

Initial codebook development (pp. 1-11) Final codebook (pp. 21-14) for data and analysis cited in: Camic, Dickens, Zeilig & Strohmaier (2021). Subjective wellbeing in people living with dementia: Exploring processes of multiple object handling sessions in a museum setting. *Wellcome Research Open*.

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
F agreeing with P	Facilitator(s) agreeing with participants.	Removed due to overlaps with “F validating or encouraging to P” and “F sharing opinions”.		Facilitation		13
F answering questions	Facilitators answering questions.			Facilitation	3	44 (17, 12, 15)
F asking questions	Facilitator(s) asking questions: opinions, prompts, hypotheses, knowledge etc.		Facilitator initiated exploration scaffolding, pacing learning. Guides conversation and exploration. Impact of questions on the group E.g. may speed pace, slow pace, increase interest, decrease interest.	Facilitation	3	195 (71, 72, 52)
F asking questions - exploration	Facilitator(s) ask participant(s) questions which further exploration of objects or views in relation to them. Can include prompts that explore different ideas around a topic to help get closer to ‘the answer’.		Can prompt or shut down/change topic of conversation. Prompts guessing and hypothesising.		3	119 (53, 35, 31)

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
F asking questions - memories or existing knowledge or personal experience	Facilitator(s) asking questions relating to participants knowledge, memories or personal experiences.				3	35 (13, 18, 4)
F asking questions - opinions & preferences	Facilitator(s) asking questions relating to participants opinions and preferences.				3	47 (8, 22, 17)
F bringing P in	Facilitators bringing participants into conversations and exploration.		Element of all contributing.	Facilitation	3	32 (9, 15, 8)
F changing topic or introducing new idea	Facilitator changing the topic or introducing new idea. Can perhaps consider unusual topics - e.g. if would put object in mouth. Can be interrupting. F's may do this to each other too. Can be used to prompt further exploration before known information is shared to maximise time hypothesising.			Facilitation	3	30 (16, 12, 2)
F direction or instruction - prompting	Facilitator instructing or inviting participants. E.g. pass it on; setting up expectations for session. Overlap with "F providing information" – different as this is more directive – different parts of the process? Overlap with "F asking questions/F initiated exploration"?		Provides a safe framework – makes accessible and provides boundaries and guidance. Structure of the group and prompts for exploration.	Facilitation	3	48 (13, 19, 16)
F expressing what handlers 'usually' do	Facilitator sharing expectations or what people "usually do".	Removed as captured by "Validating".		Facilitation		5
F Introductions	Facilitators making introductions.	Collapsed into "F providing information".		Facilitation		5
F It's like...	Facilitator likens an object to something else.	Removed as accounted for under combined F and P "It's		Objects		2

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
		like”				
F not knowing	Facilitators expressing not knowing or being unsure.		Contributes to a sense of equal status in group as things not known by Fs. Creates conditions for it to be ok to share, hypothesise and contribute without needing to be “correct” or have answers.	Facilitation	3	17 (7, 4, 6)
F object exploration	Facilitator makes comments, asks questions, provides answers, contributes to discussion in reference to particular aspects or features of the object.	Collapsed with P object exploration as does not seem meaningful to separate into F and P when there is so much overlap.		Objects		
F process of discovery	Facilitators and participants discuss and ask questions to find out more about an object.	Collapsed with P process of discovery as this is a group interaction.		Interaction		8
F providing explanations	Facilitators providing explanations. E.g. in explaining how an object is used or explaining reasons behind own views.	Collapsed into “F providing information” and “F sharing opinions” as overlaps were too great.		Facilitation		6
F providing information	Facilitators providing information. This includes information on what the sessions will entail, information provided within the session (educating), which may also be in response to questions. Includes information that only facilitators are aware of due to knowing more detailed information about the objects relative to the participants. Can include clues or guides to support further discussion.		Providing information that can also suggest that some hypotheses are correct or incorrect. Does not shut down group but appears to scaffold.	Facilitation	3	119 (41, 33, 45)

