

6COSC023W – Final Project Report

Health Assister

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Abstract

Breast cancer has been recognized as a common cancer among female citizens in Sri Lanka. Over 3000 new cases are recorded each year. It has been recorded that over 80% of the patients survive the initial stage of breast cancer. But it is the recurrence of the cancer that causes the high rates of mortality. The recurrence is when the cancer returns back after a certain period of time when not detected. This study focuses on identifying the problems that has been faced by breast cancer patients in Sri Lanka which could lead to an early recurrence and increase rate of mortality.

The author went through multiple publications, conducted interviews and distributed questionnaires as methods of collecting data about the problems faced by breast cancer patients. The following problems were identified by the author which led to high rate of recurrence and mortality, 1) the lack of follow-up care, two main reasons were identified, which is follow-up care being expensive and since Sri Lanka is resource-constraint country, patients are required to stay for longer periods for the treatments. 2) Not maintaining a healthy lifestyle, obesity was identified as a risk factor that would lead to decreasing the survival rate of the patient and it was found out that most of patients in Sri Lanka were unable to find a proper diet plan.3) Lack of technology used in clinics in Sri Lanka. It was found that most of process such a rescheduling appointment were conducted manually causing the patients to stay in longer queues to get their next check-up date and the patients weren't able to access the medical reports digitally causing the patients carry loads of files when visiting the clinics.

Based on the problems identified the author developed the solution Health-Assister which a web application that offers the following features, a breast cancer recurrence prediction system to identify recurrence of cancer right after the initial treatments, a personalized diet planner with access to recipes, a digitalized reporting system and online appointment system. Experts and non-experts evaluated the platform and provided feedback and recommendations for the system, which will be considered and incorporated in the future releases.