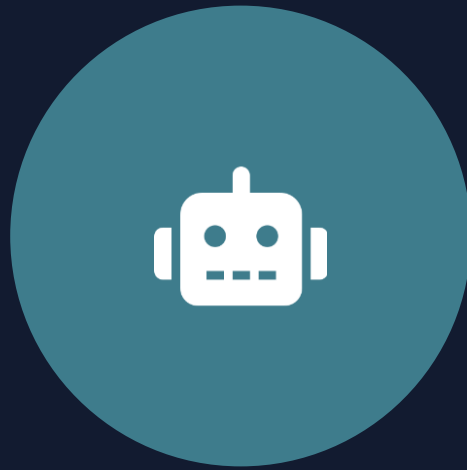


Memory Care Staff Perspectives and Technological Augmentation

A Qualitative Analysis of Staff Workload, Stress, and Robotic Acceptance

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AAIC 2026 • Poster aaic2026.11da0da6



Abstract

As long-term care (LTC) facilities face mounting staffing shortages, humanoid robots are emerging as a potential solution to support caregiving staff and residents. This poster analyzes results from an anonymous poll of 42 LTC professionals, examining perceptions of robotic augmentation, workload, stress, and acceptance. Findings reveal cautious optimism: strong recognition of potential benefits, alongside significant concern about privacy, security, ethics, and loss of human connection.



Introduction

Demographic shifts toward an aging population, combined with persistent healthcare workforce shortages, have created urgent need for innovative caregiving solutions. Humanoid robotics has moved from science fiction toward tangible application — supporting staff, engaging residents, and streamlining daily operations. Because success hinges on acceptance by frontline staff and administrators, this study explores their views on the benefits, risks, and ethics of integrating humanoid robots into care settings.



Background

The “care gap” created by an aging population and shrinking caregiver workforce has accelerated interest in socially assistive robots (SARs) — from zoomorphic companions like PARO, shown to reduce anxiety and loneliness, to humanoid robots that lead activities, offer reminders, and assist with simple tasks. Prior research consistently shows staff attitudes are among the most significant factors shaping implementation success, with caregivers expressing “cautious optimism” about reduced workload weighed against fears of job displacement and diminished human connection.



Future Research

The authors recommend longitudinal studies in facilities that have deployed robots, to track real-world impact over time, and further exploration of how perceptions evolve among staff, residents, and their families as exposure to the technology increases.



Methodology

Data were collected via an anonymous poll of 42 attendees at a long-term care conference, including both caregiving staff and administrators. Questions spanned four dimensions: perceived benefits, perceived risks, acceptance & comfort, and legal/ethical considerations. Subgroup sizes were too small for a statistically meaningful staff-vs-administrator comparison, so analysis is descriptive and qualitative.

42

poll respondents at the conference

95%

see benefit in humanoid robots

88%

call legal/ethical issues significant



Key Concerns Raised



Privacy: surveillance & data breach risk



Security: hacking or mechanical malfunction



Fear: apprehension among residents & staff



Liability: unclear legal responsibility for errors



Usefulness: capability vs. cost doubts

“Used for more than appropriate creating liability” — poll respondent

“Mechanical failure causing potential injury or death” — poll respondent

Fig. 1 — Perceived Benefits

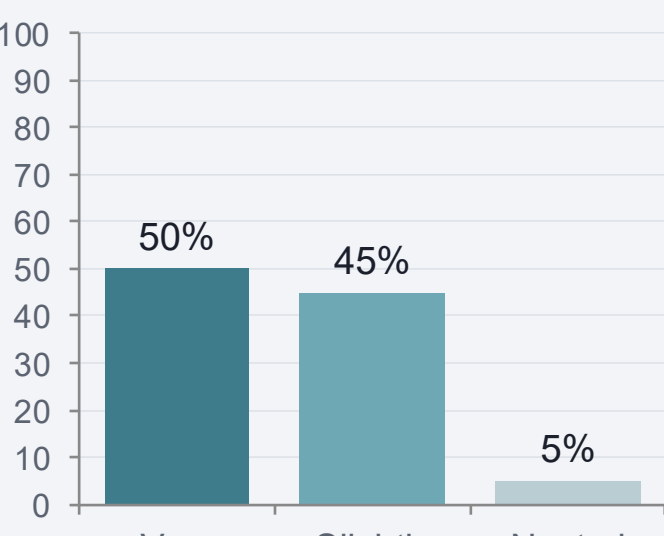
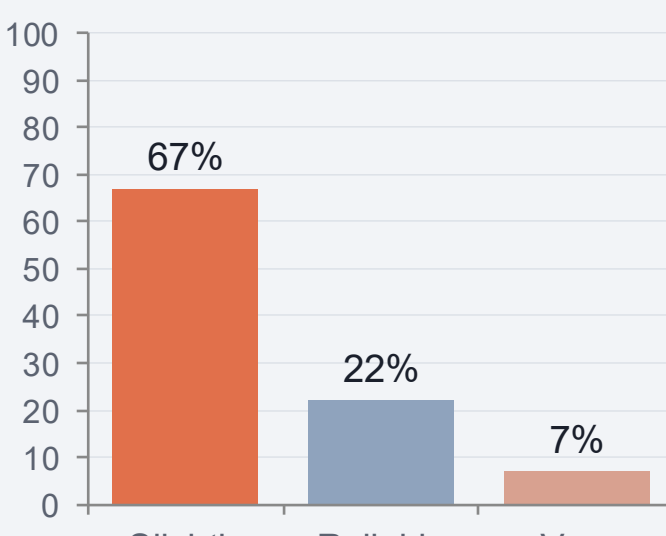


