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Robotic Pets for Psychosocial Therapeutics

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Short Commentary

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DESCRIPTION

Robotic animals have been developed as a substitute for animals in Animal-Assisted Therapy (AAT). In AAT, an animal is used as a facilitator to help individuals aid in recovery from or cope with medical conditions. Animals have a unique ability to break down barriers that may exist between a client and therapist in a relatively short period of time, and thus aids in building trust between client and therapist, to create a more relaxed and comfortable atmosphere. It is highly effective in eliciting communication and interaction from clients who would otherwise prove difficult to engage. Working with live animals has many limitations such as zoonotic disease, allergies or animal welfare concerns. Robotic pets can bring therapeutic benefits of animal-assisted therapy, while nullifying negative issues associated with living pets such as increased. Robotics technology has been applied in a variety of ways in mental healthcare scenarios. Such applications include interventions for conditions ranging from autism spectrum disorder to cognitive impairments, as well as ways to encourage physical activity and provide companionship to individuals living alone.

Currently, there are dozens of different robotic pets commercially available with a wide variety of features ranging from $100-$6,000. For $100, the Hasbro Joy for All Pets line includes multiple colors of cats and dogs. The cat can blink, purr, meow, wash its face with its paw and even roll onto its back for belly rubs and the dog has a realistic heartbeat, can bark in response to voices and move its head around to nuzzle up against the user. At a higher price point of $500, the Tombot Jennie has a moving head and is covered in touch sensors and microphones that allow it to realistically respond to touch and bark in response to voice commands. Aibo, costing $2,900, is able to move around on its own, and has Artificial Intelligence (AI) powered learning that allows it to develop a unique personality over time. It can pick up a special bone it recognizes, roll over and respond to human interaction through touch or voice, and even sports a fake peeing animation where it lifts a back leg and plays the sound of water being poured on a hard surface through its built-in speakers. Unlike many robotic pets that attempt to mimic its real life

counterparts, aibo has no fur, instead sporting a metallic dog-like form. For $6,000, PARO, a seal-like pet, holds the Guinness World record for “Greatest reduction in stress levels by a robot”. PARO has been in use in Japan and throughout Europe since 2003. PARO’s cameras allow it to actively seek eye contact with its users and can even remember faces and associate them with different names for the robot, if the same unit is used for multiple patients, it will recognize each user and respond to the name each has assigned to it. Therapeutic benefits of a robotic pet mostly parallel those of a living animal. Robotic animals used for AAT have been shown to improve moods and make patients more communicative, improve activity of cortical neurons in patients with dementia and reduce stress as revealed from urinary tests. In treating loneliness in elderly patients living in long-term care facilities, no statistical difference was shown between treatment groups of a robot, aibo and living dog, both resulting in similar improvements. Anecdotally, some residents and staff were initially reluctant to interact with aibo however, with exposure, this resistance largely dissipated. Acceptance of interactive robots suggests their widespread use in geriatric facilities is feasible from a therapeutic standpoint. Research has indicated it is not the mere presence of a robotic animal that produces therapeutic effects, but that it is animated. When the “Haptic Creature”, a furry-animal like device, was breathing compared to inactive, respiration rate, heart rate and anxiety were lower and emotional valence was more positive.

REFERENCES

1. Rizvi SM, et al. A simple click by click protocol to perform docking: AutoDock 4.2 made easy for non-bioinformaticians. EXCLI J.2013; 12:831-57.2.
2. Kim JY, et al. Safe, high-throughput screening of natural compounds of MERS-CoV entry inhibitors using a pseudovirus expressing MERS-CoV spike protein. Int J Antimicrob Agents. 2018; 52:730-732.
3. Ratia K, et al. Severe Acute Respiratory Syndrome Coronavirus papain-like protease: Structure of a viral deubiquitinating enzyme. Proc Natl Acad Sci. 2006; 103:5717-5722.
4. Anand K, et al. Coronavirus main proteinase (3CLpro) structure: Basis for design of Anti-SARS drugs. Science. 2003; 300:1763-1773.
5. Xu Y, et al. Crystal structure of Severe Acute Respiratory Syndrome Coronavirus spike protein fusion core. J Biol Chem. 2004; 279: 49414-9.32.
6. Li SY, et al. Identification of natural compounds with antiviral activities against SARS-associated Coronavirus. Antiviral Res. 2005; 67:18-23.