

Abstract

Review of Alzheimer's Disease Focused Mobile Applications

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Abstract

Background: As of 2017, an estimated 5.5 million Americans are living with Alzheimer's disease and related dementias (ADRD). Information and support for individuals with ADRD and their caregivers are critically needed. Technological advancements have provided patients and caregivers with tools that can provide information and education in areas such as improving awareness about the disease, disease management, and caregiving skills training. Mobile applications (apps) are an example of these tools. Studies have been conducted to assess the content of mobile apps focused on other health issues such as diabetes, weight management, and cancer; however, little is known about ADRD-related mobile apps. To our knowledge, this is the first comprehensive review of apps focused on ADRD.

Objective: The objective of this study was to review the content of ADRD-related mobile apps.

Methods: ADRD-related mobile apps were searched using keywords such as "Alzheimer", "Alzheimer's Disease" and "Dementia" in the App store for iOS-supported apps and Google Play Store for Android-supported apps. Apps were included for final review based on description, and inclusion and exclusion criteria. Three reviewers coded characteristics of the app (e.g. developer, version, number of installations, user ratings), target users, purpose, content of information provided, and technical aspects. Descriptive statistics, including frequencies and percentages, were used to analyze the data.

Results: A total of 38 apps were included in the review (16 were only available in iOS; 9 were only available in Android; 13 apps were available in both operating systems). IT companies developed 36.8% of the apps reviewed, followed by non-profit organizations (18.4%), and health-consulting organizations (10.5%). Very few apps were developed by government agencies (5.3%) or pharmaceutical companies (5.3%). Most apps were intended for caregivers of individuals with ADRD (63.2%), followed by the general population (44.7%). The main purpose of the apps was for disease management (55.3%), skills training (42.1%), disease and treatment information (34.2%), and to improve disease awareness (29.0%). Very few apps had a goal of providing peer support (2.6%). Most of the content was focused on caregiving (63.2%) and disease management (50.0%). Other information frequently presented included signs and symptoms of ADRD (34.2%), types of ADRD (31.6%), financial and legal issues (29.0%), resources for supporting patients (29.0%), and healthy lifestyle for ADRD prevention (29.0%). Few apps contained information about differences between typical aging and ADRD symptoms (13.2%), and health insurance option for ADRD patients (10.5%). Few apps had video (23.7%) or audio (2.6%) lectures or tutorials. Interactive features were limited; few apps had a function of sharing (18.4%), an app community (10.5%), or sending reminders (7.9%).

Conclusions: ADRD mobile apps that provide caregiving information can potentially benefit individuals who are supporting ADRD patients. Most ADRD mobile apps reviewed did not cover certain aspects related to ADRD, such as how to differentiate ADRD symptoms from typical aging. In addition, information provided by the apps was mainly presented in the form of text with limited audio/video options. There are opportunities for further development of ADRD apps with respect to content and format.

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KEYWORDS

Alzheimers; Caregivers; Dementia; Mobile health (mHealth)

Multimedia Appendix 1

Full poster.

[\[PDF File \(Adobe PDF File\), 462KB-Multimedia Appendix 1\]](#)

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