

## Voice-Activated Health Interventions: Exploring the Benefits of Amazon Alexa for Physical Activity and Weight Management in Older Adults

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### **Abstract:**

**Background:** Regular physical activity improves fitness, physical and cognitive function, and overall well-being, especially in older adults. Digital health applications, particularly those integrated with voice-activated assistants like Amazon Alexa, present new opportunities for promoting healthier lifestyles by facilitating access to health information and on-demand exercises. This study evaluates the impact of using the EngAGE Amazon Alexa Skill on weight loss and physical activity among older adults.

**Objective:** The study aimed to assess whether the EngAGE Amazon Alexa Skill could increase physical activity and promote weight loss in older adults by providing on-demand health programs.

**Methods:** This 4-month study involved 22 patients with obesity, prediabetes, and type 2 diabetes, with 12 participants downloading and using the EngAGE Amazon Alexa Skill. Data collected included participant demographics (age, gender, weight), engagement metrics (minutes spent in on-demand classes), and qualitative feedback. Statistical analysis was performed using SPSS to evaluate differences in physical activity and weight loss between Skill users and non-Skill users.

**Results:** Participants using the Amazon Alexa Skill recorded significantly more active minutes (85.92 minutes/day) than non-Skill users (50.86 minutes/day), representing a 68.9% increase in activity. Skill users also exhibited more significant average weight loss (-3.9 lbs) than non-Skill users (-2.3 lbs). Most Skill users provided positive feedback, with 75% reporting ease of use and 84.6% recommending the Skill to others.

**Findings:** The study suggests that integrating voice-activated health apps like EngAGE can enhance physical activity and support weight loss in older adults. The findings indicate that voice assistants provide an accessible, engaging platform for promoting healthier lifestyles. However, future research should explore the broader application of such tools and assess the long-term effects on health outcomes.