The impact of short-term companionship with social robots on technological anxiety among women at different behavioral levels of exercise [1]Linda, Li-Chuan Lin, [1]Chia-Yu, Lin, [1]Mi-Chia Ma, [2]Kelvin Tan. *Gerontechnology* 25(s*)*

Purpose The rapid advancement of technology, coupled with increasing longevity, presents both opportunities and challenges for older adults as they adapt to new digital tools. Middle-aged and older women often face psychological and social changes during aging, including potential declines in subjective well-being and heightened technology anxiety [1]. This study aimed to evaluate the social companion robot LOVOT's sociability and usefulness among different regular exercise behaviors after interacting with the robot. **Method** A quasi-experimental design was employed with 45 middle-aged and older women recruited from communities in southern Taiwan to participate in the study. Specifically, participants were aged 55 years or above (mean age = 65.18 ± 6.22 years), possessed basic language comprehension and reading abilities, and had no significant cognitive impairments. Based on the Transtheoretical Model (TTM), they were classified into a regular exercise group (N=23) and an irregular exercise group (N=22). Participants engaged in a 15-minute session with the social companion robot LOVOT, involving visual, tactile, and conversational interactions, followed by a baby-like hugging experience. Pre- and post-intervention assessments measured perceived robot sociability and usefulness, and changes (post–pre)/pre in STAM indicators: attitudinal beliefs, control beliefs, and gerontechnology anxiety. Mann-Whitney U test, one-way analysis of covariance (ANCOVA), and Chi-square tests were applied to analyse the differences between groups of the social companion robot. **Results and Discussion** A quasi-experimental design was employed with 45 middle-aged and older women recruited from communities in southern Taiwan to participate in the study. Specifically, participants were aged 55 years or above (mean age = 65.18 ± 6.22 years), possessed basic language comprehension and reading abilities, and had no significant cognitive impairments. Based on the Transtheoretical Model (TTM), they were classified into a regular exercise group (N=23) and an irregular exercise group (N=22). Participants engaged in a 15-minute session with the social companion robot LOVOT, involving visual, tactile, and conversational interactions, followed by a baby-like hugging experience. Pre- and post-intervention assessments measured perceived robot sociability and usefulness, and changes (post–pre)/pre in STAM indicators: attitudinal beliefs, control beliefs, and gerontechnology anxiety. Mann-Whitney U test, one-way analysis of covariance (ANCOVA), and Chi-square tests were applied to analyse the differences between groups of the social companion robot.

References

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Table 1. Analysis of Covariance (ANCOVA) for Technology Acceptance Variables

Variable	Regular Exercise (n = 23)	Non-Regular Exercise (n = 22)	p Value
	Pretest Posttest	Pretest Posttest	
LOVOT Sociability	38.09±6.67 45.48±6.27 +19.4%	37.73±6.77 35.95±10.29 -4.7%	p = .006*
LOVOT Usability	34.43±4.14 35.30±4.74 +2.5%	33.95±5.13 30.14±5.69 -11.2%	p = .089
STAM Attitude Beliefs	20.30±5.61 22.48 ± 4.61 +6.50%	20.59±4.17 15.09 ± 7.01 −5.20%	p = .014*
STAM Control Beliefs	24.65±6.83 29.91 ± 6.28 +21.35%	28.32±3.72 23.09 ± 8.74 -18.47%	p = .009*
STAM Technology Anxiety	13.61±3.73 9.52±4.65 −28.97%	11.91±3.88 10.27±4.01 −16.20%	p = .041*