Chatterjee, H. J. (2011). *Heritage in Health: A guide to using museum collections in hospital and other healthcare settings*. London: University College London.
- Ander, E. E, Thomson, L. J, Noble, G., Lanceley, A., Menon, U., & Chatterjee, H. J. (2012). Heritage, health and well-being: assessing the impact of a heritage focused intervention on health and well-being. *International Journal of Heritage Studies*, 19, 229–242. doi: 10.1080/13527258.2011.651740
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: Sage Publications.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101. doi:10.1191/1478088706qp063oa
- Braun, V., & Clarke, V. (2012). Thematic analysis. In H. M. Cooper, P. M. Camic, D. Long, A. Panter, D. Rindskof, & K. Sher (Eds.), *APA handbook of research methods in psychology*, vol. 2 (pp. 57–71). Washington, DC: American Psychological Association.

- British Psychological Society. (2014). Understanding anxiety in older women. Retrieved from <http://www.bps.org.uk/news/anxiety-older-women>
- Camic, P. M. (2010). From trashed to treasured: A grounded theory analysis of the found object. *Psychology of Aesthetics, Creativity, and the Arts*, 4, 81–92.
doi:10.1037/a0018429
- Camic, P. M., Brooker, J., & Neal, A. (2011). Found objects in clinical practice: Preliminary evidence. *The Arts in Psychotherapy*, 38, 151–159.
doi:10.1016/j.aip.2011.04.002
- Case, C. & Dalley, T. (2006). *The handbook of art therapy* (2nd ed.). New York: Routledge.
- Charlesworth, G. & Carter, J. (2011). Anxiety and depression in older people. In Keady, J., & Watts, S., (Ed.s), *Mental health and later life: Delivering an holistic model for practice*. (pp. 57–72). Milton Park, Abingdon, Oxon: Routledge.
- Chatterjee, H. J., & Noble, G. (2009). Object therapy: A student-selected component exploring the potential of museum object handling as an enrichment activity for patients in hospital. *Global Journal of Health Science*, 1, 42–49. Retrieved from <http://www.ccsenet.org/gjhs>
- Chatterjee, H., Vreeland, S., & Noble, G. (2009). Museopathy: Exploring the healing potential of handling museum objects. *Museum and Society*, 7, 164–177. Retrieved from <http://touchandwellbeing.co.uk/reading-room/essays-and-articles/chatterjee-vreeland-noble.pdf>
- Clark, J. M., & Paivio, A. (1991). Dual coding theory and education. *Educational Psychology Review*, 3, 149–210. doi:10.1007/BF01320076
- Classen, C. (2007). Museum manners: The sensory life of the early museum. *Journal of Social History*, 40, 895–914. doi:10.1353/jsh.2007.0089

- Clift, S., M. Camic, P., Chapman, B., Clayton, G., Daykin, N., Eades, G., ...White, M. (2009). The state of arts and health in England. *Arts & Health: An International Journal for Research Policy and Practice*, 1, 6-35. doi:10.1080/17533010802528017
- Cornwell, J. (2012). The care of frail older people with complex needs: Time for a revolution. Retrieved from http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/the-care-of-frail-older-people-with-complex-needs-mar-2012.pdf
- Cox, S. M., Lafrenière, D., Brett-MacLean, P., Collie, K., Cooley, N., Dunbrack, J., & Frager, G. (2010). Tipping the iceberg? The state of arts and health in Canada. *Arts & Health: An International Journal for Research, Policy and Practice*, 2, 109–124. doi:10.1080/17533015.2010.481291
- Digby, S. (2006). The casket of magic: Home and identity from salvaged objects. *Home Cultures*, 3, 169–190. doi:10.2752/174063106778053219
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods*, 5, 2–11.
- Forte, D. (2009) Relationships. In M. Cattan, (Ed.), *Mental health and well-being in later life*. (pp 84–111). Maidenhead, Berkshire, England: Open University Press.
- Friese, S. (2012). *Qualitative data analysis with ATLAS.ti*. London: SAGE.
- Giorgi, A. & Giorgi, B. (2003). The descriptive phenomenological psychological method. In P. M. Camic, J. E. Rhodes, & L. Yardley, (Eds.) *Qualitative research in psychology: Expanding perspectives in methodology and design* (pp. 243–273). Washington, DC: American Psychological Association.
- Godfrey, M., & Denby, T. (2004). *Depression and older people: Towards securing well-being in later life*. Bristol, UK: Policy Press in association with Help the Aged.

Holmes, J., & House, A. (2000). Psychiatric illness predicts poor outcome after surgery for hip fracture: a prospective cohort study. *Psychological Medicine*, 30, 921–929.

Retrieved from

http://journals.cambridge.org/download.php?file=%2FPSM%2FPSM30_04%2FS0033291799002548a.pdf&code=f9a962359969d453535dff80e4f96db5

Lanceley, A., Noble, G., Johnson, M., Balogun, N., Chatterjee, H., & Menon, U. (2011).

Investigating the therapeutic potential of a heritage-object focused intervention: a qualitative study. *Journal of Health Psychology*, 17, 809–820.

doi:10.1177/1359105311426625

Maroevic, I. (1995) The museum message: Between the document and information. In E.

Hooper-Greenhill (Ed.), *Museum, media, message* (pp 24–36). London: Routledge.

National Institute for Health and Clinical Excellence. (2009a). *Depression in adults: The treatment and management of depression in adults*. (NICE Clinical Guideline 90).

London: National Institute for Health and Clinical Excellence.

National Institute for Health and Clinical Excellence. (2009b). *Depression in adults with a*

chronic physical health problem: Treatment and management. (NICE Clinical Guideline 91). London: National Institute for Health and Clinical Excellence.

National Institute for Health and Clinical Excellence. (2011). *Generalised anxiety disorder*

and panic disorder (with or without agoraphobia) in adults: Management in primary, secondary and community care. (NICE Clinical Guideline 113). London: National Institute for Health and Clinical Excellence.

National Institute for Health and Clinical Excellence. (2013). *Mental wellbeing of older*

people in care homes. (NICE Quality Standard 50). London: National Institute for Health and Clinical Excellence.

New Economics Foundation. (2008). Five ways to well-being: The evidence. Retrieved from <http://www.neweconomics.org/publications/entry/five-ways-to-well-being-the-evidence>

New Economics Foundation. (2009). National accounts of well-being: Bringing real wealth onto the balance sheet. Retrieved from <http://www.neweconomics.org/publications/entry/national-accounts-of-well-being>

Noble, G. & Chatterjee, H. J. (2008). Enrichment programmes in hospitals: Using museum loan boxes in university college London hospitals. In H. J. Chatterjee (Ed.), *Touch in museums: Policy and practice in object handling* (pp. 215–223). Oxford: Berg

Paddon, H. L., Thomson, L. J., Menon, U., Lanceley, A. E., & Chatterjee, H. J. (2013). Mixed methods evaluation of well-being benefits derived from a heritage-in-health intervention with hospital patients. *Arts & Health: An International Journal for Research Policy and Practice*, 6, 24–58. doi:10.1080/17533015.2013.800987

Paivio, A. (1986). *Mental representations: A dual coding effect*. New York: Oxford University Press.

Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*, 136, 257–301. doi:10.1037/a0018301

Pratt, H. & Burgess, L. (2011). Later life liaison service: Delivering holistic care in a general hospital. In Keady, J., & Watts, S. (Ed.s), *Mental health and later life: Delivering an holistic model for practice*. (pp.153–170). Milton Park, Abingdon, Oxon: Routledge.

Romano, D., McCay, E., & Boydell, K. (2012). The use of material objects in understanding the process of recovery from a first episode of schizophrenia. *Arts & Health: An International Journal for Research Policy and Practice*, 4, 70–82. doi:10.1080/17533015.2011.584882

- Rowlands, M. (2008). Aesthetics of touch among the elderly. In H. J. Chatterjee (Ed.), *Touch in museums: Policy and practice in object handling* (pp. 187–198). Oxford: Berg.
- Samuels, J. (2008). The British Museum in Pentonville Prison: Dismantling barriers through touch and handling. In H. J. Chatterjee, (Ed.), *Touch in museums: Policy and practice in object handling*, (pp. 253–260). Oxford: Berg.
- Schaverien, J. (2000). The triangular relationship and the aesthetic countertransference in analytical art psychotherapy. In A. Gillroy & G. McNeilly (Eds.), *The changing shape of art therapy*, (pp. 55–83). London: Jessica Kingsley.
- Smyer, M. A., & Qualls, S. H. (1999). *Aging and mental health*. Malden, Mass: Blackwell Publishers.
- Sonke, J., Rollins, J., Brandman, R., & Graham-Pole, J. (2009). The state of the arts in healthcare in the United States. *Arts & Health: An International Journal for Research Policy and Practice*, 1, 107–135. doi:10.1080/17533010903031580
- Spector, A., Woods, B., & Orrell, M. (2008). Cognitive stimulation for the treatment of Alzheimer's disease. *Expert Review of Neurotherapeutics*, 8, 51–57.
doi:10.1586/14737175.8.5.751
- Staricoff, R. L. (2004). *Arts in health: A review of medical literature*. London: Arts Council England.
- Thomson, L. J., Ander, E. E., Menon, U., Lanceley, A., & Chatterjee, H. J. (2011). Evaluating the therapeutic effects of museum object handling with hospital patients: A review and initial trial of well-being measures. *Journal of Applied Arts & Health*, 2, 37–56. doi:10.1386/jaah.2.1.37_1
- Thomson, L. J., Ander, E. E., Menon, U., Lanceley, A., & Chatterjee, H. J. (2012a). Quantitative evidence for wellbeing benefits from a heritage-in-health intervention

with hospital patients. *International Journal of Art Therapy*, 17(2), 63–79.

doi:10.1080/17454832.2012.687750

Thomson, L. J., Ander, E. E., Menon, U., Lanceley, A., & Chatterjee, H. J. (2012b).