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
	Overlap with “F referring to P as correct or incorrect” and “F answering questions”.					
F referring to P as correct or incorrect	Facilitator(s) referring to participants as correct or incorrect.	Collapsed into “validating” and “providing information” as no clear examples of being “incorrect”.		Facilitation		22
F repeats views of group	Facilitator repeating parts of what has been said/expressed by the group (participants). Provides words to link/summaries what different pps say. Overlap with F validation?	Collapsed with “validating”.		Facilitation		3
F responding to P	Facilitator(s) responding to participant(s). Overlap with “F answering questions” and “F validating or encouraging P”? Captures units of conversation that are more non-specific but are part of guiding conversations.			Facilitation	3	80 (46, 25, 9)
F setting up expectations of session	Facilitator setting up expectations of session	Collapsed into “F direction or instruction” as too much overlap		Facilitation		2
F sharing opinions	Facilitators sharing own opinions.			Facilitation	3	42 (11, 18, 13)
F sharing personal information	Facilitator(s) sharing personal information.		Facilitator as human. Works to balance power between F and P in the room.	Facilitation	3	15 (6, 8, 1)
F validating or encouraging to P	Facilitator responding in a validating or encouraging way to participant(s) E.g. agreeing with observations or supportive statements. Non-judgmental. Overlaps with “F sharing opinions’ and “F responding to P”?		Allows participants to feel heard and contributions validated. Equal status in group. Qualities that create	Facilitation	3	96 (39, 36, 21)

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
			conditions for sharing.			
Humour	Playfulness, making jokes, laughter.		Brings in fun, unites – creates a ‘we’.	Interaction	3	42 (14, 12, 16)
Associations beyond the physical object	Participants discussing (with each other and facilitators) topics associated with, but beyond the physical object in front of them.		Meaning-making. Links to personal experiences beyond concreteness of object.	Objects, Interaction	3	35 (17, 16, 2)
Next object	Participant(s) or Facilitator(s) making references to the next object in the session – moving on.	Deleted code as part of what would expect from facilitator and so not as relevant to the research question which focusses on process.		Facilitation, Interaction		4
P – short phrase engagement or contribution	Participant uses words such as “amazing”, which appears to be a way P2 participates as is less vocal than other participants. Perhaps as a way to participate in the face of dementia? P2 more vocal in session 2.		Participating in own way.	Interaction	3	68 (10, 33, 25)
P forgetting	Participant(s) make reference to forgetting or not remembering	Collapsed into “not knowing” due to overlap and low frequency.		Interaction		
P agreement with another P	Participant agreeing with another participant(s).			Interaction	3	33 (15, 11, 7)
P agreement with F	Participant agreeing with facilitator. Overlap with “P responding to F”. Interesting not very present.	Removed due to low frequency and overlap with “P responding to F”.		Interaction		1
P answering questions	Participant(s) answering questions.	Collapsed into “opinions”, “personal stories” “hypothesising” and “providing information”.		Interaction		23

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
P asking P question	Participant asks another participant a question. May just repeat what another participant has said in a questioning way or be used to clarify what was said.			Interaction	3	31 (11, 13, 7)
P asking permission	Participant asking for permission in relation to exploring objects.	Collapsed into “asking questions” due to overlap and low frequency		Interaction		
P asking questions	Participants’ asking any questions during sessions E.g. thinking out loud, asking permission, challenging others, as an answer to a question, in relation to object features etc... These may be directed at facilitators, other participants or the group (direction sometimes hard to identify even through watching video).			Interaction	3	128 (46, 41, 41)
P question – Curiosity or exploration	Asking what/when/why/how to gain more information or asking for answers to guessing different features relating to the object e.g. “It’s an ashtray, isn’t it?” or content in associated discussion.	Collapsed into “P asking questions” as does not feel important to split up in this way.			3	94
P question or statement – challenge	Participant asks a question or makes a statement challenging what has been said.	Collapsed into “P disagreeing with others” to form “P disagreeing with or challenging others” due to overlap.			3	35
P changes or introduces new topic or moves conversation on	Participant brings in a new element to the conversation e.g. age when the current discussion was around function or makes a comment relating to the session pace or content e.g. trying to move on to the next object. May go back to a topic discussed before conversation moved onto the current topic or initiate topics of exploration.		May reflect dementia – impulsivity – may also show feel comfortable to also take lead/initiate at times or change topic as had enough of the current	Interaction	3	29 (12, 10, 7)

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
	Often same person - Overlap with “amazing” - roles people hold/personal styles of communicating.		object/discussion. Equal status in the group.			
P clarifying	Participant(s) using clarifying phrases and questions to support understanding of self and others. E.g. May repeat parts of what has been said, may not have heard properly or may clarify question to enhance understanding or point making to make self understood.			Interaction	3	44 (15, 13, 16)
Dementia talk	References made to dementia.	Deleted as doesn't speak to research questions and low frequency.		Interaction	2	3
P comment relating to the session pace or content	Participant makes a comment relating to the session pace or content.	Collapsed into “P changes topic or moves conversation on” due to overlap and low frequency.		Interaction		
P disagree with F	Participant disagreeing with facilitator.	Collapsed P disagreeing with F and P together to create “P disagreeing with others”		Interaction	3	9
P disagreeing with another P	Participant disagreeing with another participant/expressing having a different opinion.			Interaction	3	20
P disagreeing with or challenging others	Participant(s) disagree with/express having a different opinion or challenge what is said by another participant or facilitator. Can be presented as a question or statement.		Group affords Ps to have agency to express themselves.	Interaction	3	52 (21, 15, 16)
P guessing and hypothesising	Participants guessing and hypothesising. For example, about an object's identity, age, material, function etc. or in wider discussion.		Creativity – imagination – having a voice – allowing own curiosities.	Objects, Interaction	3	162 (50, 48, 64)
Co-curating	Participants along with other participants and the facilitator make suggestions/negotiate/problem solve to curate a display case.		Unique to this study. Task only occurred in session 3.	Interaction	1	9 (0, 0, 9)

