WALTHAM™

Considerations for Applicants

The following information is provided to assist applicants in thinking through some of the challenges and complexities of HAI and ageing research. This is not an exhaustive list of all of the questions you will need to ask, or factors you will need to consider, and it is merely included as a potentially helpful resource. This information is provided in addition to that contained in the recommended reading specified in the call for applications.

1.   Formulating your research question and hypotheses:

- Is the outcome under consideration:

  – Common?

  – Costly?

  – Fixable?

- Can the outcome be clearly articulated, described and operationalized?

- What is the association between modifiable factors and the outcome under consideration (i.e., what are the pathways and mechanisms that potentially connect the independent and dependent variables)?

- Is there a clear (and clearly stated) problem to solve, and a path to solving it?

2.   Some general considerations for ageing research

2.1   Age Cohorts

- When looking at different age cohorts, be aware that there are many important differences to consider.

- Consider the historical significance of age cohorts, because this can affect outcomes (e.g., Depression Era cohort vs. 'Baby Boomers')

2.2   Some challenges in ageing research

- Health conditions

- Social/cultural and language issues

- Impaired ability to provide informed consent (may need to be provided by caregiver/proxy)

- Non-compliance (source of potential confounding)

- Potential institutionalization (have to work with both the subject and the institution; Health Insurance Portability and Accountability Act of 1996 - HIPAA compliance)

- Attrition by drop-out or death

  – Measure factors predictive of drop-out and death (use in advanced analytical methods)

2.3   Some areas of current interest in the field of ageing research

- Non-pharmacological treatments

  – Treatments that do not involve drugs.

- Patient-centred care:

  – The Institute of Medicine (IOM) defines patient-centred care as: "Providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions."

- Value-based care:

  – Current fee-for-service models of reimbursing providers for healthcare create an incentive for providers to "do" more (i.e., when more tests or procedures are performed, more revenue is generated). One approach to addressing this is to move to a reimbursement system that is 'value-based.' Value-based systems are concerned with the health outcomes achieved per dollar spent. In a value-based system, achieving and maintaining good health is viewed as inherently less costly as trying to correct poor health.

2.4   Ensuring participant well-being

- Carefully consider participant health and well-being and potential for risk or injury.

- Professionals/researchers who are knowledgeable about human health and psychology should be included as part of the research, planning, and/or advisory teams.

- If issues of participant health and/or well-being emerge during the course of the study, these should be well-described and recorded.

- Complications or risks that emerge as being particularly relevant to an ageing human population should be reported and well-described.

3.   Some general considerations for HAI research

3.1   Defining pet ownership is complex

- Pet characteristics (e.g., species, breed, size, age, health status)

- What about those who have multiple pets/species?

- Length of ownership/ownership history for current and previous pets

- Who actually owns and /or cares for the pet (other household member?)

- Attachment/involvement/quality of relationship with pet

- Typical activities with the pet (e.g., walking, sports, hobbies, training, treat giving)

- Ownership versus visitation

3.2 The ways humans and animals interact are complex

3.2.1 Exposure situations

- Context of the situation (visiting programs differ from living with a pet)

- Duration and frequency of animal contact (we don't know ideal amount)

- Type of exposure: Tactile, visual, auditory, olfactory

- Task type and animal involvement

- If multiple exposures, order/carryover/novelty effects

- Timing

3.2.2 Animal

- Type of animal/temperament of animal

- Specific activity with the animal

- Proximity or location of animal in relation to person

- Safety/stress of animal

3.2.3 Person

- Individual characteristics (e.g., gender, ethnicity, religion, cultural background, married/single, allergies)

- Pet ownership history

- Experience with animals, required tasks

- Attitudes toward animals

- Not everyone likes animals; some are afraid of animals

- Demand characteristics, can't double blind

- Psychosocial status of subject (e.g., depression, anxiety)

- Human social support (e.g., extent and quality of social support network)

3.2.4 Handler (for intervention studies)

- Individual characteristics (e.g., gender)

- Role in intervention

- Experience in animal-assisted interventions and with this specific animal

- Attachment to the therapy animal

3.3 Are pet owners and non-owners different?

- Covariates/confounders (e.g., gender, health status)

- Random assignment of pet ownership, extremely challenging to accomplish

- Does pet ownership improve health, or do healthier people opt to own pets?

3.4 Why include animals?

- What is the rationale for including animals, as opposed to another sort of interaction or activity?

- Have you considered alternatives and rejected them as being potentially less effective than including animals?

- Is there a match between the subject's needs and what the animal can provide?

3.5 Ensuring animal well-being

- Consider animal health and well-being and potential for stress or injury.

- Professionals/researchers who are knowledgeable about animal behaviour, health, and welfare should be included as part of the research, planning, and/or advisory teams.

- If issues of animal stress and/or well-being emerge during the course of the study, these should be well-described and recorded.

4. Some methodological considerations in HAI research

- Treatment fidelity:

  - Is the treatment described in the protocol what is actually happening in real-life? Protocols and treatments need to be well-described, and investigators need to ensure that they are adhered to throughout the study.

- Many instruments are designed to measure HAI with only dogs and cats, but aren't as relevant for other species. Or, instruments are designed with pet ownership in mind, but aren't as relevant for animal-assisted interventions (or vice versa). Ensure that you have included all key measures, but exclude unnecessary measures (whenever possible, seek to reduce participant burden and maximize participant benefit). If a new, un-validated measure is used, when possible, it should be validated by comparison with an instrument having known validity and reliability.

- The animals themselves should be well-described, i.e., specify species, breed, size, age, health status, etc. If applicable, include how the animal was trained, what he/she was trained

to do, what he/she did in the context of the study, and what organization provided his/her registration or certification.

- In intervention studies, it is important to assess whether treatment effects are maintained over time, or are observable in other contexts. Consider the use of multiple informants and sources of information, e.g., caregivers.

- Because human-animal interaction and relationships are complex, many covariates, mediators, moderators, and potential confounders must be considered in the analyses.