Enhancing cancer patient well-being with a nonpharmacological, heritage-focused intervention. *Journal of Pain and Symptom Management*, 44, 731–740.

doi:10.1016/j.jpainsymman.2011.10.026

Timmons, A., & MacDonald, E. (2008). 'Alchemy and Magic': the Experience of Using Clay for People with Chronic Illness and Disability. *British Journal of Occupational Therapy*, 71, 86–94.

[http://www.ingentaconnect.com/content/cot/bjot/2008/00000071/00000003/art00002?](http://www.ingentaconnect.com/content/cot/bjot/2008/00000071/00000003/art00002?token=0056167ed1e58939412f415d767825247b6e2b452a7a7b4225304829552c4b49266d656c9a12ea74f333a7)

[token=0056167ed1e58939412f415d767825247b6e2b452a7a7b4225304829552c4b49266d656c9a12ea74f333a7](http://www.ingentaconnect.com/content/cot/bjot/2008/00000071/00000003/art00002?token=0056167ed1e58939412f415d767825247b6e2b452a7a7b4225304829552c4b49266d656c9a12ea74f333a7)

Watkins, A. (1997). *Mind-body medicine: A clinician's guide to psychoneuroimmunology*. New York: Churchill Livingstone.

Winnicott, D. W. (1953). Transitional objects and transitional phenomena. In D. W. Winnicott (Ed.), (1971), *Playing and reality* (pp. 1–34). London: Routledge

Woods, R. T. (1999). *Psychological problems of ageing: Assessment, treatment and care*. Chichester: Wiley.

Wreford, G. (2010). The state of arts and health in Australia. *Arts & Health: An International Journal for Research Policy and Practice* 2, 8–22.

doi:10.1080/17533010903421484

Yamanaka, K., Kawano, Y., Noguchi, D., Nakaaki, S., Watanabe, N., Amano, T., & Spector, A. (2013). Effects of cognitive stimulation therapy Japanese version (CST-J) for people with dementia: a single-blind, controlled clinical trial. *Aging & Mental Health*, 17, 579–586. doi:10.1080/13607863.2013.777395

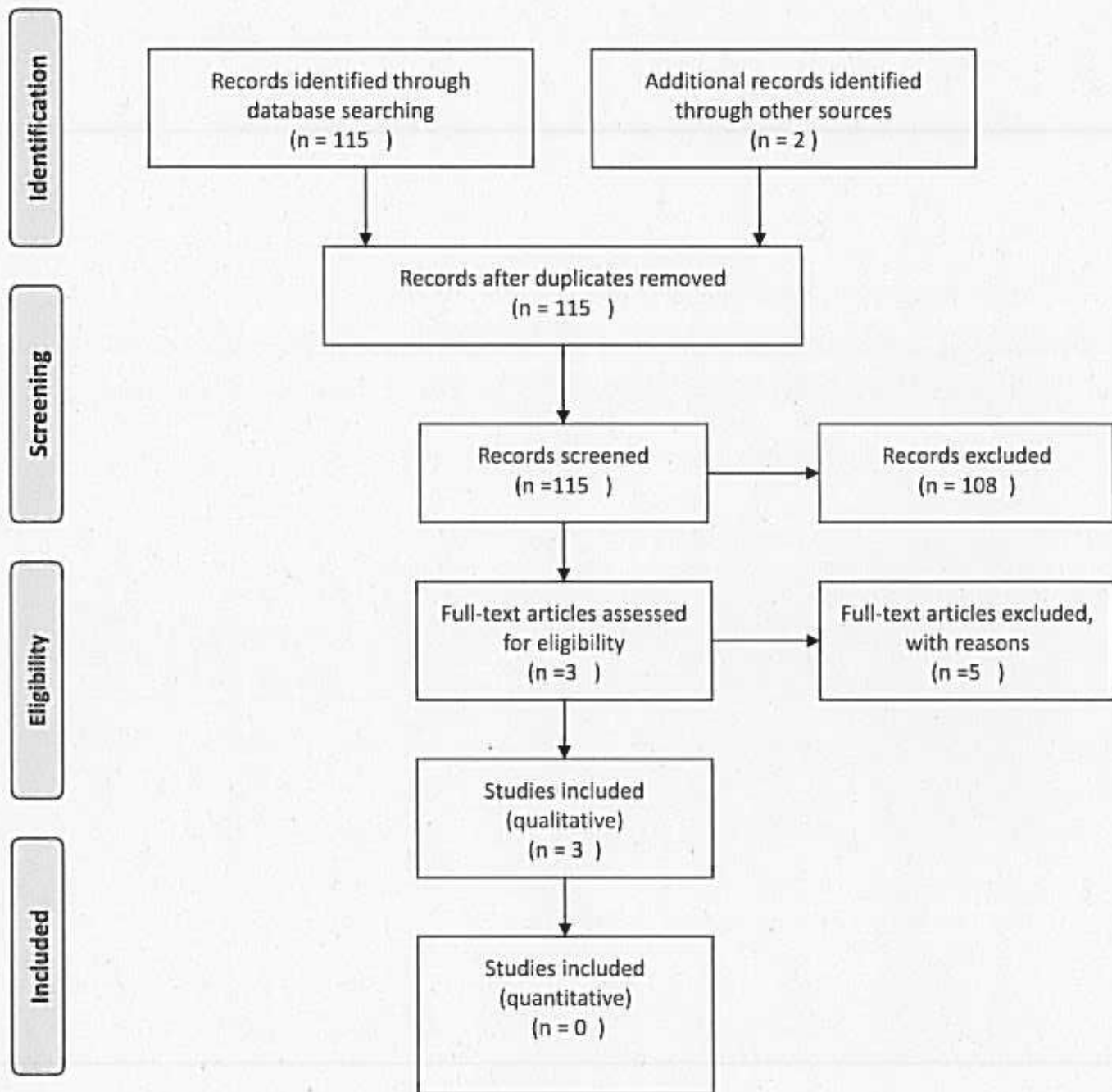
Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology and Health*, 15, 215–228. doi:10.1080/08870440008400302

