

NegotiAge: Pilot Testing an Artificial Intelligence-Based Family Caregiver Negotiation Training Program

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INTRODUCTION

Family caregivers of older adults with memory loss and Alzheimer's disease (PWD) often experience conflicts as they interact with them and navigate the healthcare system. Most family caregivers do not have adequate negotiation training to help resolve these disputes. Business schools effectively teach negotiation; we hypothesized that teaching family caregivers how to negotiate might be useful in supporting older adults. We developed and pilot-tested an artificial-intelligence-based online negotiation training program, **NegotiAge**, for family caregivers.

METHODS

Family caregivers are busy, so we created NegotiAge to be online, automated, able to be done at any time and anywhere. We convened negotiation experts, geriatrician, social worker, and community-based family caregivers (N=9; IL, FL, NY, CA). Content matter experts created informational videos/materials to teach negotiation skills. Family caregivers generated dialogue surrounding caregiver conflicts. Computer science experts used the dialogue with the Interactive Arbitration Guide Online (IAGO) platform to develop avatar-based agents (e.g., sibling, older adult, physician) for caregivers to practice negotiating with on their own time.

RESULTS

Table 1: Pilot testing subject characteristics

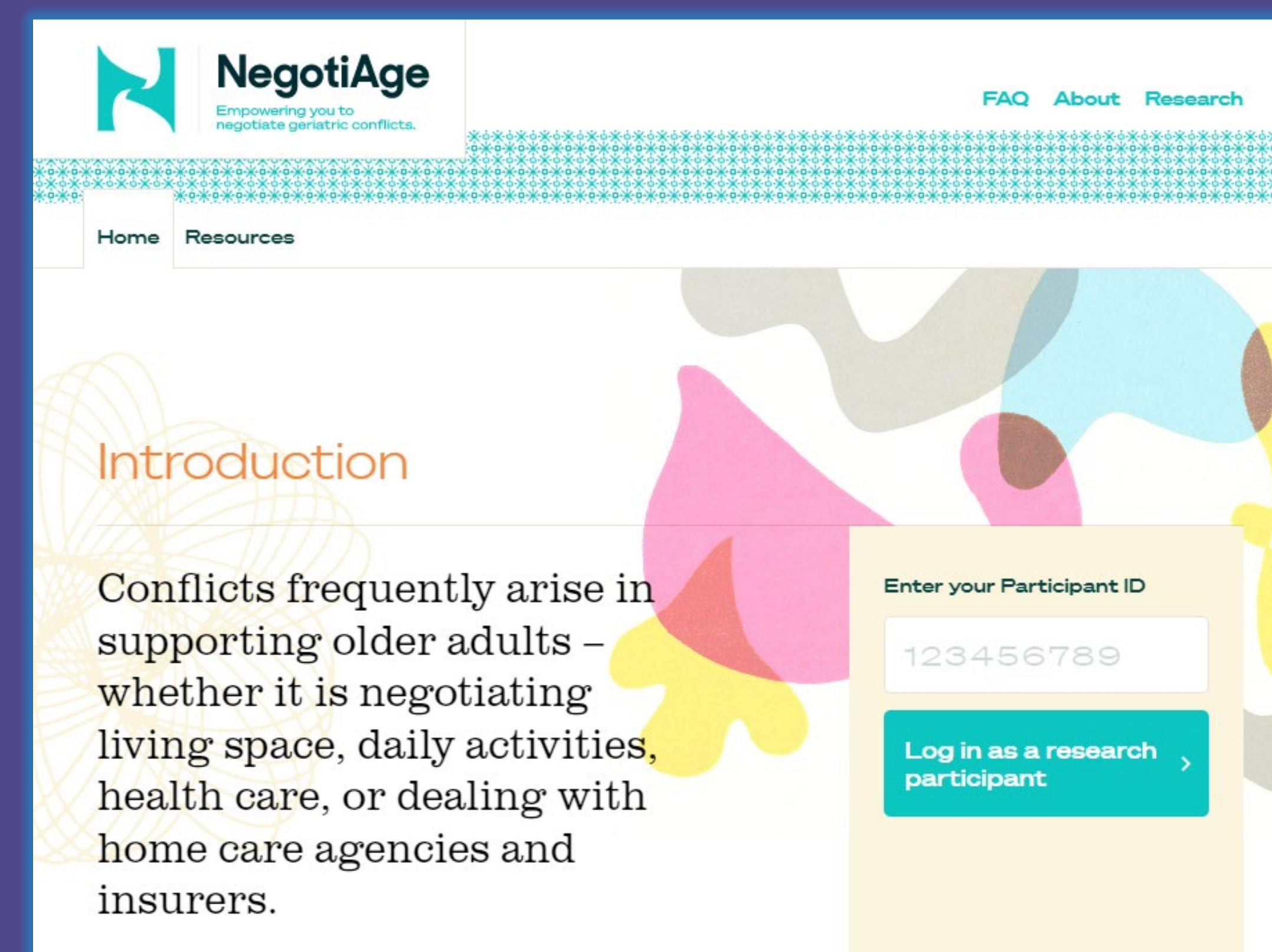
Variable	Baseline N=12
Age, M (SD)	54 (14)
Sex, %	
Male	8%
Female	92%
Race, %*	
Black	17%
White	75%
Prefer Not to Say	8%
Ethnicity, %	
Hispanic or Latino	8%
Not Hispanic or Latino	92%
Education, %	
Some College	8%
College Graduate	50%
Graduate Degree	42%
Living situation, %*	
Alone	8%
With Spouse/Partner	83%
With Son/Daughter	17%
With Other Relative	8%
Other	

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We developed an AI-based Online Negotiation training program to help family caregivers resolve conflicts involving older adults.



Pilot test results showed NegotiAge is feasible and usable.



RESULTS (cont.)

NegotiAge was developed to facilitate negotiation skills training for family caregivers of PWD. Family caregivers progress through didactic material, then negotiate real-life conflicts (e.g., physician recommends gastric tube in PWD, sibling disagrees with home support, older adult refuses home support). Caregivers negotiate in real-time with avatars who are designed to act like humans, exhibiting emotional tactics and irrational behaviors. Caregivers send/receive offers, using tactics until either mutual agreement or time expires. Immediate feedback is generated from the response chosen/tactics used to assist with the negotiation skills training.

Pilot testing was conducted with family caregivers of PWD (n=12). and showed that the negotiation and conflict resolution training program was feasible and usable for family caregivers. Subjects found the program to be satisfying with real-world applicability.

Participant Quotes:

Overall, I just appreciate the effort to older people and address this less contentiously is helpful.

I really liked the idea and designed to be respectful of the older adult it wasn't just to achieve what you want. Their needs are important.

I like the game aspect,.. it's an interesting concept. It will be really useful for caregivers.

I think the interface is really nice and pleasing and easy to use the tutorial sections are clear and concise.

CONCLUSION

NegotiAge is an artificial intelligence-based online caregiver negotiation training program, that is usable and feasible for family caregivers to become familiar with navigating conflicts commonly seen in caring for persons with PWD.

We are actively recruiting for a national randomized controlled trial to test NegotiAge – online/phone (no in-person assessments). **If you are a family supporter of an older adult with memory loss and interested in participating, please contact:**

negotiage@northwestern.edu

FINANCIAL DISCLOSURE

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