

Analyzing the Effectiveness of an Automated System for Bariatric Surgery Patients and Medical Officers

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Abstract. Obesity has become an epidemic condition in Sri Lanka as well as around the world. It is proven beyond doubt that Bariatric Surgery (BS) is the most effective option in treating morbid obesity patients whose Body Mass Index (BMI) is greater than 40.0. After undergoing the surgery, it is required to monitor patients' weight for eighteen months until they reach a healthy weight that falls within the normal BMI range (18.5—24.9). In this study, we have analyzed records of 241 bariatric patients registered at Colombo South Teaching Hospital, Kalubowila. Records show, due to a lack of continuous assessment after Bariatric Surgery, some patients have to go through the same operation more than once which will lead to an increased risk of complications that may result in high life risk. Since this process is done manually, the majority of patients have lost track of weight before reaching the eighteenth month. To fulfil this gap this study aims. to analyze the effectiveness of an automated system for Bariatric Surgery Patients and Medical Officers by using a mobile application. By developing a mobile application, it will fulfil the gap of follow up of eighteen months after the surgery until they achieve the ultimate goal of a healthy weight and avoid getting the Bariatric Surgery more than once. Further, in this review, several physical and mental factors have been identified which can affect the patient weight loss journey and introduces some proven technological solutions for them. Another important feature of adding telemedicine in a pandemic situation to the introduced system is presented in the study. Also, predicting, the score for each patient after the surgery every month will help them to track their weight loss journey and at the same time by providing alternatives if a change occurs. The features, which we are concerned with within this study for developing the application, are used in separate applications in the current world, but this research is attempting to add those features into one single application.

Keywords: *Bariatric Surgery (BS), Body Mass Index (BMI), Obesity, Morbid Obesity, Telemedicine, Automated System*