Fig. 2 — Perceived Risk



Results: Acceptance & Ethics

Fig. 3 — General Acceptance

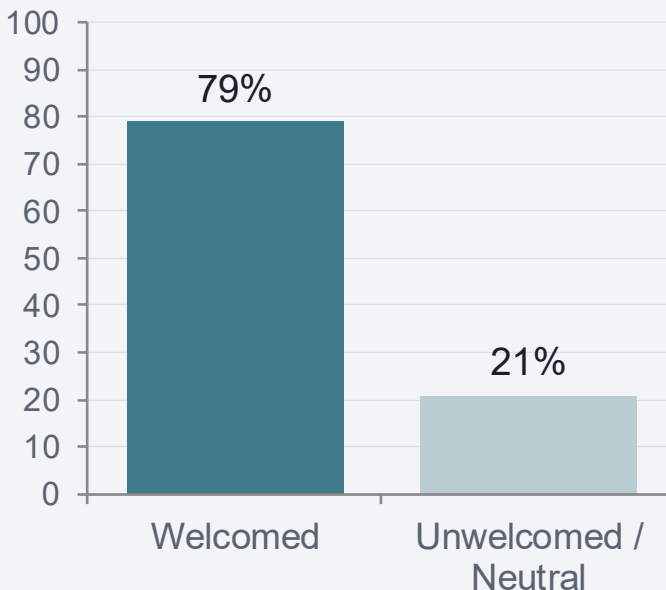


Fig. 4 — Comfort: Robotic Surgery

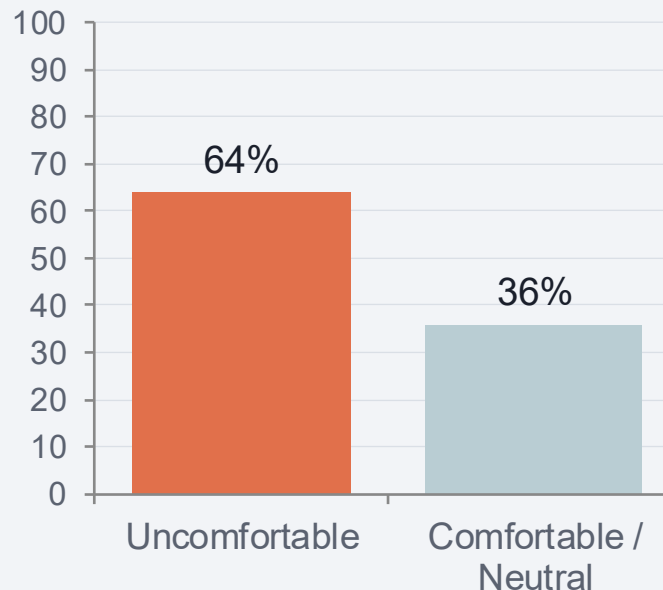


Fig. 5 — Comfort: Elder Parent Care

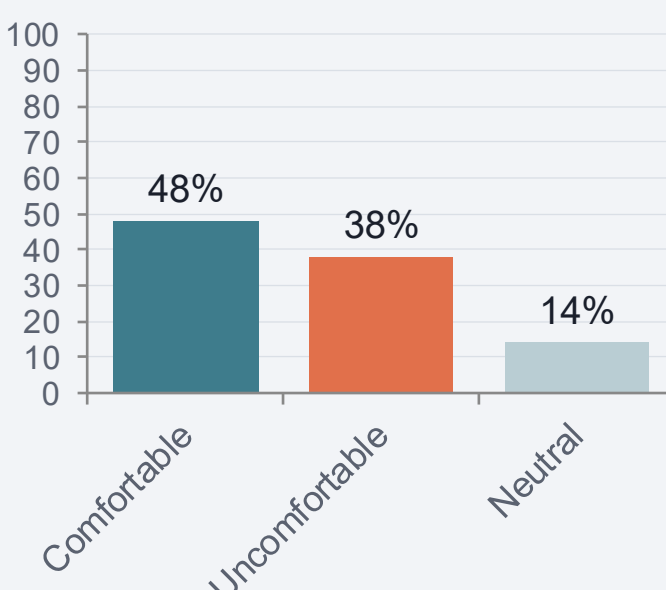
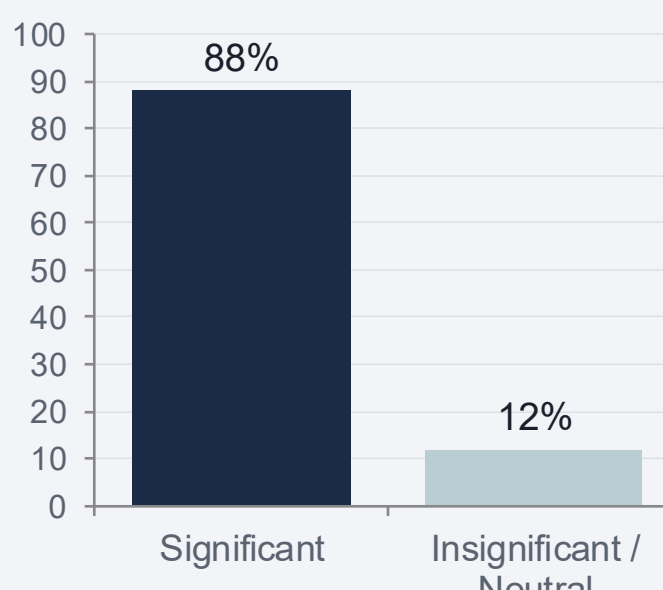


Fig. 6 — Legal/Ethical Significance



“I’ve a helpful tool but robots cannot replace humans. Too many variables.” — poll respondent

Reading the Data

Benefits and general acceptance were rated highly (95% saw benefit; 79% would welcome robots), yet 73% flagged the technology as risky and 88% saw legal/ethical issues as significant. Comfort dropped sharply for invasive clinical roles (64% uncomfortable with robotic surgery) but rose for supportive daily roles (48% comfortable with a robot caring for an elderly parent) — a consistent line between acceptable assistive functions and unacceptable clinical ones.



Limitations

This poll drew n = 42 respondents from a single long-term care conference, limiting generalizability to the broader LTC workforce. While both frontline staff and administrators were represented, subgroup sizes were too small to support a formal statistical comparison between the two roles — an important gap for future, larger-scale, multi-site research to address. Responses were also self-reported and collected at a single point in time, so they capture a snapshot of attitudes rather than how perceptions might shift with sustained, real-world exposure to robots in daily care.



Discussion