Section C: Appendix of Supporting Material

Appendix A: Flowchart

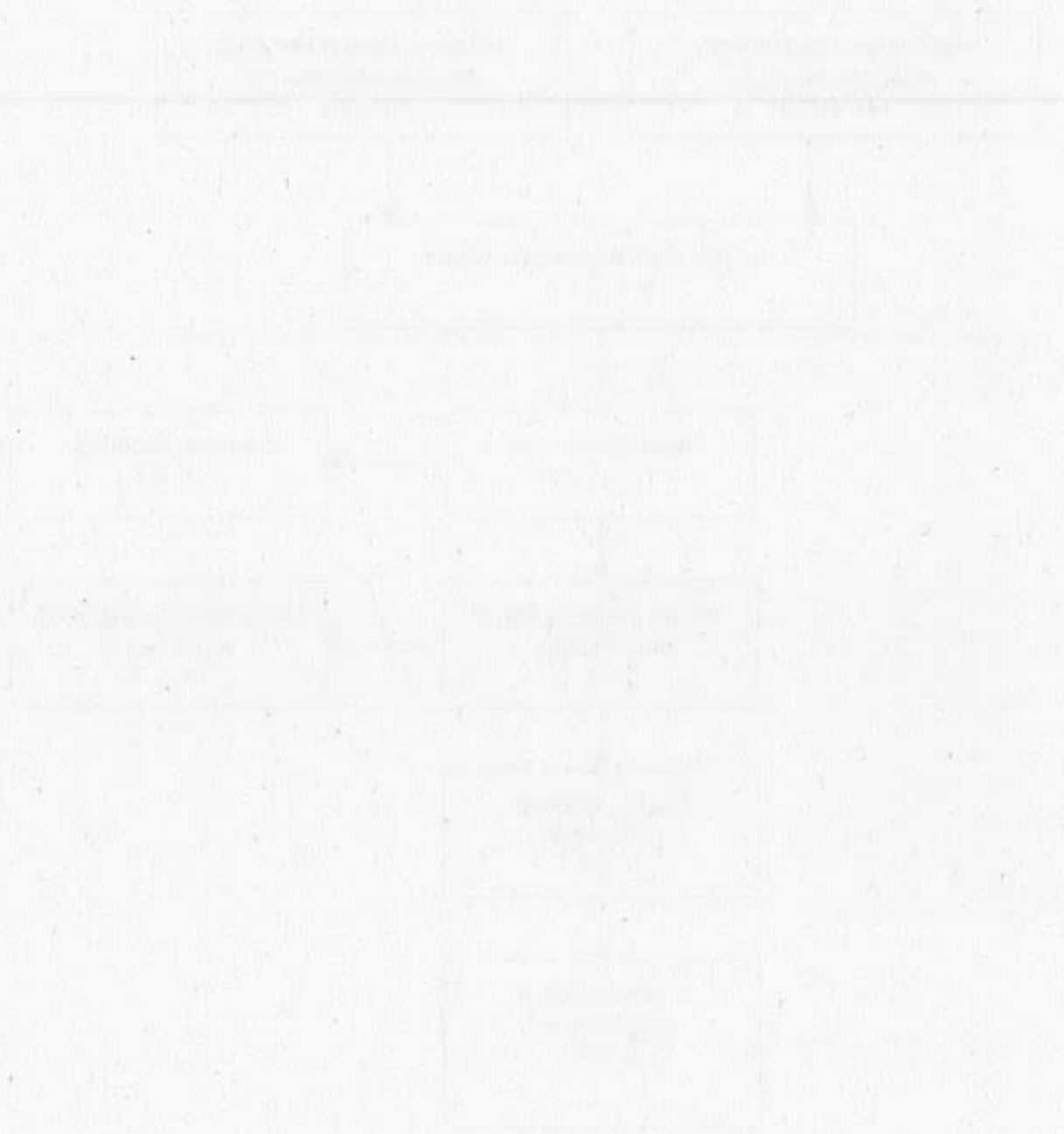
Appendix A: Flowchart

Flow chart of example literature search: Object OR Objects AND Material

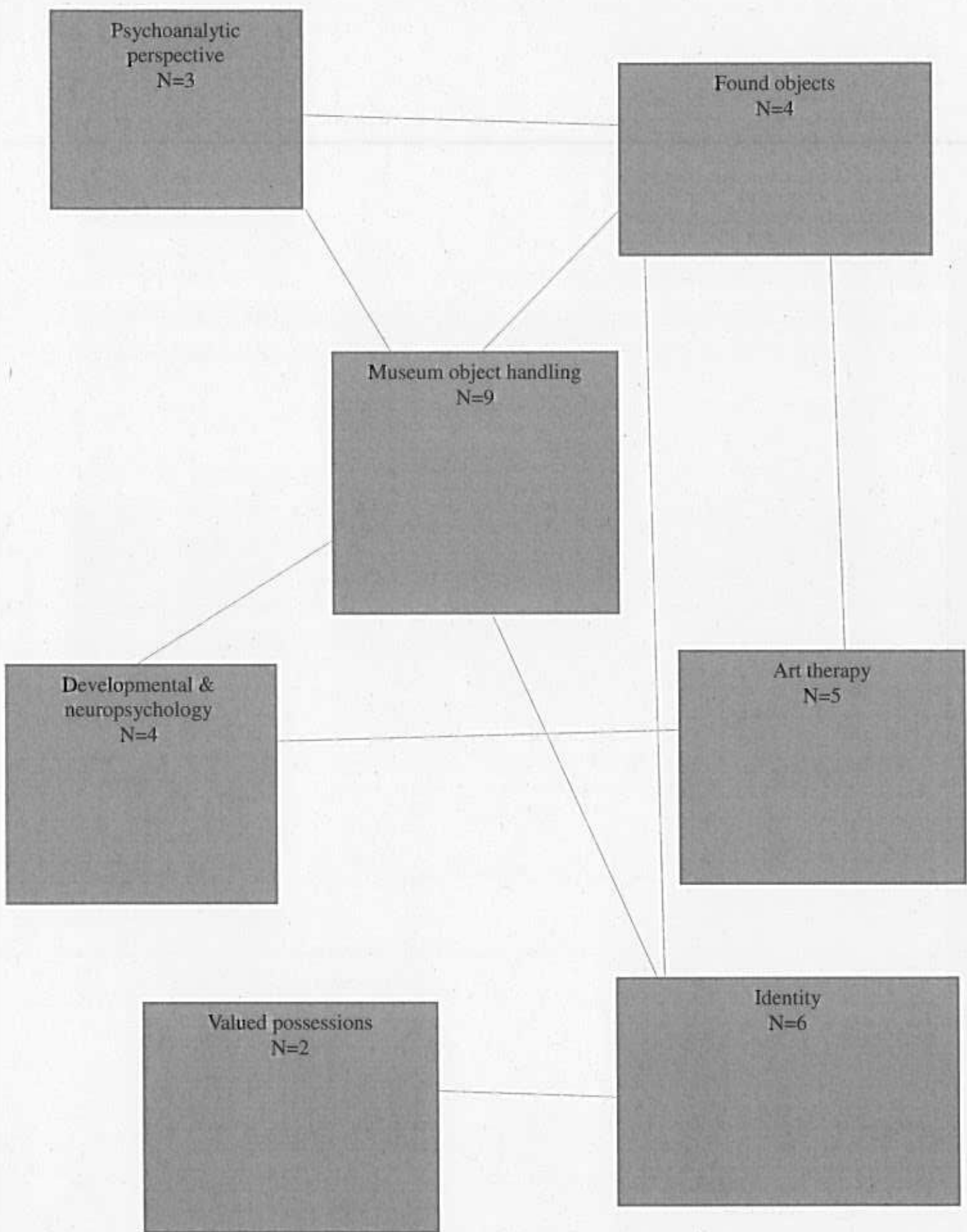


Flowchart diagram was adapted from PRISMA (<http://www.prisma-statement.org/2.1.4%20-%20PRISMA%20Flow%202009%20Diagram.pdf>) for ease of presentation however please note this was NOT a systematic review it was a conceptual literature review

Appendix B: Concept Map



Literature review "Material Objects and Psychological Theory" – Concept Map (Hart, 1999)



Appendix C: Literature search results

Appendix C : Literature search results

Author	Participants	Method	Focus of article
1. Ander,Thomson, Blair,Noble, Menon, Lanceley & Chatterjee (2013).	N=90 adults from healthcare settings	Grounded theory	Museum object handling sessions
2. Ander, Thomson, Noble, Lanceley, Menon, & Chatterjee (2012)	N=185 adults from healthcare settings	Grounded theory	Museum object handling sessions
3. Arthern & Madill (2002)	N=6 women in psychotherapy	Grounded theory	The use of transitional objects in psychotherapy
4. Brooker (2010)	N=1 adult with mental health diagnosis	Case study	The use of found objects in art therapy
5. Buschel & Madsen (2006)	N=5 children	Case studies	Art therapy and trauma
6. Camic (2010)	N=65 adults, non-clinical population	Grounded theory	Found objects
7. Camic, Brooker & Neal (2011)	N=14 clinicians and service users in psychotherapy	Thematic analysis	The use of found objects in psychotherapy
8. Chatterjee & Noble (2009)	N=24 hospital inpatients	Quantitative (quasi experimental) and thematic analysis	Museum object handling sessions
9. Chatterjee, Vreeland & Noble (2009)	N=32 hospital inpatients	Quantitative (quasi experimental) and constant comparative method	Museum object handling sessions
10. Critchley (2008)	Not applicable	Review	Touch and emotion (neuropsychology)
11. Digby (2006)	N=1	Narrative analysis	Material objects and identity
12. Hodgetts, Stolte, Chamberlain, Radley, Groot & Nikora (2010)	N=1	Case study of a homeless individual	Material objects and identity
13. Hooley & Wilson-Murphy (2012)	N=80 non clinical population	Quantitative use of clinically validated measures	Transitional object use and borderline personality disorder
14. Hurdley (2006)	N=2	Narrative analysis	Material objects and identity
15. Jones & Martin (2006)	N=74	Experimental design	Valued objects
16. Kozłowska & Hanney (2001)	N=5 children	Small group case study	Art therapy, material objects and trauma
17. Lai (2011)	Adults and children, numbers	Small group case study	Art therapy, material objects