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
P not bothered	Reports not bothered by object or topic of related conversation. Overlap with “P sharing opinions and preferences”	Removed as overlap with opinions too great.		Interaction		3
Exploring objects	Captures the different perspectives from which objects are explored and discussed. Participants and/or facilitators make reference to different aspects of objects e.g. their age, size, function etc. during any part of session discussion (questions/hypotheses/opinions/providing information etc.).		Multifaceted way objects are explored allows open conversation for all participants ranging from features of object to personal expressions (stories/opinions). Increases agency – some subjective aspects, some more factual.	Objects	3	460 (195, 152, 113)
Age	Reference to the age of an object.				3	54 (29, 13, 12)
Authenticity	Reference to the authenticity of an object.				3	10 (5, 1, 4)
It's like...	Likening an object to something else.				3	13 (5, 6, 2)
Condition	Reference to the condition of an object.				2	3 (1, 2, 0)
Fragility	Reference to the fragility of an object.				2	2 (1, 0, 1)
Danger	Worry/concern/danger expressed in relation to an object.				3	8 (5, 2, 1)
Detail or features	Reference made to finer details of or about an object (rather than the object as a whole).				3	43 (17, 7, 19)

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
Healing properties	Participants refer to objects as having healing properties.	Collapsed into "Meaning"			2	5
Identity or function/purpose	Reference to the identity or function of an object – what it may or may not be.				3	74 (27, 30, 17)
Material	Reference to the material make up of an object and its qualities.				3	34 (19, 5, 10)
Meaning	Reference to the meaning of objects or what they represent.				3	36 (12, 12, 12)
Monetary value	Reference to how much an object may be worth.				3	9 (2, 5, 2)
Orientation	Reference to the orientation of an object.				2	4 (2, 2, 0)
Origin	Reference to the origin of an object.				3	23 (8, 10, 5)
Ownership	References to who might own the object.				3	9 (4, 1, 4)
Production	Reference to the production of an object – how it was made.				3	14 (6, 3, 5)
Quality	Reference to the quality of an object.				2	3 (1, 2, 0)
Shape	Reference to the shape of an object.				2	3 (1, 2, 0)
Sign of wealth	Reference to an object as a sign of wealth.	Collapsed into "Meaning"			1	2
Size	Reference made to the size of an object.				2	4 (0, 1, 3)
Smell	Reference made to the smell of an object.				2	31 (6, 25, 0)

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
Taste	Reference made to the taste of an object.				2	5 (3, 2, 0)
Touch or texture	Reference made to the feel or texture of an object.				3	13 (10, 1, 2)
Usefulness of object	Reference made to the usefulness of objects. Overlap with “opinions and preferences”?				3	11 (6, 1, 4)
Visual properties	Reference made to visual properties of an object.				3	21 (10, 9, 2)
Weight	Reference made to the weight of an object.				2	16 (12, 0, 4)
Practicality	Considering practical aspects of an object.				2	4 (3, 0, 1)
Object skill or appreciation	Reference made appreciating an object or the skill involved in producing it.				2	13 (0, 10, 3)
P problem solving	Participants problem solving through discussion (asking questions and debating) to discover answers in relation to an object. Overlap with “process of discovery”, “asking questions” or “not knowing”.	Collapsed into “process of discovery” as too similar.		Interaction		16
P making suggestions	Equivalent to making hypotheses?	Removed.			1	5
Process of discovery and problem solving	Group engaging in a process together of sharing ideas, asking questions, debating, negotiating and problem solving to discover more about an object. Can include facilitators and doesn’t have to reach an answer or correct answer.		What is achieved together within the group. Comes from interaction between facilitation and contribution of Ps around objects.	Interaction	3	50 (15, 14, 21)
P providing	Participant explaining their reasoning or short discussion			Interaction	3	33

