

## **Humanising AI: Emotional Cues in Digital Healthcare Appointment Booking**

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### **Abstract:**

The expansion of AI driven self service tools is reshaping how patients access healthcare, yet most appointment booking chatbots communicate in a purely transactional manner. Drawing on service marketing and human–computer interaction literature, this study examines whether adding explicit emotional cues (warm language and supportive emojis) to a booking chatbot alters patients’ overall experience during a simulated scheduling task.

Using a between subjects experiment ( $N \approx 200$ ), participants are randomly assigned to interact with one of two scripted booking scenarios: Emotional AI or Neutral AI. After the interaction, respondents complete a validated questionnaire that captures five SERVBOT dimensions (reliability, responsiveness, assurance, empathy, entertainment), emotional engagement, overall experience (satisfaction, trust, perceived value), and behavioural intentions (re use, recommendation). Moderators such as privacy concern and technology readiness are also recorded.

Group differences will be analysed with independent samples t tests and one way ANOVA. Mediation and moderation will be assessed using the PROCESS macro with bootstrapped ordinary least squares regression.

We expect the Emotional AI condition to yield higher empathy, entertainment, and emotional engagement scores, which subsequently elevate overall experience and positive behavioural intentions. Findings will provide actionable guidance for healthcare organisations deciding whether—and how—to embed emotionally intelligent design features in digital front doors, balancing operational efficiency with patient centred values.

### **Keywords:**

Emotional AI; Healthcare chatbot; Digital appointment booking; Patient experience; Human–computer interaction; Patient satisfaction.