

Analysis of an as-is model

Science, Computer Science



Social Modeling is used for analyzing the introduction of new systems to a social setting where there are multiple communication links between different actors or agents. The modeling technique investigates the requirements, the impact of quality measures, and the effect of individual agent goals on the success of a new system.

The As-Is SD Model shows the dependencies between the four agents. The main depender in this model is the parent, who depends on the dependee, the mobile application, for the dependum, to efficiently track, monitor, and manage their child's nutrition intake. It is important to note that, in the current state, there are no dependency links between the child and the diet tracking mobile applications in the market nor between the healthcare provider and the diet tracking mobile applications in the market. The child does not depend on any diet tracking mobile application because the current apps in the market do not target children, and even if they do, they do not use evidence-based behavioural intervention strategies to combat childhood obesity. This is also the main reason why there isn't a dependency link between healthcare providers and current diet tracking mobile applications in the market. Healthcare providers tend to avoid referring mHealth technology to patients unless they are based on evidence in the literature.

In this current state, the parent has two methods of tracking their child's nutrient intake; the parent can use a manual method of tracking what the child eats on paper, or the parent can use existing mobile applications. For both methods, the parent meets their soft goal of being a proactive parent. However, the paper-method doesn't allow for efficiency/saving time whereas the mobile application does. Furthermore, neither the paper-method nor the

current mobile applications provide educational resources and constructive feedback which are important evidence-based behavioural intervention strategies associated with successful behaviour change. Failure of current diet tracking mobile applications to incorporate these evidence-based behavioural strategies results in the “ child healthy” goal to be poorly satisfied.

Furthermore, in the internal rationale of the current diet tracking applications, the main goal, “ satisfied user, ” is not sufficiently met because current mobile applications do not provide evidence-based strategies that users are looking for such as feedback, motivation, tips to battle negative emotions, and visual summaries of the child’s diet. Additionally, current mobile applications do not use reliable sources of information, such as CFG and healthy recipes, to educate the user so that they are able to make informed decisions for their child. Therefore, there is a gap between the number of evidence-based behavioural intervention strategies, such as education and feedback, that can be employed within a diet tracking mobile application.

Therefore, the proposed solution is not considered a diet tracking mobile application, but rather, a behaviour-change mobile application using evidence-based behavioural intervention strategies focused on children, hence the name Evidence-Based Child Obesity (EBCO) Nutrition Tracker.