

Development of Educational Content for a Health Promoting Smartphone Application for Sri Lankan Sub-fertile Women with Obesity

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Obese sub-fertile women of childbearing age striving to achieve pregnancy is a global concern. Lower level of knowledge and awareness about sub-fertility and obesity, and the void in scientific knowledge dissemination among the women of childbearing age in Sri Lanka are concerns. Smartphone applications as a form of knowledge dissemination is a timely requirement. There were three phases in developing the educational content: the literature review, collecting previous success stories, and the expert consultation. Literature within the past fifteen years was considered. In the second phase, information was gathered from thirty succeeded individuals who were obese/ overweight and then conceived after weight reduction. This was a cross-sectional study. Expert consultation through focus group discussions with a panel of three nutritionists, a gynecologist, a counselor, a sport and exercise science expert, and two developers was considered. All the participants reported that they had lost weight (weight reduction percentage varied from 7.14% to 25%) before conceiving. They followed a Low Carbohydrate Diet/ intermittent fasting/ balanced diet under dietary management. It was found that there was no proper awareness regarding sub-fertility caused by excessive weight gain among participants. This justified the need for the dissemination of knowledge regarding obesity and subfertility among the target group. Twenty-three participants reported weight reduction resulted in regular menstrual cycles and the literature proves proper menstrual cycle is a key factor for conception. Most participants had followed imbalanced dietary practices with an energy-dense diet and had led a sedentary lifestyle which resulted in obesity. From the obtained information from all three phases, the content was validated and verified for the mobile application under the guidance of the expert panel. It was finalized to have content on; Body Mass Index (BMI), obesity, subfertility, insulin resistance, Glycemic Index (GI), maintaining weight loss, circadian rhythm, pre-pregnancy nutrition requirement, and fertility window.

Keywords: Education, Obesity, Smartphone Application, Sub-fertile