

Implementing robotic pet therapy in continuing care settings: A scoping review of barriers and facilitators

Brooklynn Fernandes¹, Justin Eng², Ann Toohey¹, Bonnie Lashewicz¹, Marie Charbonneau³, Jayna Holroyd-Leduc^{1,4}

¹Dept of Community Health Sciences, University of Calgary, ²Dept of Health Sciences, University of Calgary, ³Faculty of Engineering, University of Calgary, ⁴Department of Medicine, Cumming School of Medicine

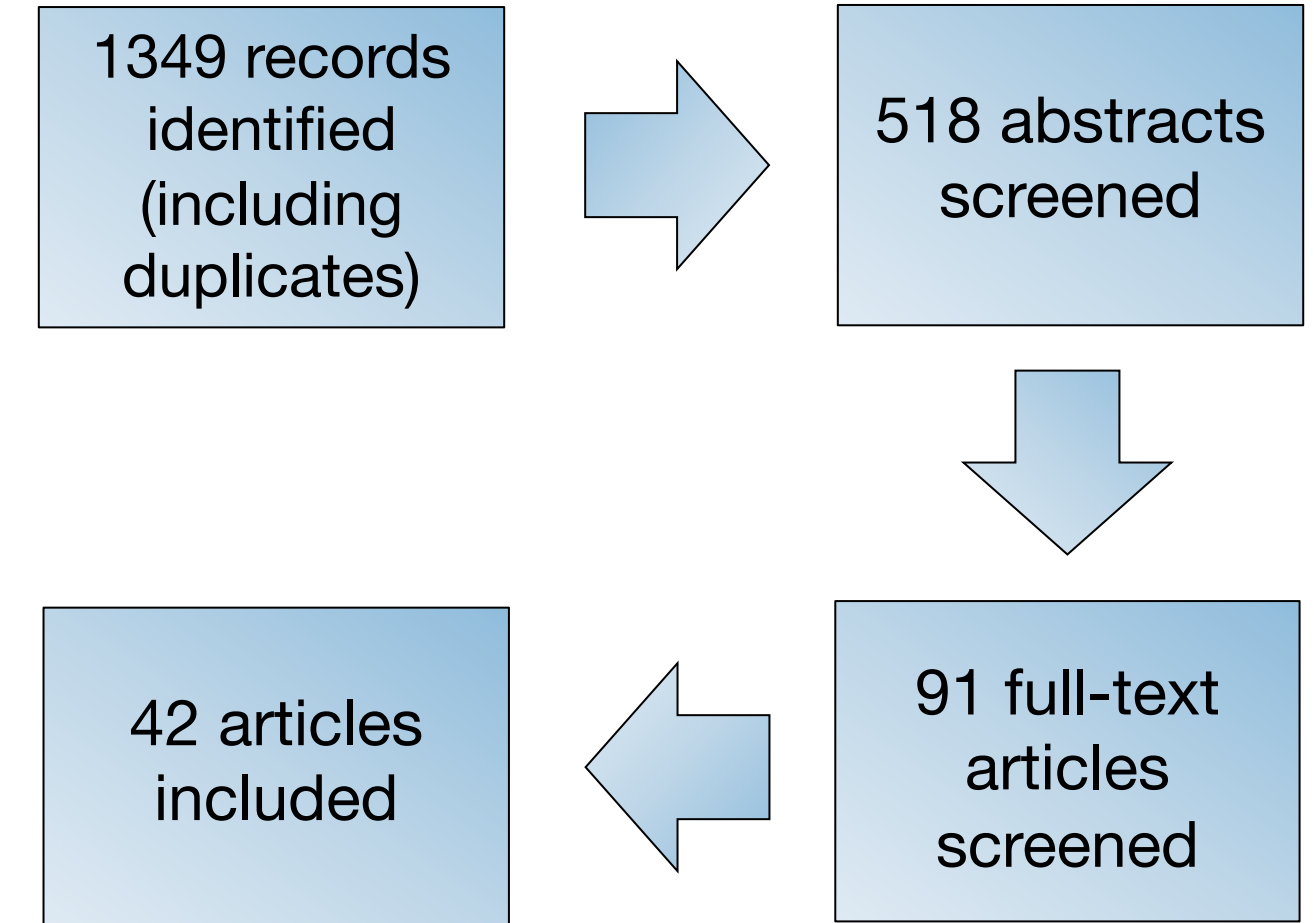
Introduction

- Access to the human-animal bond can improve the mental, physical, and emotional well-being of many older adults¹⁻³
- To leverage these benefits, animal-assisted activities are increasingly offered in residential continuing care (CC) settings
- Even so, policies often exclude live animals from entering residential CC facilities due to allergies and the risk of physical harm from or to animals⁴
- **Robotic pet therapy** is a unique alternative to using live animals, and may offer similar benefits to older adults
- A recent randomized control trial (RCT) involving Joy for All robotic pets and older adults with dementia found⁵:
 - Lower depression
 - Lower anxiety
 - Improved elation
- To leverage the potential of robotic pets for older adults in CC settings, understanding effective implementation is necessary **to maximize benefits and minimize unintended consequences of robotic pet use**
- **Objective:** Examine and summarize the current evidence regarding the barriers and facilitators of introducing robotic pets to older adults in CC settings

Methods

- Guided by Arksey and O'Malley's methodological framework⁸ and conducted according to PRISMA-ScR⁹
- Searched five databases: MEDLINE, EMBASE, PsycINFO, CINAHL, and Scopus
- Searched grey literature using CADTH Grey Matters Tool
- **Inclusion criteria (Population, Concept, Context):**
 - **P:** Older adults with or without dementia presented with a robotic pet, and any care providers involved
 - **C:** Guidelines, recommendations, or experiences using robotic pets
 - **C:** CC settings
- Two reviewers screened all titles/abstracts/full-texts, extracted all data, and mapped barriers and facilitators to the Theoretical Domains Framework (TDF) and Capability, Opportunity, Motivation Behavioral Change Wheel (COM-B)

