**Older adults using Pleo for two weeks: Can a social robot really reduce loneliness?** S. Baisch, T. Kolling. *Gerontechnology* 25(s)

**Purpose** Many older adults, both community-dwelling and living in care facilities, experience emotional, social, or practical loneliness. Social robots, often designed to imitate real animals, are intended to reduce feelings of loneliness. While longitudinal studies tend to confirm a loneliness-reducing effect [1-3], their number is still limited. Moreover, it remains unclear which specific aspects of loneliness can be addressed by social robots, constraining their effective therapeutic use. In addition, little is known about who benefits most. For example, it could be assumed that participants experiencing higher levels of loneliness show greater robot acceptance and more usage behavior, which in turn could be associated with stronger loneliness-reducing effects. **Method** In this study, *N* = 29 older adults (community-dwelling and nursing home residents) used the social robot dinosaur Pleo in their home environment for two weeks. Emotional, social, and practical loneliness, as well as several aspects of robot acceptance, were assessed at the beginning and at the end of this interaction period. Moreover, amount of usage was recorded by participants on a daily basis. **Results and Discussion** The results show that social, but not emotional, loneliness was associated with initial robot acceptance. Descriptive analyses indicated that most participants exhibited a slight decrease in daily robot usage over time, although individual differences were pronounced. Multilevel analyses revealed that changes in daily robot usage were not related to levels of loneliness. Contrary to expectations, participants—particularly those with lower social support—showed lower scores at the end of the study in certain aspects of robot acceptance (e.g., social acceptance) compared with baseline. These findings suggest that social robots may not address all aspects of loneliness experienced by older adults. Moreover, longer usage appeared to be associated with reduced acceptance and potentially lower usage behavior, paradoxically especially among lonely older adults, i.e., the main target group. One possible explanation is that interacting with artificial intelligence increases awareness of loneliness-related feelings. Overall, the results highlight the need for a differentiated perspective on loneliness in the context of social robots and underscore the importance of tailoring their therapeutic use more effectively.

**References**

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**Keywords:** social robots**,** loneliness, robot acceptance, robot use, long term study

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