	not given		and trauma
18. Lanceley, Noble, Johnson, Balogun, Chatterjee & Menon (2012)	N=10	Constant comparative method framed by Kleinian analysis	Museum object handling sessions
19. Malchiodi (2003)	Not applicable	Not applicable	Art therapy
20. Martin & Jones (2009)	N=109	Experimental design	Valued objects
21. McGlone (2008)	Not applicable	Review	Touch and emotion (neuropsychology)
22. McGlone, Vallbo, Olausson, Loken, & Wessberg (2007)	Not applicable	Psychophysical	Touch and emotion (neuropsychology)
23. Mehta & Belk (1991)	N=38	Thematic analysis	Material possessions and cultural identity
24. Mills & Kellington (2012)	N=1	Case study	Art therapy for trauma
25. Paddon, Thomson, Menon, Lanceley & Chatterjee (2013)	N=57	Quasi experimental and thematic analysis	Museum object handling sessions
26. Paulus & Hauf (2011)	N=32 infants	Empirical observation of infants playing	Material objects and developmental stages
27. Romano, McCay & Boydell (2012)	N=10	Semi-structured interview	Found objects and recovery from mental health
28. Rowlands (2008)	N=4	Case studies	Material objects, aging and identity
29. Thomson, Ander, Menon, Lanceley & Chatterjee (2011)	N=40 female hospital inpatients	Repeated measures design	Museum object handling sessions
30. Thomson, Ander, Menon, Lanceley & Chatterjee (2012)	N=158 adults in healthcare settings	Quasi experimental	Museum object handling sessions
31. Thomson, Ander, Menon, Lanceley & Chatterjee (2012)	N=100 hospital inpatients	Quasi experimental	Museum object handling sessions
32. Wallendorf & Arnould (1988)	N=343	Surveys, focus groups and interviews	Material possessions and cultural identity
33. Winnicott (1953)	Not applicable	Theory and examples from clinical work	

Criteria for assessing methodological quality, Greenhalgh (2010)

- Was the study original?
- Whom is the study about?
- Was the design of the study sensible?
- Was systematic bias avoided or minimised?
- Was assessment blind?
- Were preliminary statistical questions addressed?

Criteria for assessing the quality of qualitative papers, Greenhalgh (2010)

- Did the paper describe an important clinical problem addressed via a clearly formulated question?
- Was a qualitative approach appropriate?
- How were (a) the setting and (b) the subjects selected?
- What was the researcher's perspective, and has this been taken into account?
- What methods did the researcher use for collecting data – and are these described in enough detail?
- What methods did the researcher use to analyse the data – and what quality control measures were implemented?
- Are the results credible, and if so, are they clinically important?
- Are the findings of the study transferable to other settings?

Criteria for assessing the quality of case study research, Yin (2009).

- The case study must be significant
- The case study must be "complete"
- The case study must consider alternative perspectives
- The case study must display sufficient evidence
- The case study must be composed in an engaging manner

References

Greenhalgh, T. (2010). *How to read a paper: The basics of evidence-based medicine* (4th ed.).

Chichester: Wiley-Blackwell.

Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Thousand Oaks: Sage

Publications.

Appendix E: Details of participant attendance per session

Appendix E: Participant attendance per session:

Session number	Number of participants in group
1	5
2	7
3	6
4	6
5	7
6	6
7	12
8	8
9	6

Appendix F: Details of loan box contents

This has been removed from the electronic copy

Appendix G: Museum object handling session protocol

HERITAGE IN HOSPITALS

Object Handling Protocol

1. The object handling session begins with a general introduction and explanation of the project. The patient is asked whether they would like to participate and if so is given the patient information leaflet (PIL) that outlines the project in writing. They are asked to read the PIL and whether they have any questions or concerns. The PIL is for the patient to keep. If the patient has further questions these are addressed in a more detailed, step-by-step overview of the session. The patient is asked to read and sign the Consent Form where they agree to being recorded and their data being used for research. The recorder is turned on.

2. While/after the box is unpacked, the session leader asks:
 - *How do you feel about handling museum objects?*
 - *Have you handled museum objects before?*
 - *Do you visit museums?*

3. Once the objects are laid out on the mat, the session leader asks the following questions:
 - *Would you like to take a look at the objects and choose one to handle (first)?*
 - *What does the object feel like?*
 - *What do you find interesting about it?*
 - *What do you feel about the object?*
 - *What attracted you to this object?*
 - *What do you think this object is?*

Additional prompt questions

Example Prompt – you are holding something that people made 3,000 years ago that comes from a rainforest/etc, to emphasise connection with other people/places/times.

- *Do you have any questions about the object(s)?*
- *Can you think of any experience that might relate to this object?*
- *Where do you think it comes from?*
- *What material do you think it is made out of?*
- *What do you know about this material?*
- *What use do you think the object would have?*
- *Have you seen an object like this before? What does it remind you of?*

- *Do you have any other questions about the object(s)?*

4. The session leader asks:

- *Do you think these sessions are a good idea?*
- *Did you enjoy the session?*

5. The audio recorder is turned off.

Appendix H: Ethics letter and contract
This has been removed from the electronic copy

Appendix I: Example consent form and information leaflet

Study Number:

CONSENT FORM

Thank you for reading the information about our research project. If you would like to take part, please read and sign this form.

Title of Project: Heritage in Hospitals: Investigating the Impact of museum object handling in healthcare settings

Please initial box

- | | |
|---|--------------------------|
| 1. I confirm that I have read and understood the information sheet dated [date] for the above study and have had the opportunity to ask questions. | <input type="checkbox"/> |
| 2. I confirm that I have had sufficient time to consider whether or not I want to be in the study. | <input type="checkbox"/> |
| 3. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my care or legal rights being affected. | <input type="checkbox"/> |
| 4. I understand that data from the study may be looked at by someone from the research team or regulatory authorities. I give permission for these individuals to have access to my data. | <input type="checkbox"/> |
| 5. I consent to the audio recording of any interview I give for this research and understand that this data may be kept for the purpose of the research study. | <input type="checkbox"/> |
| 6. I agree to taking part in the above study | <input type="checkbox"/> |

Name of patient: _____

Date: _____

Signature: _____

Name of researcher: _____

Date: _____

Will my taking part in this study be kept confidential?

For more information please contact:

Heritage in Hospitals Research Project

Patient Information Leaflet

Yes, only members of the research team will have access to your personal details. This could include access to sections of medical notes and demographic data. All information collected during the course of the research will be treated in the strictest confidence. Data may be stored by the custodians, **University College London** for use in future studies.

Data may be transferred with no personal identifiers to researchers or sponsors of the research (including countries outside the European Union) that may not have equivalent data protection legislation. All efforts will be made to ensure the security of this information.

The results of this study may be published or used for teaching purposes, however, your name or other identifier will not be used in a publication or in teaching material unless your specific permission has been sought.



MREC No 06/Q/50578

2nd March, 2009

Heritage in Hospitals Research Project

You are invited to take part in a research project that is investigating the benefit of bringing museum objects to patients' bedsides. This leaflet explains why the research is being carried out and what will be involved if you choose to take part. Please feel free to ask the researcher if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

The purpose of this study is to assess the potential value of museum object handling as an enrichment activity in hospitals and healthcare settings.

University College London houses three Museums and fifteen Collections that cover the Arts, Humanities, Medicine and Sciences. These collections consist of a diverse array of around 600,000 objects.

Some of these objects are from archaeology, geology, natural history and medicine. These objects are available for research and feel.

Do I have to take part?

It is entirely up to you to decide whether to take part or not. If you do decide to take part you will be given this information leaflet to keep and be asked to sign a consent form. Even after you have decided to take part, you are free to withdraw at any time without giving a reason. A decision to withdraw, or a decision not to take part, will not affect the standard of the care you receive.

How long will the session take?

Session lengths vary depending on how long you would like to handle the museum objects for. Usually sessions last between 20 and 30 minutes. You can choose to end the session at any point.

What will happen to me if I take part?