Results



Barriers and facilitators were identified across all 14 domains of the TDF and all 6 components of the COM-B

Results from the most frequently mentioned domains (≥50% of articles):

- Environmental Context & Resources (83% of articles)**
 - **Facilitators:** Funding for robotic pet purchases, effective cleaning protocols
 - **Barriers:** Concerns over hygiene, not enough staff to implement
- Beliefs about Consequences (76% of articles)**
 - **Facilitators:** Improved communication between care staff and residents
 - **Barriers:** Care staff's concern over infantilizing residents
- Social Influences (62% of articles)**
 - **Facilitators:** Family and care staff buy-in and facilitation through a mediator
 - **Barriers:** More responsibility for care staff, conflict between residents who share the pets

Results from the less frequently mentioned domains (<50% of articles):

- Skills (45% of articles)**
 - **Facilitators:** Training care providers, holding pets as if they were real
 - **Barriers:** Challenges determining which residents should use the pets
- Social Professional Role and Identity (31% of articles)**
 - **Facilitators:** Defining role of care staff regarding pet use
 - **Barriers:** Uncertainty over who should purchase the pets
- Beliefs about Capabilities (62% of articles)**
 - **Facilitators:** Some care staff thought the pets were easy to use
 - **Barriers:** Care staff's belief that they have too many duties to help implement the pets

Conclusion

- While there are reported benefits to delivering robotic pet therapy, there are also several potential barriers and unintended consequences
- It is important to identify barriers and facilitators to ensure robotic pets are implemented in an evidence informed way that improves the quality of life of older adults and minimizes unintended negative consequences
- **Future research areas include:**
 - Developing an implementation guideline for CC facilities to use that can address the barriers and facilitators
 - Mapping the results of this scoping review to the intervention functions of the Behavioural Change Wheel to help address the barriers

