

Grądzik Anna, Gorajek Anna, Osiejewska Aleksandra, Wojtachnio Dominika, Nowakowska Izabela, Bartoszewicz Jakub. The popularity and usability of mobile applications for women and expecting mothers. Journal of Education, Health and Sport. 2022;12(8):378-382. eISSN 2391-8306. DOI <http://dx.doi.org/10.12775/JEHS.2022.12.08.039> <https://apcz.umk.pl/JEHS/article/view/JEHS.2022.12.08.039> <https://zenodo.org/record/6979530>

The journal has had 40 points in Ministry of Education and Science of Poland parametric evaluation. Annex to the announcement of the Minister of Education and Science of December 21, 2021. No. The journal has had 40 points in Ministry of Education and Science of Poland parametric evaluation. Annex to the announcement of the Minister of Education and Science of December 21, 2021. No. 32343. Has a Journal's Unique Identifier: 201159. Scientific disciplines assigned: Physical Culture Sciences (Field of Medical sciences and health sciences); Health Sciences (Field of Medical Sciences and Health Sciences).

Punkty Ministerialne z 2019 - aktualny rok 40 punktów. Załącznik do komunikatu Ministra Edukacji i Nauki z dnia 21 grudnia 2021 r. Lp. 32343. Posiada Unikatowy Identyfikator Czasopisma: 201159. Przypisane dyscypliny naukowe: Nauki o kulturze fizycznej (Dziedzina nauk medycznych i nauk o zdrowiu); Nauki o zdrowiu (Dziedzina nauk medycznych i nauk o zdrowiu).

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The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 01.08.2022. Revised: 07.08.2022. Accepted: 10.08.2022.

The popularity and usability of mobile applications for women and expecting mothers

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Key words: menstrual cycle tracker; period tracker app; pregnancy app; applications; mHealth

Abstract

Introduction and purpose: There are many applications for women, including those planning to conceive, being pregnant or having a small child. These applications have various functions, among others: menstrual cycle control, information about fetal development, labor contractions counting or lifestyle advice. Aim of the study was to assess the popularity, usability, most frequently used functions and expectations of users in relation to mobile applications designed for period tracking, for pregnant women and for parents.

Material and methods: The study was conducted in the form of a self-prepared, anonymous survey shared on social media.

Results: 522 correctly completed questionnaires were analysed. The main sources of knowledge about pregnancy and motherhood were: Internet (90.4%) and doctor (73.5%). 78.7% of participating women used period tracking applications. The most useful functions were: date of period (94.7%), fertile days and ovulation (86.4%) and menstrual cycle regularity (58,2%). 86.6% of women used pregnancy tracker applications. The most useful features were: information about week of pregnancy (98.5%), child development (95.3%) and countdown to childbirth (83%). Using application during pregnancy: 74.8% of women felt more aware and 68.6% enjoyed the expectation time more. Parenting applications were the least popular - only 25% of respondents used them.

Conclusions: Thanks to the mobile applications, women can be more aware and better prepared for planning pregnancy and motherhood. Encouraging them to use the applications can bring many benefits in a doctor-patient relationships, provided that the information contained therein is properly constructed.

Introduction

In the 21st century, mobile applications make everyday life easier for users. There are also many applications for women, including those planning to conceive, being pregnant or having a small child. These applications have various functions, among others: menstrual cycle control,

information about the week of pregnancy and fetal development, counting labor contractions, features related to breastfeeding or lifestyle advice.

Purpose

To assess the popularity, usability, most frequently used functions and expectations of users in relation to mobile applications designed for period tracking, for pregnant women and for parents.

Material and methods

The study was conducted in the form of a self-prepared anonymous survey shared on social media for a period of three months. The survey consisted of 53 questions (50 closed and 3 open) and was divided into 3 parts: concerning applications for period tracking, for pregnant women and for parents.

Results

522 correctly completed questionnaires were analysed. The average age of respondents was 28 years (17-44 years). While completing the survey 52.7% of women were pregnant. The main sources of knowledge about pregnancy and motherhood were: Internet (90.4%), doctor (73.5%), books / parenting guides (58%). 78.7% of participating women used period tracking applications. My Calendar (47%) and Flo (33%) were the most popular ones. The most useful functions were: date of period (94.7%), fertile days and ovulation (86.4%) and menstrual cycle regularity (58.2%). Most frequently applications were used several times a month (41.6%). Thanks to the application 69.1% of women felt better prepared for the gynecological appointment and 61.6% considered application helpful during pregnancy planning. 86.6% of women used pregnancy tracker applications. Preglife (67%) and Pregnancy + (39%) were the most popular ones. 43.6% of respondents use application every day. The majority found out about the application from the Internet / social networks (80.3%). According to the survey, the most useful features are: information about week of pregnancy (98.5%), child development (95.3%) and countdown to childbirth (83%). 82.3% of women found doctors' participation in application development important. Using application during pregnancy: 74.8% of women felt more aware, 68.6% enjoyed the expectation time more, 43.6% felt less concerned. Parenting applications were the least popular - only 25% of respondents used them. 54.8% of them felt more confident taking care of the newborn thanks to the application. The most useful features

are: child development (77.4%), feeding (50.5%), medical articles and information (47.3%). Education, place of residence and age did not affect the use of pregnancy and period tracking applications, while parenting applications were most often used by women aged 23-26, with higher education and living in cities with more than 500,000 inhabitants.

Discussion

Mobile health (mHealth) technology-based apps are becoming rapidly available, especially in high-income countries. Several mHealth apps have been developed related to pregnancy and as such have the potential to improve maternal health care. There are more apps available to support pregnancy than for any other medical domain. Apps can contribute to healthy lifestyle during pregnancy, as pregnancy is a critical teachable period in the lives of young women.¹ The use of social media and mHealth apps has been increasing in pregnancy care because of the low cost and their easy access regardless of time and geographic location.² Smartphone apps have the potential to influence healthy behaviours in pregnancy, but an evidence-based approach is needed.³ Since during pregnancy women are more sensitive to misleading information and considering the potential of mHealth to be effective in promoting maternal health and knowledge about pregnancy and child health and development, the importance of developing apps able to provide the most complete, truthful, and reliable information on pregnancy and the postnatal period is unquestionable.⁴ Mobile applications can be valuable tools to help women track their periods, as they offer effective features for self-care and symptom management.⁵ For women, cycle length prediction can be useful to have an idea of when their period might arrive and the possible onset of premenstrual syndrome (PMS). The value of having an accurate record of their menstrual cycles may be very important for some women, for their fertility, pregnancy and during the perimenopause. Education about women's reproductive health is lacking in all countries. With many women using period tracker apps, it gives the ideal opportunity for women to have a platform to learn about their menstrual cycle health.⁶ Women highly appreciated evidence-based information, expert opinions, and tailored advice available on the apps. Efforts should be made by health professionals, app developers, and policymakers to ensure quality apps be developed for providing timely health promotion information.⁷ The future of the mobile applications can be for example: connecting the health clinic with application, storage the laboratory and USG results, the ability to make an appointment using application, more multimedia or possibility to print the data.

Conclusions

Thanks to the mobile applications, women can be more aware and better prepared for planning pregnancy and motherhood. Encouraging them to use the applications can bring many benefits in a doctor-patient relationships, provided that the information contained therein is properly constructed.

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