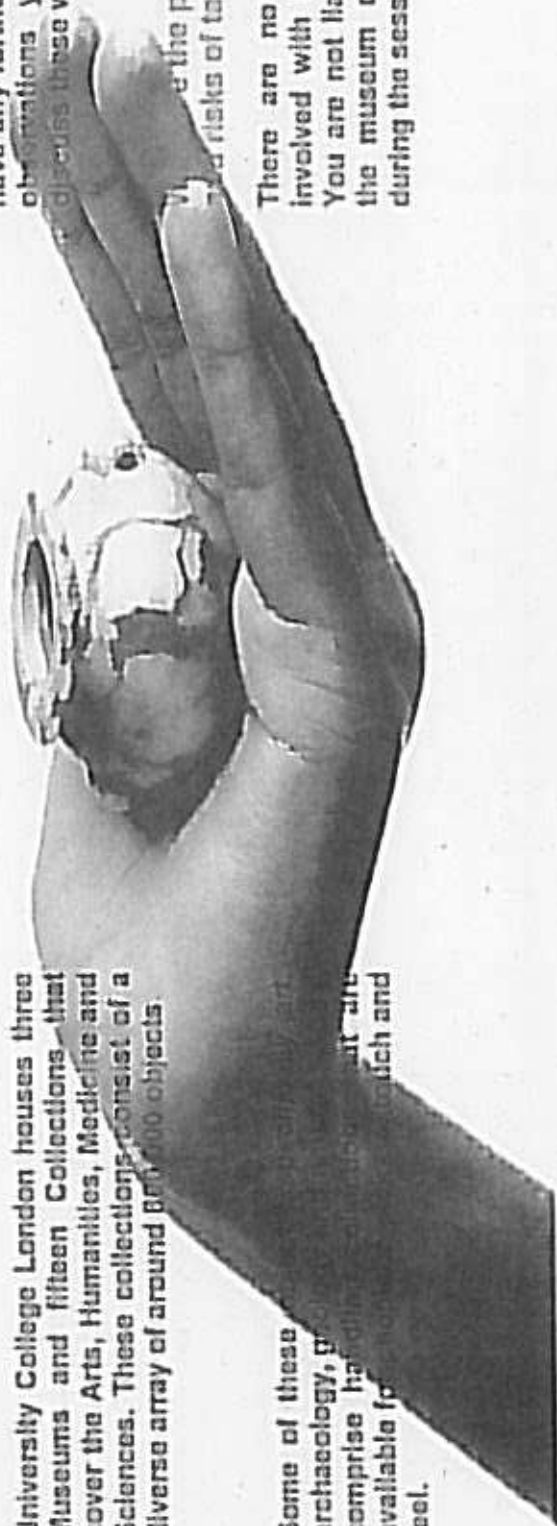
If you agree to take part, a researcher will explain more about the handling session and any answer questions you might have. The researcher will ask you if you agree to the session being recorded with an audio recorder. The researcher will also ask you to indicate how you are feeling using a series of short questions. You will be asked to sign a consent form.

Prior to handling the museum objects, you will be asked to wash your hands using soap and water or alcohol gel and the researcher will wash their's as well. You will then be invited to select one or more of the museum objects to handle and talk about with the researcher.

After the session you will be asked again to indicate how you are feeling. If you have any further questions, comments or observations you will be welcome to discuss these with the researcher.

What are the possible disadvantages and risks of taking part?

There are no disadvantages or risks involved with taking part in the study. You are not liable for any breakages to the museum objects that might occur during the session.



Appendix J: Annotated transcript
This has been removed from the electronic copy

Appendix K: Records of theme development

Refining codes and developing themes -example 1

a	2 age of object	1 learning/thinking about object
a	4 inside information about curating objects	2 property of object
a	4 power - facilitator does not know	3 identity
c	2 prompting group to explore or prompting participant to explore	4 social processes in group including task
d	2 conversation sharing discovery with one another	5 positive experiences
d	4 conversation - sharing knowledge with group	6 touch
d	4 supporting peers	
e	4 sharing feelings with group	
h	2 conversation about rules of the task	
h	4 power - reserving judgement - facilitator giving power to participant	subdivisions of category 1 codes
i	1 role for group member in fantasy of discovery	a learning
j	2 how object found or where object found	b bringing the past alive, being in past
j	1 mystery	c guessing game
i	2 story of the object	
j	2 surprise at finding out what object is	subdivisions of category 2 codes
k	2 uncovering secrets	f physical properties of object, weight
k	6 tactile stimulation	g feelings and thoughts about object
k	6 touch takes you away to another place, being taken to another place	j the story of the object
k	2 touch vs photographs	subdivisions of category 3 codes
i	4 group culture	e identity, bringing the individual into
i	4 group culture - running joke	subdivisions of category 4 codes
i	4 group culture - shared history - recapping what has happened in group	
i	4 humour	
i	4 inclusion	
i	4 joke	
i	4 participation	d working on the task
i	4 power - multiple experts in group, not just facilitator	h talking about the task including rules
i	4 suggestion for future sessions	i fantasy
i	4 talking about the session	l group culture
m	5 engagement	n story telling, going off on a tangent
m	5 enjoyment	subdivisions of category 5 codes
m	5 interesting	m

m 5 now you can say you have handled some....

m 1 privilege

n 4 conversation

n 4 conversation off on tangent

n 4 story telling

1 bringing the past alive, being in past times and links to present and future times

4 fantasy

2 feelings and thoughts about object

1 guessing game

3 identity

1 learning

2 physical properties of object, weight, colour, shape, details

4 talking about the task including rules and rule breaking

4 working on the task

subdivisions of category 6 codes

k

Defining themes example 2

the activity itself	social processes	learning new things	enjoyment and privilege	memories and identity
guessing game	fantasy	bringing the past alive, being in pa	enjoyment	identity
feelings and thoughts	group culture	story of the object	now you can say you have handled	memories and identity
physical properties of	story telling	learning new things	touch	
working on the task	talking about the task including rules and rule breaking			

themes

the activity

social processes

learning new things

enjoyment and privilege

memories and identity

Developing themes: Example 3

5 Themes

Key:

titles of Themes are in **bold font**

titles of Codes are in *italic font*

Notes are at the end of the document in **bold font underlined**

Theme 1: Answering the questions about the object, exploring the object, solving the mystery.

This theme is focussed on the tasks being set by the facilitator, for instance categorising an item as animal, mineral or artefact or guessing/deducing what the particular item is, what its function may have been etc. It includes three codes:

Guided discovery, guessing games and questions from the facilitator: the facilitator posing questions, setting tasks and inviting guesses and/or deductions, includes the facilitator confirming or correcting guesses.

Facilitator setting task "so I'll give you each an object to talk about"

Facilitator "ok another clue think what has sharp teeth"

Participant "some kind of predator it's a cutting edge rather than a grinding edge"

Facilitator "yes absolutely"

Careful examination of the object: including describing the physical properties of the object such as its weight, colour, shape and reactions to those properties

"its surprisingly heavy"

"it's so beautiful"

Shared exploration and discovery: this is participants sharing observations, thoughts and hypothesis about an object with one another.

Participant 1 "I would have said that's a mineral so you are saying that it is an animal Participant 2" yes I am saying that"

Theme 2: Learning new things, teaching each other This includes both being given information about the object and other topics by the facilitator and participants sharing knowledge, facts and expertise with one another. There are three codes in this theme:

Bringing the past alive: link to ancient/past peoples and world "I mean to think somebodies hands made this from nature" "yes I mean you know these sort of mythical stories that people lived in Egypt at that time but it doesn't quite seem real until you see the thing and what they did.". This also includes picturing the object as complete or creature as alive, talking about the object in its original habitat or context including what its value would have been and finding out the function/original use of object.

learning new things acquiring new skill or knowledge to use "but there is one clue that tells you it isn't a goats horn, because goats horns are always straight and sheeps are always curved", facilitator or participant giving facts or information "yes absolutely it's a modern version of an ammonite", curiosity/ participant asking facilitator questions about the object,

story of the object questions about and/or details given regarding the specific object being handled, how and/or where the object was found, "so how did the museum come by it then?" "do you know where it is from that one?"

exclusion criteria not generic information about the object

Theme 3: Enjoyment, engagement and touch; now you can say you have handled... This includes discussing the enjoyment, interest or other positive emotions associated with the objects and activities, expressing a sense of privilege in being allowed to hold the objects and describing the tactile stimulation/sensation of holding an object including how this may enhance the experience. There are three codes within this theme:

enjoyment enjoyment and interest
"this is fun"

"it's been quite fascinating"

now you can say you have handled some... sense of privilege in being allowed to physically handle a museum object "wow I can't believe I am holding one of these [flint axe head]"

touch touch enriching the experience

"(facilitator) it's quite interesting to ask people whether they like to hold the objects too rather than just [look at them] (participant) it's a bit better to hold, it takes you right away, right away from here, it takes you to another place."