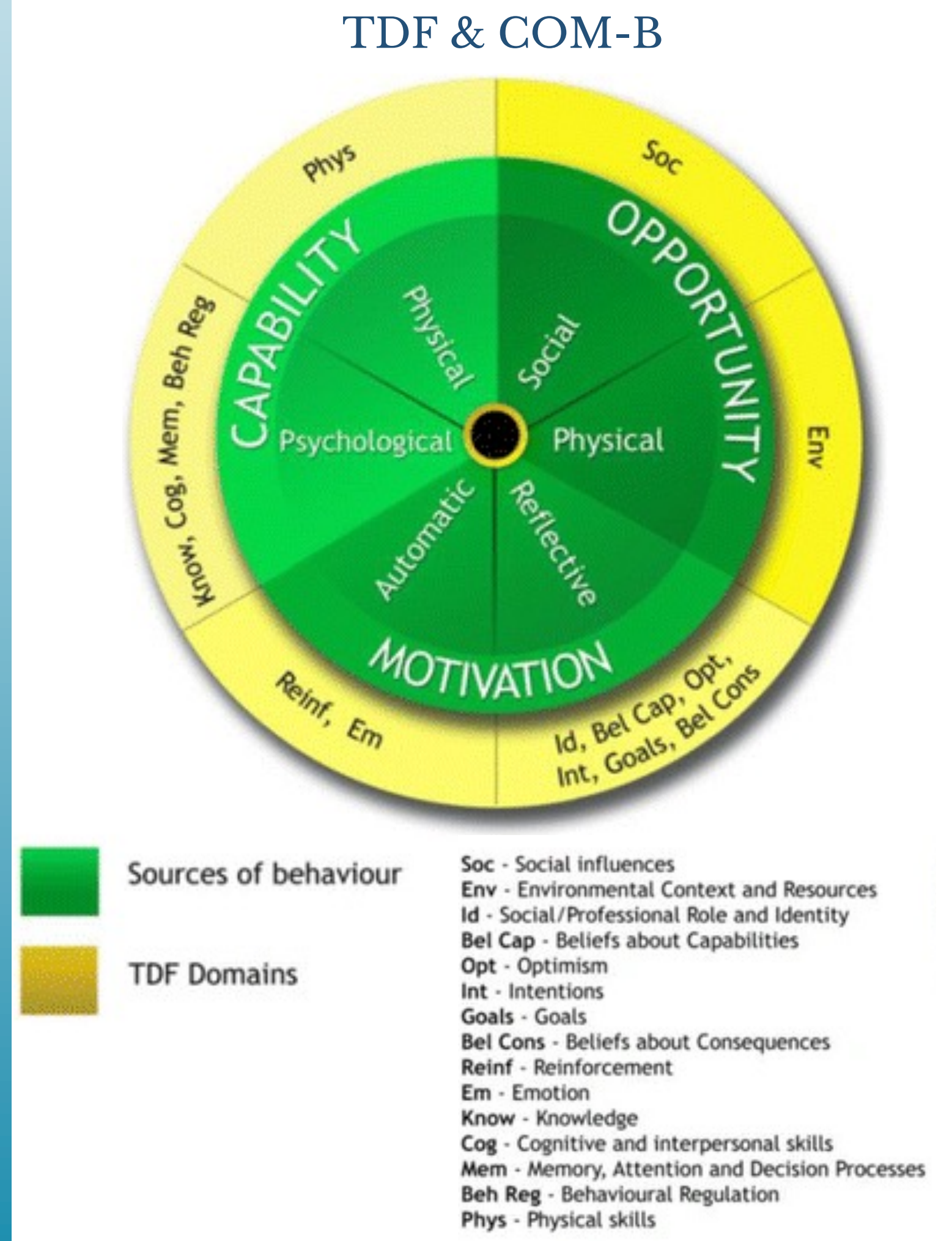
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Common Robotic Pet Models



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