



New Product Development – X-Tube Breast Pump

Faculty : HEALTH SCIENCE

Program : BACHELOR MEDICAL IMAGING

Program Code : HS 242

Course : TECHNOLOGY AND ENTREPRENEURSHIP

Course Code : ENT600

Semester : 6 / 2018

Group Name : NHSIF10Y

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Submission Date

13 MAY 2018

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1. Introduction

1.1. Problem statement

Breastfeeding give a lot of benefits to the babies. In the national policy of breastfeeding, the Malaysian government had encouraged the mother to breastfeed their baby until the age of two years old. However, majority of mother nowadays is a working mother. Breastfeeding become a new challenge for them. The breast pump was designed to help these working mothers to manually pumping out the milk for their babies but the design was still bulky, messy with accessory and not mobile.

1.2. Methodology : Data Collection

A quick survey of breast pump usage has been done to 15 mother who has experience with breastfeeding and breast pumping. These mother are among our staff members in our department. A set of questionnaires are given to them to answer which the questions are related to breastfeeding experience and breast pump usage.

1.3. Limitations

Our main limitation is different gender. We had some difficulties during interview as all our team members are men and some of the respondent was shame to share their opinions and experiences. Besides, we had very little time frame to collect our information data.

2. New Product Development (NPD)

2.1. Definition

Based on the current situation, our group members had come out with the idea to design a breast pump which give more comfort and freedom to move to the mother. We had brainstormed an idea to create a breast pump which is smart, mobile, compact and tubeless. This new breast pump design will also linked to the mobile application for monitoring purposes. This application will alert the mother to pump the milk and the amount of milk that they produced at each time.

There are many formulated milk for babies in the market. However, no product can give the benefit as good as breast milk. In Malaysia, the National Breastfeeding Policy recommends exclusive breastfeeding for the first six months of life and continued up to two years (Fatimah et al.). This recommendation need to be support with a good system and product to encourage mother to give breast milk to their babies.

As we know, the maternity leave that is allocated for a year is 90 days (HRSifu, 2018). So, during the maternity leave, the mother can easily breastfeeding the baby. But, how they want to breastfeeding after the leave and need to continue working. This situation usually caused the mother to stop breastfeeding and change to feed the baby with formulated milk.

So, our idea is to help and promote the mother to continue breastfeeding the baby up to two years while working without any difficulties and problem.

2.2. Classification of NPD

Our breast pump project is still in pre Research and Development (R&D) phase. However, the similar product in oversea is currently at development phase.

2.3. New Product Development Process

2.3.1. Research & Development

The R&D process was started with an idea based on the one of our group member who get a baby recently and his wife is a working mother. The need to breastfeeding or feeding the baby under 2 years old with mother's milk is a must. Besides, in our department, majority of the staffs are women and some of them are in the breastfeeding period. They need to take certain time and left the job to pump the milk. This situation sometimes has interrupted the daily workflow and affect other staff member. So, a simple, small and portable breast pump is needed for a working mother.

We had done an idea screening among staff members who had experience with breastfeeding. We create a simple survey regarding type of breast pump that they prefer and wished to have. Most of them really like the idea of portable breast pump so that they can still working while pumping the breast without feeling shy.

For market survey, we use street intercept survey as we go around the hospital that we work to interview the public regarding our idea. Surprisingly, most of them are excited of our idea and give positive response to the idea.

2.3.2. Product Design/ Features

The breast pump is design to give freedom to the mother in doing daily activities while pumping the breast. The outer dimension of the pump is enough to put the pump inself in between the breast and bra. It cone-shape design also will make a good appearance of breast while wearing it. This will make other people will not notice that a user is wearing it. This will not cause the user to feel shy in front of public.