Includes tactile stimulation "(Facilitator) run your fingers over it. (Participant) it's very smooth"

Theme 4: Social processes in the group. This theme includes participants clarifying the rules of the task to one another, recapping what has happened in the session, humour, imagination and flights of fancy, telling stories and referring to literature and popular culture. There are four codes in this theme:

talking about the task including rules and rule breaking including participants reminding each other of rules "Participant 1: we have got to say something we think? Participant 2: yes anything at all" talking about the process of deduction or guessing "I had quite a few guesses what this was", discussing whether the task is easy or difficult "I'm lost on this one, I'm not too good with insects" trying to break the rules "I cheated I assumed you would of brought two of each [categorising objects to animal mineral or artefact]"

imagination including fantasies of owning the object, finding the object and transforming the object
"it's like a pork chop"

"do we get to keep the egg now? (laughter)"

"Participant 1: it's like an ashtray Participant 2: as used by Julius Caesar on Thursday 21st of March"

group culture including humour and running jokes, recapping what has happened in the current session "ok so we guessed this was a mineral at the end of the last one" talking about past sessions or making suggestions for the future sessions – exclusion criteria not talking about how enjoyable the session was or was not

Story telling and conversation that take the object as a starting point [after looking at turtle shell]
"do you ever watch QI with Stephen Fry? Well they had one episode where they were talking about a particular turtle or breed of turtle that Darwin found on his voyage..." including links to literature eg. Talking about 20,000 leagues under the sea which features a submarine called "Nautilus" after examining a nautilus shell

exclusion criteria: not stories about personal life experiences

Theme 5: memories, personal associations and identity. Includes sharing personal information, histories and memories. Individuals and associations with a particular objects. This theme has 3 codes:

memories including childhood memories "I always remember going to a restaurant when I was a very small girl well it was more like a café but it used to be a hotel and they had this huge well I don't know if it was turtle or tortoise shell thing..."

personal association with object or something connected to a particular object
"it's just that my Mum used to have old razors with decoration"

"(Facilitator)Teddington Weir on the Thames [explaining the subject of an etching] (Participant) Oh crikey I used to live near there"

Identity including previous/current career, qualifications and roles
"the thing that fascinates me because I'm learning to be a web designer..."

"I did half a degree in zoology at one time..."

"I know because I used to work in copper"

Notes

- overall this still feels too descriptive
- Theme 4 social processes in the group is too much of a "catch all" category, needs more work
- Story telling and the imagination/fantasy/role play feels like they need to be developed to a more major theme rather than codes

Appendix L: Nascent thematic maps

story of the egypt
213-21-

it among new
things 212-21-

bringing past alive
218-21-

group culture
219-21-

talking about the
past including
rules and rule
breaking 214-21-

now you can see
you have handed
some... 215-21-

enjoyment 217-21-

physical properties
of egypt
weight, colour,
shape 216-21-

working on the
task 209-21-

feelings and
thoughts about
egypt 214-21-

guessing game
215-21-

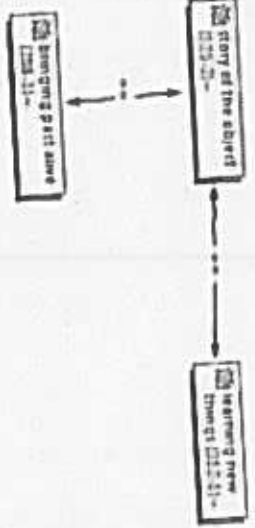
story telling 213-21-

secrets and
identity 211-21-

fantasy 210-21-

taught 212-21-

Search 100-01



Talking about the task including rules and rule breaking 100-01-04

Group culture 100-01-05

How you let me you have finished some... 100-01-06

Engineering 100-01-07

Working on the task 100-01-08

Physical properties of object, weight, colour, shape 100-01-09

Thoughts and thoughts about object 100-01-10

Quitting Game 100-01-11

Identity 100-01-12

Working 100-01-13

Start working 100-01-14

Working 100-01-15

Appendix M: Final thematic map with relational details

Figure 1: Final thematic map with relational details. This figure is a map showing the spatial distribution of various themes across a geographic area. The map includes a legend, a scale bar, and a north arrow. The themes are represented by different colors and patterns, and their relationships are indicated by lines connecting them. The map is titled 'Final thematic map with relational details' and is located in Appendix M.

The map displays the following themes and their relationships:

- Theme 1 (Red): Located in the northern region.
- Theme 2 (Blue): Located in the central region.
- Theme 3 (Green): Located in the southern region.
- Theme 4 (Yellow): Located in the western region.
- Theme 5 (Purple): Located in the eastern region.

The relationships between the themes are as follows:

- Theme 1 is related to Theme 2.
- Theme 2 is related to Theme 3.
- Theme 3 is related to Theme 4.
- Theme 4 is related to Theme 5.
- Theme 5 is related to Theme 1.

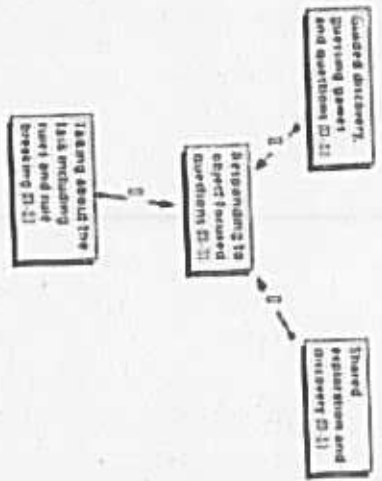
Codes that are exclusively participant interacting with other participants:

- Shared exploration and discovery
- Talking about the task including rules and rule breaking

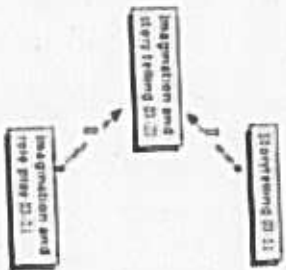
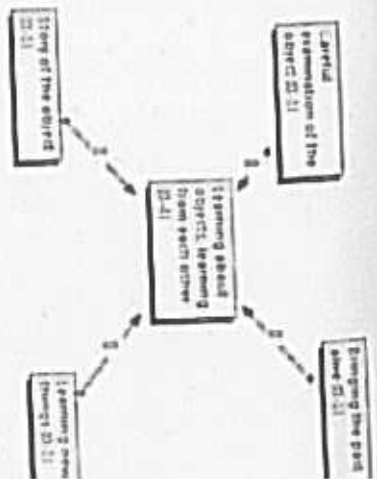
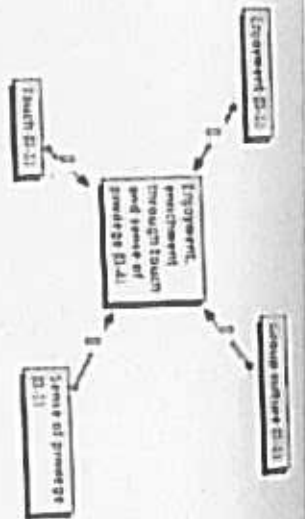
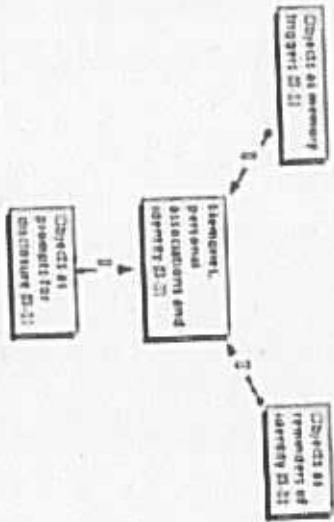
Codes that are exclusively facilitator interacting with participant(s):

- Guided discovery, guessing games and questions
- Story of the object

All other codes may refer to interactions between facilitator and participant OR participant to participant



Third exploration and discovery



Appendix N: Excerpts from quotation list for code

This has been removed from the electronic copy

Appendix O: Reflective research diary (abridged)

Appendix O: reflective research diary (abridged)

January 2012

Preliminary ideas: After the research fair, the museum object handling project grabbed my attention. I knew it was going to be one of the potential projects on offer. One of the lectures we had on our first teaching block was on material objects and psychology. I was really interested and contacted the lecturer, Paul, who sent me some papers and mentioned there will be a related MRP proposal on museum objects. I have a background of working with older adults; six years in the third sector managing a residential project for older men with mental health and/or alcohol dependency. I helped facilitate reminiscence and art group that used object handling which I enjoyed and worked extremely well in engaging the residents. I am keen to have an opportunity to "pop the lid off" and try and understand some of the psychological processes at play in this kind of intervention.

March 14th 2012

Formulated the research question. A factor in not collecting the data myself is that it may restrict the methodology I can use. My research question is investigating the psychological and social aspects of museum object handling groups. I am thinking about this from a phenomenological perspective, thinking about the meaning of the experience for participants. I don't think an IPA study is going to fit the data. I have been reading about descriptive phenomenological analysis by Giorgi and Giorgi, and this seems like it may be a good option. It maintains the phenomenological stance focused on participants' experience, but then explicitly looks to adopt a psychological stance in describing it. I am hoping this will be an opportunity to capture the social processes.

June 11th 2012

Something I am still thinking about a lot is using data that has already been collected. Obviously there are some practical advantages in terms of timing, not having to go through ethics and data collection. A concern I have is not having actually been present in the sessions recorded, not having met the participants. Talking this over in supervisions. I think it will be helpful that I have worked with similar client group, doing similar work, although not museum object handling. An object handling based intervention with older people with mental health issues is something I have experience in, the audio recordings will not be of an entirely alien context to me.

