عنوان مقاله:

Using Mobile Health to Improve Genetic and Heart Diseases Prediction

نویسندگان:

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خلاصه مقاله:

Introduction: Mobile personal health is a rapidly growing area of healthinformation technology. Mobile personal health users are able to manage theirown health data and communicate with doctors in order to improve healthcarequality and efficiency. In recent years, information and communicationtechnologies improvements, along with mobile Internet, offering anywhere andanytime connectivity, play a key role on modern healthcare solutions. Moreover,data on genetic diseases are no exception to this set of data. Therefore,appropriate algorithm and methods of data analysis should be designed.Methods: The main objective of this research is to investigate the effective factors onmore efficiency of medical data. In this article, in addition to analyzing andevaluating the best data mining algorithms used in the medical field, a new combinedapproach has been provided in order to predict the risk of transmitting geneticdiseases. A questionnaire was developed for this task, based on the rigorous study ofscientific literature concerning pregnancy and applications available on the market,with 12 data items. The data items contain calendars, genetic diseases andcardiovascular diseases information, health habits, counters, diaries, mobile features,security, backup, configuration and architectural design.Results: Health telematics is a growing issue that is becoming a majorimprovement on patient lives, especially in elderly, disabled, and chronically ill.The results of the patients clustering were obtained using the risk of transmittinggenetic diseases and according to the criteria of similarity in the ways oftransmission as well as using a decision tree to predict whether the individual withthe related characteristics has the likelihood to transmit the disease or not. 300participants were recruited, 92% routinely used and 91% owned a mobile phone.99% were willing to receive mobile health (m-health) advice, and 79% favoredmobile medication reminders. 65.2% would send home recorded information ontheir blood pressure, weight, medication use and lifestyle to a doctor. 81.9%trusted the confidentiality of m-health data, while 77.1% had no concerns aboutthe privacy of their information.Conclusion: M-health system proposes healthcare delivery anytime andanywhere, overcoming geographical, temporal, and even organizational barrierswith low and affordable costs. This study reviewed the state-of-the-art on mhealthsystem and technologies.

کلمات کلیدی:

Mobile Personal Health, Mobile Health, Genetic Disease, Healthcare, Heart Diseases

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