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
explanations or reasoning	but not as much as in process of discovery.					(10, 10, 13)
P purpose beyond looking at it	Participants comment on the wider purpose of the object beyond something to be explored within the session. Overlap with “links to world outside the session”?	Deleted due to low frequency and overlap with other codes.		Objects		2
P agreeing or reaching consensus	Participants reach a consensus. Three or more. Overlap with “P agreeing with P”			Interaction	3	23 (8, 12, 3)
P responding to F	Can be an acknowledgement or questions or in answer to a question. Can be part of a back and forth conversation between P and F. Overlaps with “asking” and “answering questions” or “conversation”. As in F responding to P includes the responses that aren’t part of conversations and/or questions or answers E.g. “Oh right”.	Consider collapsing into suggested overlapping codes?		Interaction	3	136 (59, 42, 35)
P sharing expectations	Sharing expectations	Removed as captured by “sharing opinions and preferences”		Interaction		2
P sharing opinions and preferences	This may be spontaneous or in response to a question, prompt or associated conversation. Preferences/reactions/expectations/concerns/likes/dislikes e.g. “I think...” Overlap with “hypothesising”?		Sharing creates a ‘We’. Agency to express selves in any direction (even if disagreeing with another) without judgement.	Interaction	3	156 (63, 48, 45)
P sharing personal information & stories	Sharing information about own life or experiences/stories.		Creates a ‘we’. Suggests people feel comfortable and safe to share.	Interaction	3	43 (13, 21, 9)
P uncertainty, not knowing or forgetting	Expressing not knowing or being unsure or forgetting.			Interaction	3	79 (24, 32, 23)
P using imagination	Participant expressing creative ideas or using their imagination.	Removed as overlapped with “hypothesising”.		Interaction		3

Code	Description	Collapsed codes	Ideas for theme development	Relevant research question(s)	Number of sessions code present	Frequency of code across all sessions (breakdown 1-3)
P sharing personal knowledge	Participant(s) sharing personal knowledge.			Interaction	3	25 (3, 13, 9)
P what is 'normal' or expected	Participant expressing an element of surprise or something counter to what was expected. What is normal or not normal, expected or unexpected.	Removed as high overlap with “opinions” and “hypothesisng”.		Interaction		12
P&F interactive learning	Back and forth conversation made of questions and answers between participant(s) and facilitators on a particular topic to learn more (about an object or topic or reactions to these). Overlap with “guessing and hypothesising” and “opinions” but more about process. Overlap with “Process of discovery” but more to do with learning around particular facts. E.g. how iron is important in our diets.			Interaction	3	10 (5, 1, 4)
Ps responding to each other	Direct communication between Ps - commenting on what the other has said, an acknowledgement or asking/answering questions. Fs may also join in with this. Can be single instances or back and forth interaction but not reaching process of discovery.	Consider collapsing. Important features captured by other participant categories?		Interaction	3	102 (27, 42, 33)
Remembering - recapping what has been discussed	References to what others have previously said (remembering), or summarising what has been discussed (recapping) to help hold the thread or resume a previous conversation topic. On occasion participants do this too to acknowledge what others have said. Some overlap with “validating”.		Permission not to remember what has been said. Shared responsibility to hold the thread.	Facilitation/ Interaction	3	34 (13, 10, 11)

Definitions: P = Participant(s); F = Facilitator(s)

Final codebook

Code	Description
Associations beyond the physical object	Participants and/or facilitators discussing topics associated with, but beyond the physical object in front of them.
Co-curating	Participants along with the facilitator making suggestions/negotiating to curate a display case.
F answering questions	Facilitators answering questions.
F asking questions	Facilitators asking questions. E.g. opinions, prompts, hypotheses, knowledge etc.
F asking questions - exploration	Facilitators asking participants questions which encourage further exploration of objects or topics of discussion in relation to them.
F asking questions - memories or existing knowledge or personal experience	Facilitator(s) asking questions relating to participant's knowledge, memories or personal experiences.
F asking questions - opinions & preferences	Facilitator(s) asking questions relating to participant's opinions and preferences.
F bringing P in	Facilitators bringing participants into conversations and exploration, such as when someone appears to be speaking less or hasn't had an opportunity to handle an object.
F changing topic or introducing new idea	Facilitator changing the topic or introducing new idea. E.g. asking about smell when the current topic is touch.
F direction or instruction - prompting	Facilitator instructing or inviting participants. E.g. asking a participant to pass an object on.
F not knowing	Facilitators expressing being unsure or not knowing.
F providing information	Facilitators providing information. E.g around what the sessions will entail, information on objects (educating), clues to guide further discussion.
F responding to P	Facilitators responding to participants.