July 6 2012

Talking to fellow trainees: I notice I have to introduce the idea of the museum handling sessions as intervention. I am aware it is a niche area to study, and will have to bear in mind in the write up that most people reading won't be familiar with this subject

July 20th 2012

Am focusing on part A and engaging with the literature. Have received a copy of the audio recordings. I will be the first person outside of the UCL research team allowed access to this data, which feels exciting but daunting; I feel a responsibility to justify their faith in me

Also a couple of other trainees are doing MRPs on arts/heritage work with older people. Not the same intervention as I am looking at, but the same ballpark. Am impressed by an initiative at the Dulwich Picture gallery another trainee is making the subject of their research.

September 26th 2012

I have been coming across papers I find interesting but am concerned that they I may be going off at too much of a tangent. Case in point is a study I read about Vietnam Zippo lighters, the way that American soldiers during the Vietnam War had these lighters and would get them engraved. In terms of attributing meanings to objects, they were literally carving slogans into the metal (everything from jokes and anti-establishment slogans to patriotic phrases) Paul advises me to keep

an extra miscellaneous file to keep these papers. This helps me focus.

December 12th 2012

In supervision with Linda she is excellent about coming back to the specific issues working with older people with object handling. I am reminded of partnership work I did with the British Museum and the Wallace Collection when I worked with older homeless people. The curators would arrange for clients to come in for private viewing sessions. I feel that older people can often be marginalised in society as are people who have experienced homelessness and I love the inclusivity of museums. There was something about the sense of privilege, doing something special in having an expert devote their time to getting the clients engaged with the museum and gallery.

February 20th 2013

Interesting conversation with a museum professional who takes loan boxes out into schools. She described how engaged the children are and their astonishment to be holding something from Roman times, for instance. I am struck again by how the act of holding something seems to make the past more tangible, more real. The wow factor of holding something in your hand rather than seeing a picture in a book.

12th March 2013

Innovative practices in Art, Health and Wellbeing seminar: very interesting seminar which included a presentation on the Heritage in Health project which my research will be contributing to. It was good to meet professionals from a variety of disciplines: psychologists, art therapists, museum professionals. In the small group work I had a chance to talk about my research and was pleased with the positive reactions and interest I received. An art therapist from Brighton recommended a good resource – it was the actually the Case and Dalley handbook which I had come across. Hopefully this means I am on the right track.

July 10th 2013

It's helpful to be interviewed and think about my assumptions/position prior to undertaking the analysis. Some key points:

- I tend to think that ward life can often be quite dull and the sessions will be a welcome distraction, which may be reflected in the recordings.
- Working with older people I have thought about stages of life, the perspective of having lived through a lot personally and in terms of the way that society has changed. I wonder if participants will use the objects as platforms to reminisce or connect meaning to things they have experienced in their lives.
- I feel that holding something, having a material object as a focus of attention, makes it easier to talk, helps social interaction. I am expecting the objects to spark off personal memories. I expect some people to be more comfortable speaking in a group context and I wonder if there will be a natural turn taking.
- I think that isolation, a lack of social network can be a damaging aspect of mental health issues, and holding group sessions that get people talking to one another will be a strength of the sessions
- I am conscious that I have a strong attitude about the intervention. My experience of participating in these type groups of has been positive and I have found it to be a very useful way of improving communication, opening dialogue with older people with mental health and other issues. However I need to be aware of this enthusiasm and how this colours my view of the sessions I will be investigating.
- I am coming to this a novice researcher. I am now in in my forties and completed my undergraduate degree over 20 years ago. I am expecting there to be a steep learning curve but I feel lucky to have this opportunity to undertake doctoral research in a subject I am interested in

September 30th 2013

I have blocked out six consecutive days next month to tackle transcribing. I am hoping that it will be helpful to be quite immersed in the task.

October 2013 - transcribing

Tackling the transcribing. Sometimes the recordings can be hard to follow, in particular when there are multiple conversations – it is not always possible to make out what is being said or when conversations overlap. Fortunately there are not that many full group discussions.

I am jotting down first thoughts and impressions as I transcribe. The story of the object keeps coming up, where it is from exactly.

Session 2: A participant discloses something about their past “I have never told anyone that apart from my family”. I am very intrigued; I want to hear more about this. The facilitator responds but draws the conversation back to aspects of the heritage object. I feel quite frustrated listening, I wish I could leap into the recording and see if the participant has further thoughts or wants to share more about what he was saying. I wonder about the set-up of the group, perhaps as the facilitator is a museum professional they may be wary of having participants open up too much, in case concerned participants may share upsetting memories or experiences which would be difficult to manage in the group. Maybe there would be more scope to explore these issues in a more containing way with a clinical psychologist running the sessions?

Session 3 group discussion. Because of the position of the recorder, I get a good account of one pair speaking but very aware that I am missing other conversations going on.

Have transcribed the first three sessions. Lots of ideas have for themes or codes around bringing the past alive, shared discovery. Am wondering about how appropriate a phenomenological approach is going to be, as the facilitator is not asking about the meanings of the experience. Resolve to press on with transcription and not get ahead of myself.

Session 5 as I transcribe I hear the group start to develop this story about an Egyptian Goddess keeping random items in a basket (they are looking at the statuette) I am struck at how the energy in the exchange and how various people chip in to add to the story.

I am noting some fantasy that seems to crop up, imagining keeping the artifact.

Throughout the sessions the activities like guessing games seem to provide a lot of the structure. I wonder if working on these tasks provides a scaffold or a safe foundation for the social interactions that follow.

December 9th 2013

I talked it over with Paul in supervision, went over a transcript in detail, and am not going to use a phenomenological approach. It doesn't fit the data. Bit of low ebb. Time to do some more reading. I keep coming back to the research question, psychological and social aspect of the group. What is the most appropriate method of analysis?

December 12th 2013

I am thinking hard about my personal position to this research. I think that the act of holding the objects adds something that looking at a photograph would not, which has a positivist element. But I think the way people interact in the sessions, work together to find meaning in the object is something that happens as they talk, a constructionist idea.

January 15th 2014

Have read up on content analysis, but it doesn't feel like a good fit – I am not trying to assess wellbeing by totalling positive phrases for instance. Have read Braun and Clarke and think that thematic analysis may work in particular as it can be used with my position which is on a continuum between positivist and constructionist

February 6th 2014

After supervisions with Paul Linda, going ahead with thematic analysis. Have bought the Boyatzis book, wincing at the price tag but good step by step procedural account of thematic analysis. I am struck by a phrase he uses describing thematic analysis, the search for the "codeable moment".

February 1st 2014

Have blocked out 9 consecutive days for the initial coding/analysis – immersing myself in transcribing for a block of days was helpful so I am sticking to the formula.

February/March 2014 coding/analysis

February 6th 2014

I am coding line by line initially using ATLAS.ti. Have printed out my research question in large font by the side of the screen.

Thoughts going in: story of object, personal experience, storytelling and fantasy, group culture, group processes, physical properties, links to another world

February 8th 2014

In sessions 7 and 8 one of the participants is keen and knowledgeable about the objects, jokes about wanting the facilitator's job. I remember on my adult mental health placement noting how effective it was when a service user co facilitated a mindfulness group on an acute ward

February 13th 2014

Completed initial coding. Feeling a bit overwhelmed by the number of codes I have – too many to hold in mind. Obviously need to refine the list (clearly some duplicates and overlaps to start with) but find myself hesitant to start. I think this may be my position as a novice researcher anxious not to inadvertently lose anything important

Lightbulb moment as discovered a great book on using ATLAS.ti (Susan Friese). Have realised I can save multiple copies of evolving codes lists so each time I delete or merge a code can keep back up copy. Will keep records and so if at any point I need to go back to resurrect or unmerge codes, should be able to do it. Getting started on refining code list.

February 14th 2014

Started working through codelist alphabetically, mapping links as I go. Now tempted to move to looking for obvious or interesting themes e.g. story of the object
However – do not want to put my theoretical constraints on data at this stage

February 15th 2014

Feel refreshed after good night's sleep. Have reread B&C 2012 and 2006, also gone through Camic et al TA paper, Paddon and Ander papers

I need to now look at codes, still too many, too much duplication and overlap. Am thinking for instance talking about weight, talking about colour could be combined to talking about physical properties of object

The key is to focus on the research question "what are the social and psychological aspects of a MOHS group"

Just thought – maybe theme is social processes, whereby talking about physical properties of object is one aspect

February 16th 2014

Magic starts – the ritual- I was keen on this code based on an account I heard of children's object handling session of Victorian toy a sudden moment when they put their gloves on and were hushed. I realise I have been hoping to find a similar moment in the recording and have been coded three occasions when participants are asked to wash their hands, but I can't hear any significant reaction or further examples so will abandon the code.

