

# S.E.N.S.E.: Surveying Experiences Necessary for Stress Evaluation



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## Introduction

We created two Android applications to analyze the Microsoft Band 2's potential to detect stress in new mothers.

The applications uses the Experience Sampling Method and retrospective diary to ask questions about the participant's stress levels while collecting output from the Microsoft Band 2.

### ESM Application

We first focused on the **ESM** application that is accessed from a **tile** on the **Microsoft Band 2** to select from a 6 point Likert Scale.



## Methods

### Alarm Algorithm and Survey

- Users receive a **notification** six times a day on the **Band 2** to complete a survey on the android phone.
- The **notification** utilizes an **alarm algorithm** that selects a time to send a notification based on variations in the **user's heart rate**.
- The **survey** has six questions to detect a **user's stress level**.



## Future Work

We will conduct an 8 week field study with 50 new mothers to determine if the Microsoft Band 2 can accurately detect stress.

### Database

Survey data is sent to a **MySQL** database that researchers can use to analyze the **correlation** between the **Band 2's sensor output** and the **survey responses** given by users.

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