

# *International Islamic University Chittagong*

Department of Computer Science and Engineering



**PDD On**

Postpartum Depression Management App

Submitted to

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**Submitted By:**

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## **1. Project Title:** Postpartum Depression Management App

**2. Introduction:** Postpartum depression (PPD) is a common but treatable mental disorder that can occur during pregnancy or within a year after childbirth. The DSM-5 classifies it as a major depressive episode with peripartum onset if symptoms appear within four weeks postpartum. However, depression can emerge later and still require treatment. PPD is often unrecognized and undertreated, leading to adverse effects on both the mother and the child. Our project aims to create a mobile application to help detect, manage, and provide resources for postpartum depression.

## **3. Problem Statement:**

Kentlee [May 11th,2023] visits the doctor for her six-week postpartum evaluation. She reports that she cannot sleep even if her baby sleeps. She cries daily and worries constantly. She does not feel hungry and is not eating regularly. Making decisions is overwhelming. She says she is not herself.

Sadia, a 26-year-old new mother, felt an overwhelming sense of exhaustion and despair. She couldn't sleep, even when her baby was quiet. Tears became her constant companion, and she lost interest in eating or even holding her child. The loneliness grew unbearable, and with no one noticing her silent struggle, she began having terrifying thoughts—ending her own life or harming her baby to escape the crushing weight of depression.

How should this new mother be evaluated and treated?

## **4. Project Objectives:**

- Develop a user-friendly mobile application using Flutter and Firebase.
- Provide screening tools for early detection of postpartum depression.
- Offer self-help resources, including guided meditation and cognitive behavioral therapy techniques.
- Enable connection with healthcare professionals for consultation and support.
- Create a community forum for peer support among new mothers.
- Send the daily condition of the new mother to the husband or guardian so that the family can assist in her care.
- Provide a personalized diet plan to help with postpartum recovery and mental health.
- Offer guided meditation sessions to help reduce stress and anxiety.

## **5. Preliminary Solutions:**

- A questionnaire-based screening tool to assess PPD symptoms.
- AI-based chatbot for initial assessment and guidance.
- Integration of Firebase for data storage and real-time user interactions.
- Telehealth feature for direct communication with doctors and therapists.
- A resource hub including articles, videos, and professional advice on PPD management.

- Automatic reporting system that sends the mother's daily condition to her husband or guardian.
- A diet plan feature that suggests personalized meals based on the mother's health and nutritional needs.
- A meditation module with guided audio and video sessions to promote mental well-being.

## 6. Project Scopes:

- **Functions, Features, and Facilities:**
  - Symptom tracking and mental health assessments.
  - Personalized self-care recommendations.
  - Emergency helpline for immediate support.
  - Secure and private chat with professionals.
  - Community engagement through discussion forums.
  - Daily condition report sent to the husband or guardian.
  - Personalized diet plans for postpartum recovery.
  - Guided meditation and relaxation techniques.
- **Overall Cost Estimate:**
  - Approximate development cost: 50,000 - 85000
  - Maintenance and server costs: 15000 - 20000
  - Hardware costs: 150000 - 200000
  - Developer salaries: 150000
  - Deployment costs: 20000
  - Maintenance costs: 90000
- **Time Frame to Implement the Project:**
  - Research and planning: 1 month
  - App development and testing: 3 months
  - Deployment and user feedback: 1 months

## 7. Estimated Cost and Time for Feasibility Study:

- **Feasibility Study Duration:** 2-3 weeks
- **Cost for Feasibility Report:** 50000

This project aims to address the significant issue of postpartum depression by providing accessible, evidence-based resources and support to new mothers through an innovative mobile application.