Code	Description
F sharing opinions	Facilitators sharing own opinions.
F sharing personal information	Facilitators sharing personal information or stories.
F validating or encouraging to P	Facilitators responding in a validating or encouraging way to participant(s) E.g. making supportive statements.
Humour	Participants and/or facilitators showing playfulness, making jokes, laughter.
Exploring objects	Captures the different perspectives from which objects are explored and discussed. Participants and/or facilitators make reference to different aspects of objects e.g. their age, size, function etc. during any part of session discussion (questions/hypotheses/opinions/providing information etc.).
Age	Reference to the age of an object.
Authenticity	Reference to the authenticity of an object.
Condition	Reference to the condition of an object.
Danger	Worry/concern/danger expressed in relation to an object.
Detail or features	Reference made to finer details of or about an object (rather than the object as a whole).
Fragility	Reference to the fragility of an object.
Identity or function/purpose	Reference to the identity or function of an object – what it may or may not be.
It's like...	Likening an object to something else.
Material	Reference to the material make up of an object and/or its qualities.
Meaning	Reference to the meaning of objects. E.g. what they may represent.
Monetary value	Reference to how much an object may be worth.
Object skill or appreciation	Reference made appreciating an object or the skill involved in producing it.
Orientation	Reference to the orientation of an object.
Origin	Reference to the origin of an object.
Ownership	References to who might own the object.
Practicality	Considering practical aspects of an object.
Production	Reference to the production of an object – how it was made.

Code	Description
Quality	Reference to the quality of an object.
Shape	Reference to the shape of an object.
Size	Reference made to the size of an object.
Smell	Reference made to the smell of an object.
Taste	Reference made to the taste of an object.
Touch or texture	Reference made to the feel or texture of an object.
Usefulness of object	Reference made to the usefulness of an object.
Visual properties	Reference made to the visual properties of an object.
Weight	Reference made to the weight of an object.
P agreeing or reaching consensus	Participants reach a consensus. I.e. Three or more in agreement.
P agreement with another P	Participant agreeing with another participant.
P asking P a question	Participant asks another participant a question. May just repeat what another participant has said in a questioning way or be used to clarify what was said.
P asking questions	Participants asking any questions during sessions E.g. thinking out loud, asking permission, challenging others, as an answer to a question, in relation to object features etc.
P changes or introduces new topic or moves conversation on	Participant brings in a new element to the conversation, e.g. age when the current discussion was around function, or makes a comment relating to the session pace or content e.g. trying to move on to the next object. May go back to a topic discussed before conversation moved onto the current topic or initiate topics of exploration.
P clarifying	Participants using clarifying phrases and questions to support understanding of self and others. E.g. May repeat parts of what has been said, may not have heard properly or may clarify question to enhance understanding or point making to make self understood.

Code	Description
P disagreeing with or challenging others	Participants disagree with/express having a different opinion or challenge what is said by another participant or facilitator. May be presented as a question or statement.
P guessing and hypothesising	Participants guessing and hypothesising. For example, about an object's identity, age, material, function etc. or in wider discussion.
P providing explanations or reasoning	Participants explaining their reasoning behind a hypothesis or opinion.
P responding to F	Participants responding to Facilitators. Can also include units of conversation that do not fall under other codes E.g. "Oh right".
P sharing opinions and preferences	Participants sharing opinions and preferences. This may be spontaneous or in response to a question prompt or associated conversation. Preferences/reactions/expectations/concerns/likes/dislikes e.g. "I think...".
P sharing personal information & stories	Participants sharing information about own life or experiences/stories.
P sharing personal knowledge	Participants sharing personal knowledge.
P uncertainty, not knowing or forgetting	Participants expressing not knowing, being unsure or forgetting.
P – short phrase engagement or contribution	Participants using short phrases or words such as "amazing". This may be how a quieter member of the group contributes.
P&F interactive learning	Back and forth conversation made of questions and answers between participants and facilitators on a particular topic to learn more (about an object or topic or reactions to these). May be to do with learning around particular facts. E.g. how iron is important in our diets.
Process of discovery and problem solving	Group engaging in back and forth discussion building on each other's ideas. E.g. asking questions, debating, negotiating and problem solving to discover more about an object. Can include facilitators and doesn't have to reach an answer or a "correct" answer.
Ps responding to each other	Direct communication between participants. E.g. commenting on what another has said, an acknowledgement or asking/answering questions.

Code	Description
Remembering - recapping what has been discussed	References to what others have previously said or summarising what has been discussed to help hold the thread or resume a previous conversation topic.
<i>Definitions:</i> P = Participant(s); F = Facilitator(s)	