HeartSmart: App-Based Implementation for Women with Cardiovascular Diseases

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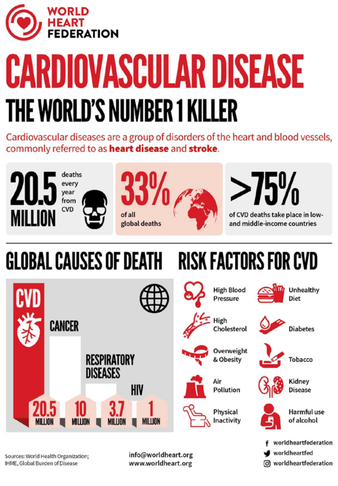
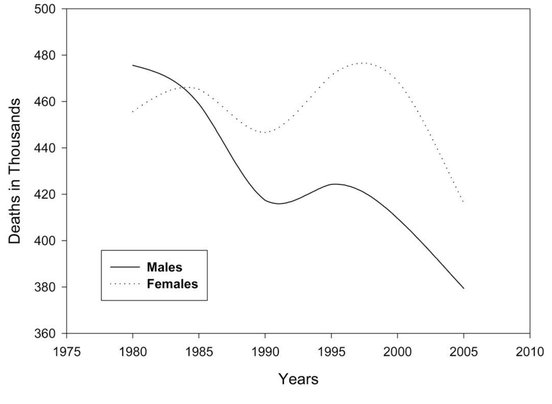
Abstract

Cardiovascular disease is the leading cause of death for women in the United States, at a rate of 1 in every 5 female deaths. In the United States about 35% of women have an illness related to CVD like hypertension, lack of physical , and high blood cholesterol level. Since 1984, the number of deaths of women caused by CVD has surpassed the number of deaths in men as women makeup 52.6% of the total number of deaths caused by CVD in the United States (Zhang, 2010). There are many factors like oral contraceptives and menopause that can put women at higher risk for CVD. Cardiovascular diseases in women can be seen differently than in men, and there's many factors that create this large gender disparity. Women experience different symptoms, risk factors, misdiagnosis, and treatment which can impact a woman's outcome compared to men. It is very important for women to be aware of these risks, advocate for their health, and seek attention when they experience symptoms of cardiovascular diseases. Addressing this gender disparity and unique challenges women face can improve outcomes and reduce the reduce the number of deaths related to CVD (Zhang, 2010).

Epidemiology

Cardiovascular disease affects approximately 40% of women (CDC, 2024) and responsible for 1 of 3 female deaths (Garcia et al., 2016). There are various risk factors for CVD, including diabetes, tobacco use, obesity, physical inactivity, and other cardiovascular related disorders and diseases like hypertension (Garcia et al., 2016).





Program Implementation

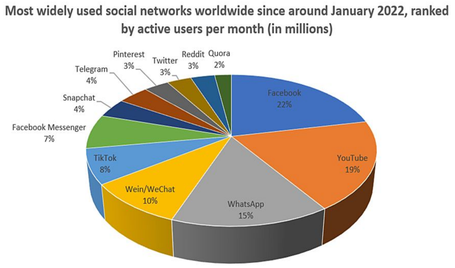
HeartSmart is meant to aid women in cardiovascular health by providing multiple lifestyle changes including in exercise, diet, stress, and health conditions. HeartSmart also provides information about potential treatments and medications with information for each of them. The information that is provided on Heart Smart will be from reliable sources and evidence-based data to show legitimacy. There will also be a calendar/planner and goals along with information on health care and providers. It will be implemented as an app on a smartphone or computer that can be easily accessed. The program will be implemented into various social media sources in order to expand user access. Additionally, the program will host activities online and in person for people to connect and participate while caring about their health. HeartSmart is unique as everything is accessible free of charge, and it provides women with the ability to have many resources in one place. Additionally, it helps create direct relationships with providers and brings exposure to different health care locations.

Theoretical Grounding

Cardiovascular disease is the leading cause of death in the United States affecting more than 30% of the population (Artinian et al., 2010). Research has shown that lifestyle changes can improve health habits such as tobacco use (Artinian et al., 2010). Lifestyle changes such as dietary and physical activity have shown to aid in cardiovascular disease prevention (Artinian et al., 2010). In order to prevent future CVD, we want to implement a program meant to aid and inform women on healthy habits and lifestyle changes on their phones or computers. Mobile phone use has shown to have an effect on health and lifestyle. (Zhao et al., 2016). Therefore, implementing a cardiovascular disease prevention program is possible (Y. Chen et al., 2024) with the use of social media and other implementations (Chen & Wang, 2021).

Program Evaluation

Our app will evaluate the health of the women that use our program by looking at their progress. We can monitor their progress with yearly check ups at their primary care doctor. We have two goals, one goal being to prevent women from being diagnosed with cardiovascular disease, and the other being to inform women on treatments, prevention techniques, and resources. We will measure the success of our goal by conducting surveys periodically throughout the time HeartSmart is used. After downloading HeartSmart, in the terms and conditions section, a consent form will be given to allow us to collect data. We will guarantee to the women that their information will be kept confidential. We will then take this data and compare it to the data of women who do not use the app so that we can test the effectiveness of our app. These surveys will be implemented into HeartSmart continuously so we can have ongoing data collection which we can use to improve our app over time.



Conclusion

This app aims to prevent, inform, and successfully treat women of all ages in regards to cardiovascular disease. We also aim to aid the overall health of women to ensure they live a healthy life and lower the death rate of CVD. We will provide multiple lifestyle changes which have proven to improve health habits (Artinian et al., 2010). This app will be implemented with the prominent social media and other programs in order to expand the influence of the app (Chen & Wang, 2021). The program will have many features to aid the health habits of users and in order to provide data of the effectiveness we will use periodical surveys. We hope to create a program that will help women reach their maximum health potential and help rid this population of disease.

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