Robotic Pets as Companions for Socially Isolated Older Adults

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Use of Robotic Animals

• **Purpose:** To examine the use of a robotic dog as a companion for socially isolated older adults
Research Questions

• Determine how older adults respond to robotics dogs

• Examine the influence of robotic dogs on depressive symptoms, morale, and life satisfaction
Sample

• Utilized older adults in a variety of assisted living settings

• Inclusion Criteria
  – Age 65+
  – Live alone
  – MMSE 23+
  – Did not presently have a Pet
Sample

- N=15
- Gender
  - Female =13
  - Male = 2
- Mean Age  84 years
  - Range 69-98
- Mean MMSE  28
Sample

- Race
  - Caucasian 87.5%
  - Native American 6.3%
  - Black 6.3%

- Marital Status
  - 10 widowed
  - 2 married
  - 2 never married
  - 2 divorced
Methods- Baseline Data
(6 weeks prior to arrival with AIBO)

• Demographic Information
• Socialization Patterns
• Function- KATZ Activities of Daily Living
• Cognition-Folstein Mini Mental State Exam
• Depression-
  – Geriatric Depression Scale
  – CES-D Depression Scale
Methods - Baseline Data

• Morale
  – Philadelphia Geriatric Morale Scale
  – Life Satisfaction Scale

• Attitudes
  – Pet Attitude Scale
  – Technology Attitude Scale
Methods- Treatment (AIBO arrives)

• Data Collection
  • MMSE, ADL, Morale, Depression, Changes in demographics

• Introduce AIBO

• AIBO Interaction- Video recorded

• Data Collection regarding impressions of AIBO (Meta questions)

• Introduce Journal
AIBO Activities

• Participants are invited to interact with AIBO as often as they would like.
• Participants are invited to do whatever activities they would like to do.
• Activities and time with AIBO are recorded in a journal
Methods - Treatment

• 3 weeks
  – AIBO Interaction- Video recorded
  – Answered questions
  – Trouble shooting
Methods - Post (AIBO leaves)

• Data Collection
  – MMSE, ADL, Morale, Depression, Changes in demographics, Socialization patterns, Attitude Scales

• AIBO Interaction- Video recorded

• AIBO Impressions (Meta questions)

• Journal Collection

• Feelings toward experience
Results: Responses

• Pre-test
  • What does AIBO need?
    – Batteries
    – Electricity
  • Is AIBO male or female?
    – Male because of the color

• Post-test
  • What does AIBO need?
    – To be held
    – Someone to talk with
  • Is AIBO male or female?
    • Female because of the personality
Responses

• What did you like to do with AIBO?
  – Talk with it
  – Hold it
  – Pet it
  – Show it to other individuals
AIBO as a Companion

• What is a companion
  – Someone you talk with.
  – Someone you confide in.
  – People who support one another

• “Did you confide in AIBO?”
  • Yes = 11 No = 3
    (AIBO was mechanical and could not respond)

• “Would AIBO be a good companion?”
  • Yes 12, No = 2
    (ALL felt AIBO was fun and entertaining)
AIBO as a Companion

• “Did you talk with AIBO?”
  – Yes = 15, No = 0

• “If you were alone in your room, would you feel better if AIBO was with you?”
  – Yes = 15, No = 0
Quality of Life

• Life satisfaction
  – Baseline = Mean 32.7
  – Post = Mean 29.0 (improvement)

• Depressive symptoms
  – Baseline = Mean 28.6
  – Post = Mean 27.5 (improvement)
Quality of life

• Change in frequency of visitors
  \[ S = 45.5 \quad P < 0.001 \]

• Change in activity
  \[ S = 23 \quad P \text{ value } < 0.063 \]
Possible Outcomes

• Increased morale
• Increased physical activity
• Increased socialization
  – Visitors
  – Telephone
Mixed Media

"You're not serious about getting one—are you?"

"How can you resist those sad puppy eyes?"

"Robotic dogs on sale here."