

Review Article: Mobile Health Applications for Pediatric Health and Management

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Abstract: This article reviews the landscape of mobile health (mHealth) applications designed for pediatric health and management. We aim to provide healthcare professionals with a structured overview of available apps, their features, and their quality based on various study references. The methodology includes a literature survey, results discussion, comparison in tabular form, and future scope of mHealth applications in pediatric care.

Keywords: Mobile health applications, healthcare professionals, pediatric care, available apps, literature survey

1. Introduction

The adoption of mHealth applications in pediatric care has surged, providing healthcare professionals (HCPs) with tools to improve healthcare delivery and patient outcomes. Despite the increasing number of mHealth apps, concerns about their reliability and quality persist. This article reviews existing literature on mHealth apps for pediatric care, evaluates selected apps, and discusses their implications.

2. Methodology

This review utilized a structured approach to evaluate mHealth apps for pediatric care. Two primary methods were employed:

1) **Literature Survey:** A comprehensive search was conducted across four databases: Google Scholar, PubMed, IEEE Xplore, and Science Direct, using keywords related to pediatric care and mHealth applications.

2) **App Evaluation:** mHealth apps were identified and assessed from Google Play Store and Apple App Store. The criteria for evaluation included the necessity of an internet connection, app size, disease information, diagnostic tools, medical calculators, treatment recommendations, dosage guidelines, and drug interaction checkers.

3. Literature Survey

The literature survey revealed a variety of mHealth apps targeting both general pediatric care and specific pediatric conditions. Key findings from the literature are summarized in Table 1.

4. Results

Structured Literature Review The structured literature review identified key apps and their functionalities, as shown in Table 1.

Category	mHealth Apps (Platform)	Key Findings
General Pediatric	Medscape (iOS, Android)	Comprehensive disease info, drug interaction tool, medical education.
Care	Up to Date (iOS, Android)	Continuously updated, evidence - based, peer - reviewed content.
	Pediatrics Central (iOS, Android)	Quick reference for pediatric diseases and treatments.
Specific Pediatric	Johns Hopkins Antibiotic Guide (iOS, Android)	Diagnostic and management guide for infectious diseases.
Diseases	CDC Vaccine Schedule (iOS)	Vaccine schedules and indications, including for high - risk individuals.
	Pediatric emergency drugs (iOS, Android)	Comprehensive drug information for emergency situations.

Feature Assessment

The feature assessment of selected mHealth apps is summarized in Table 2.

App Name	Internet Required	Size (<150MB)	Disease Info	Diagnostic Tools	Medical Calculator	Treatment Info	Dosage Recommendations	Drug Interaction Checker	Score
Medscape	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	7
Skyscape	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	7
iGuideline	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	7
PediaBP	No	Yes	Yes	Yes	No	No	Yes	No	3

5. Discussion

The review reveals a diverse range of mHealth apps available for pediatric care. Apps like Medscape, Skyscape, and iGuideline scored highest due to their comprehensive features, including disease information, diagnostic tools, and treatment recommendations. Conversely, apps like PediaBP scored lower due to limited functionalities.

6. Future Scope

The future of mHealth apps in pediatric care includes the development of more comprehensive and user - friendly applications. Future studies should focus on the clinical efficacy of these apps, their integration into pediatric care workflows, and ensuring data security and patient privacy.

7. Conclusion

mHealth applications offer significant potential to enhance pediatric care. However, ensuring the quality and reliability of these apps is crucial. Healthcare professionals should carefully select mHealth apps based on their specific needs and the app's comprehensive features. By providing a structured review and comparison of mHealth apps for pediatric care, this article aims to assist healthcare professionals in selecting the most appropriate tools for their practice, ultimately improving patient outcomes and care efficiency.

References

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