
Nurse preferences of caring robots: a conjoint experiment to explore most valued robot features

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Aims: This study was designed to investigate how nurses evaluate key characteristics of caring robots.

Design: Investigators used a cross sectional research design based on a full profile, fractional factorial conjoint analysis approach. Nurse and nursing student participants at the University of Pécs and Debrecen were emailed a ranking card set with a side questionnaire to record responses and return by email.

Methods: The five imaginary robot dimensions tested were: 1) communication (responds to commands only/understands free speech); 2) look (machine/human like); 3) safety (rare misses/always on target); 4) learning (runs program only/self-learning); and 5) behavior (mechanical/friendly). Subjects were asked by email to rank order robot profile cards from one to ten, where first place was assigned to the most preferred set of robot characteristics and last place to the least preferred.

Results: Robot's ability to learn ranked first followed robot behavior, look, operating safety and communication being rated last. The most preferred combination of robot characteristics was: The robot responds to commands only, looks like a machine, is always on target, runs program only and behaves friendly.

Conclusions: Robot self-learning capacity was the least favored function by nurses showing fear of artificial intelligence taking over core nurse competencies. Authors recommend this research be replicated so that cultural sensitivity as well as nurse experiences with caring robots are further explored and outcomes of this research are refined.