February 20th 2014

Sorting codes, looking for clusters and patterns. "Conversation" does not work as a single code - conversation- sharing knowledge with group I am thinking of as a social process, one topic of social interaction in the groups was sharing what facts, what was known

Ok now am going to avoid aggregating codes into families but just try plotting out some networks

I wonder if identity works as a theme to capture memories and personal experiences
I am thinking identity, bringing the individual into the room with their memories

Thinking of properties of object dividing into physical properties and feelings/thoughts about the object as these feel like different social processes – the physical aspects very grounding and the more intellectual or emotional appeal a different tenor of dialogue

Tactile stimulation, touch, I am considering as potentially one of the positive experiences of the group or perhaps a category in itself?

A participants comment about touch being a gateway to another world, feels like one of the "codeable moments" Boyatzis talks about.

February 23rd 2014

Developing themes going ok but still not there yet. I am thinking about the times in the recordings when a particular individual comes into the room, figuratively, by sharing part of their personal experience. Another aspect is the collective task, for instance working on identifying an object, and how this gets derailed sometimes as conversations go off on tangents or a the group develop their own story about the object. This reminds me of Bion's work group and basic assumption group in terms of two similar groups at play in the sessions; group one hardworking and the second group playful.

March 3rd 2014

Met with Linda and went through the codes and themes I have so far. Realise that I have identified at least one code that is purely participant to participant (shared exploration and discovery) this will be new in the literature – exciting.

March 10th

Analysis has taken longer than I expected but feel happy, finally, with my write up of the themes. Now need to begin writing part B fully. Once again juggling annual leave and child care to ensure I

have a block of time dedicated to this.

April 1st 2014

Home stretch now as completing last small changes on final draft.

Appendix P: Notes on presentation of preliminary findings

Appendix P: notes on presentation of preliminary findings

I was invited to give a presentation of my research and preliminary findings to the older peoples' psychology team meeting on my placement. I included a brief taster of an object handling session, using a loan box I had arranged to borrow from a local museum. This was a useful way of illustrating the intervention and the feedback I got was that it was enjoyable and people highlighted how engaged with the activity they had been. I was pleased overall that my research and findings were well received. The consensus was that the themes I presented were valid and there was interest in the possibility of providing museum object handling sessions in the area. One psychologist mentioned an exercise she had undertaken in a dementia group, inviting members to bring in material objects of their choice and talk about them; she was struck by how some members had revealed uncustomary amounts of information about themselves. In terms of applications of my research, an idea that was floated was using the thematic map I am developing to hold in mind and use in running sessions. The thinking came from a narrative approach where a practitioner may use a similar idea of conversational maps in therapy sessions.

Appendix Q: Submission guidelines for chosen journal – Journal of Mental Health

Instructions for Authors

Journal of Mental Health is an international journal adhering to the highest standards of anonymous, double-blind peer-review. The journal welcomes original contributions with relevance to mental health research from all parts of the world. Papers are accepted on the understanding that their contents have not previously been published or submitted elsewhere for publication in print or electronic form.

Submissions

All submissions, including book reviews, should be made online at Journal of Mental Health's Manuscript Central site at <http://mc.manuscriptcentral.com/cimh>. New users should first create an account. Once a user is logged onto the site submissions should be made via the Author Centre. Please note that submissions missing reviewer suggestions are likely to be un-submitted and authors asked to add this information before resubmitting. Authors will be asked to add this information in section 4 of the on-line submission process.

The total word count for review articles should be no more than 6000 words. Original articles should be no more than a total of 4000 words. We do include the abstract, tables and references in this word count.

Manuscripts will be dealt with by the Executive Editor, Professor Til Wykes, Department of Psychology, Institute of Psychiatry, De Crespigny Park, London, SE5 8AF, United Kingdom. It is essential that authors pay attention to the guidelines to avoid unnecessary delays in the evaluation process. The names of authors should not be displayed on figures, tables or footnotes to facilitate blind reviewing.

Book Reviews. All books for reviewing should be sent directly to Martin Guha, Book Reviews Editor, Information Services & Systems, Institute of Psychiatry, KCL, De Crespigny Park, PO Box 18, London, SE5 8AF.

Manuscripts should be typed double-spaced (including references), with margins of at least 2.5cm (1 inch). The cover page (uploaded separately from the main manuscript) should show the full title of the paper, a short title not exceeding 45 characters (to be used as a running title at the head of each page), the full names, the exact word length of the paper and affiliations of authors and the address where the work was carried out. The corresponding author should be identified, giving full postal address, telephone, fax number and email address if available. To expedite blind reviewing, no other pages in the manuscript should identify the authors. All pages should be numbered.

Abstracts. The first page of the main manuscript should also show the title, together with a structured abstract of no more than 200 words, using the following headings: Background, Aims, Method, Results, Conclusions, Declaration of Interest. The declaration of interest should acknowledge all financial support and any financial relationship that may pose a conflict of interest. Acknowledgement of individuals should be confined to those who contributed to the article's intellectual or technical content.

Keywords

Authors will be asked to submit key words with their article, one taken from the picklist provided to specify subject of study, and at least one other of their own choice.

Text. Follow this order when typing manuscripts: Title, Authors, Affiliations, Abstract, Key Words, Main text, Appendix, References, Figures, Tables. Footnotes should be avoided where possible. The total word count for review articles should be no more than 6000 words. Original articles should be no more than a total of 4000 words. We do include the abstract, tables and references in this word count. Language should be in the style of the APA (see Publication Manual of the American Psychological Association, Fifth Edition, 2001).

Style and References. Manuscripts should be carefully prepared using the aforementioned Publication Manual of the American Psychological Association, and all references listed must be mentioned in the text. Within the text references should be indicated by the author's name and year of publication in parentheses, e.g. (Hodgson, 1992) or (Grey & Mathews 2000), or if there are more than two authors (Wykes et al., 1997). Where several references are quoted consecutively, or within a single year, the order should be alphabetical within the text, e.g. (Craig, 1999; Mawson, 1992; Parry & Watts, 1989; Rachman, 1998). If more than one paper from the same author(s) a year are listed, the date should be followed by (a), (b), etc., e.g. (Marks, 1991a).

The reference list should begin on a separate page, in alphabetical order by author (showing the names of all authors), in the following standard forms, capitalisation and punctuation:

- a) For journal articles (titles of journals should not be abbreviated):

Grey, S.J., Price, G. & Mathews, A. (2000). Reduction of anxiety during MR imaging: A controlled trial. *Magnetic Resonance Imaging*, 18, 351-355.

- b) For books:

Powell, T.J. & Enright, S.J. (1990) *Anxiety and Stress management*. London: Routledge

- c) For chapters within multi-authored books:

Hodgson, R.J. & Rollnick, S. (1989) More fun less stress: How to survive in research. In G.Parry & F. Watts (Eds.), *A Handbook of Skills and Methods in Mental Health Research* (pp. 75-89). London: Lawrence Erlbaum.

Illustrations should not be inserted in the text. All photographs, graphs and diagrams should be referred to as 'Figures' and should be numbered consecutively in the text in Arabic numerals (e.g. Figure 3). The appropriate position of each illustration should be indicated in the text. A list of captions for the figures should be submitted on a separate page, or caption should be entered where prompted on submission, and should make interpretation possible without reference to the text. Captions should include keys to symbols. It would help ensure greater accuracy in the reproduction of figures if the values used to generate them were supplied.

Tables should be typed on separate pages and their approximate position in the text should be

indicated. Units should appear in parentheses in the column heading but not in the body of the table. Words and numerals should be repeated on successive lines; 'ditto' or 'do' should not be used.

Accepted papers

If the article is accepted, authors are requested to submit their final and revised version of their manuscript on disk. The disk should contain the paper saved in Microsoft Word, rich text format (RTF), or as a text or ASCII (plain) text file. The disk should be clearly labelled with the names of the author(s), title, filenames and software used. Figures should be included on the disk, in Microsoft Excel. A good quality hard copy is also required.

Proofs are supplied for checking and making essential corrections, not for general revision or alteration. Proofs should be corrected and returned within three days of receipt.

Early Electronic Offprints. Corresponding authors can now receive their article by e-mail as a complete PDF. This allows the author to print up to 50 copies, free of charge, and disseminate them to colleagues. In many cases this facility will be available up to two weeks prior to publication. Or, alternatively, corresponding authors will receive the traditional 50 offprints. A copy of the journal will be sent by post to all corresponding authors after publication. Additional copies of the journal can be purchased at the author's preferential rate of £15.00/\$25.00 per copy.

Copyright. It is a condition of publication that authors transfer copyright of their articles, including abstracts, to Shadowfax Publishing and Informa Healthcare. Transfer of copyright enables the publishers to ensure full copyright protection and to disseminate the article and journal to the widest possible readership in print and electronic forms. Authors may, of course, use their article and abstract elsewhere after publication providing that prior permission is obtained from Taylor and Francis Ltd. Authors are themselves responsible for obtaining permission to reproduce copyright material from other sources.

