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Contents



Roles of Health Literacy in Relation to Social Determinants of Health and Recommendations for Informatics-Based Interventions: Systematic Review

Abstract

Stakeholders are coming together to develop a vision for increasing access to family planning (FP) by 2030. Of the 923 million women in the developing world who wish to avoid a pregnancy, 218 million women are not using a modern contraceptive (Guttmacher Institute, 2020). In 2016, over 3.4 billion people were using the internet (https://ourworldindata.org/internet 2016). Moreover, internet users in the developing world use social media more frequently than Internet users in the U.S. and Europe. Of the many proposed actions to accelerate progress in family planning, the use of Twitter should be a key component. In this commentary, we describe the use of Twitter in a select group of low-and-middle-income countries that have made commitments to the family planning 2020 initiative (FP2020 countries, and have the potential to leverage Twitter with current and potential family planning users. We examine Twitter feeds in eight key FP2020 countries, and we look at the content of Tweets issued by the ministries of health in most of these same countries. Our view is that it is feasible and easy to access Twitter feeds in low and middle income countries. We base our view on the types of reproductive health and family planning terms discussed in a public forum such as Twitter by current and potential users and their partners and ministries of health. We highlight two broad considerations that merit discussion among interested stakeholders, including policy makers, program designers, and health advocates. The first relates to the use of Twitter within family planning programs, and the second relates to themes that require more significant research. Data coupled with analytical capacity will help policy makers and program designers to effectively leverage Twitter for expanding the reach of family planning services and influencing social media policy. Our aim is to not only to contribute to the body of knowledge but also to spur greater engagement by program personnel, researchers, health advocates and contraceptive users.

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Roles of Health Literacy in Relation to Social Determinants of Health and Recommendations for Informatics-Based Interventions: Systematic Review

Abstract

The diagnosis of tuberculosis (TB) disease remains a global challenge, and the need for innovative diagnostic approaches is inevitable. Trained African giant pouched rats are the scent TB detection technology for operational research. The adoption of this technology is beneficial to countries with a high TB burden due to its cost-effectiveness and speed than microscopy. However, rats with some factors perform better. Thus, more insights on factors that may affect performance is important to increase rats' TB detection performance. This paper intends to provide understanding on the factors that influence rats TB detection performance using visual analytics approach. Visual analytics provide insight of data through the combination of computational predictive models and interactive visualizations. Three algorithms such as Decision tree, Random Forest and Naive Bayes were used to predict the factors that influence rats TB detection performance. Hence, our study found that age is the most significant factor, and rats of ages between 3.1 to 6 years portrayed potentiality. The algorithms were validated using the same test data to check their prediction accuracy. The accuracy check showed that the random forest outperforms with an accuracy of 78.82% than the two. However, their accuracies difference is small. The study findings may help rats TB trainers, researchers in rats TB and Information system, and decision makers to improve detection performance. This study recommends further research that incorporates gender factors and a large sample size.

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