Respondents were not technology skeptics — they clearly saw potential for robots to reduce workload, combat loneliness, and support engagement. A consistent pattern distinguished acceptable assistive roles (companionship, reminders, daily assistance) from unacceptable clinical roles (invasive procedures), reinforcing a view of robots as augmenting — not replacing — human caregivers. High concern around privacy, security, and liability signals that technical efficacy alone is not enough; robust governance and transparent protocols are prerequisites for adoption.



Conclusion

Staff and administrators view humanoid robots with cautious optimism: real potential to ease staffing pressure and support resident well-being, paired with insistence that privacy, safety, liability, and the sanctity of human interaction be proactively addressed. With n = 42 from a single conference, findings offer an early snapshot rather than a generalizable conclusion.



Implications for Practice

- Pilot Programs — small-scale deployments to test workflow fit
- Role-Specific Training — operations for staff; risk mitigation for admins
- Ethical Preparedness — protocols for privacy, consent, data governance
- Co-Design with Staff — involve caregivers in shaping robot tasks



Implications for Policy

- Safety & Liability Guidelines — standards for behavior, privacy, override
- Funding for Innovation — grants for rural / resource-limited LTC trials
- Workforce Frameworks — position robots as supportive, not replacements



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Take-Home Message

Frontline staff and administrators see humanoid robots as partners, not replacements — valuable for easing workload and supporting engagement, but adoption depends on solving privacy, security, and liability concerns before trust and clinical roles can follow.