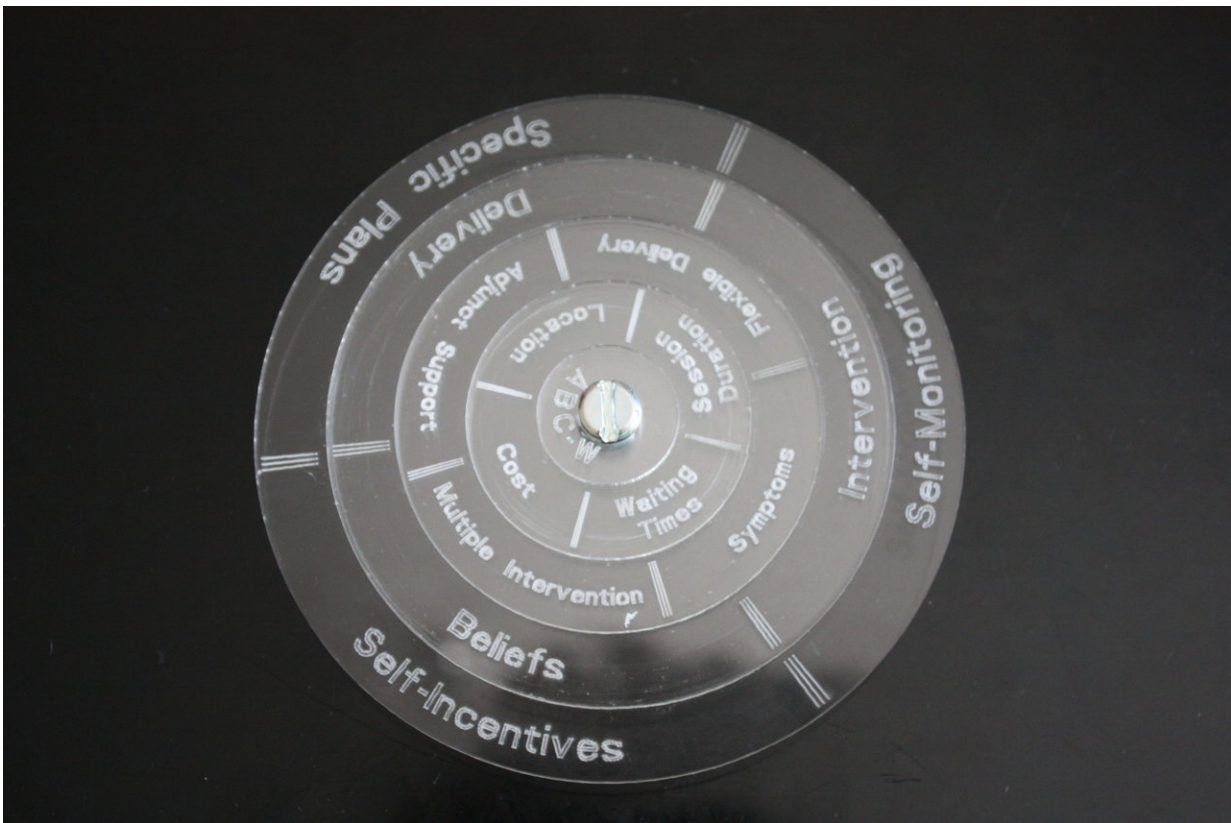# Could a mobile app help postnatal depression patients stay in treatment?

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The ABC wheel could aid treatment discussions. Credit: University of Portsmouth

A University of Portsmouth researcher has designed an app to help women with postnatal depression stay on track with their treatment and

access support from friends and family.

Omobolanle Omisade has identified a need for the app, Above Postnatal Depression, after discovering that a large number of patients comply poorly with care. She has researched the barriers facing women and explored the effects of failing to follow treatment.

Ms Omisade said: "Often women with postnatal depression are managing a combination of medications and therapies. Despite really wanting to feel better, they have a new baby to care for, and are dealing with the symptoms of postnatal depression, which can include low mood, lack of energy and loss of interest in the world around you. It's easy to see why keeping appointments and remembering to follow prescription advice can become a challenge."

She added: "I designed the app as a persistent buddy for women who have problems managing their adherence behaviour and perhaps do not achieve their desired treatment outcome."

Previous studies report that approximately 13 per cent of women having babies suffer from postnatal depression (PND) with about 70,000 experiencing symptoms in the UK each year. PND can affect the way a woman feels about herself and her interpersonal relationships.

The condition can also lead to serious consequences for the infant, including lower progression weight, impaired mental and emotional development, higher frequency of hospital admissions and long-term behavioural problems.

The idea of the app is to help women manage the use of multiple treatments and keep track of their progress. Features include a "Get Help" button that allows the user to tap and instigate a request for support from a designated person.

Ms Omisade said: "Sometimes a woman might need to speak to a friend or family member but it can take a lot of effort to pick up the phone and ask for help. It's not an easy thing to do when you're worrying that people might be busy and you feel incredibly low anyway. This feature allows the patient to make contact with a person who has already agreed to offer support. All they have to do is click a button and that person is aware they need help."

Other features include information about PND, treatment reminders, the opportunity to add special treatment instructions and a diary feature for managing symptoms.

Ms Omisade believes the app could help women closely follow their treatment and increase the chance of symptoms improving. She suggests that this could contribute to cost-saving in health care.

The research student, based in the School of Computing, has also developed a tool, known as the Adherence Behavioural Change Wheel (ABC wheel), which aims to help medical staff and patients identify alternative options when women are facing challenges with their care, such as difficulty managing multiple treatments.

The ABC wheel is designed to aid practical discussions between practitioners and patients, helping to identify which treatments are causing difficulties for patients and determine options for helping women modify and stick to a treatment plan.

Ms Omisade has an understanding of some of the difficulties faced by new mums as she gave birth to her daughter Elizabeth prematurely at the final stages of her Ph.D. research. Elizabeth was 10 weeks early and in special care for five weeks. Although the researcher and new mum has not suffered from postnatal depression, she has faced significant challenges to complete her studies and design the app. She said: "We're

both doing very well, but it hasn't been easy. However, it has helped me to appreciate some of the practical difficulties faced my all mums and how this might affect adherence to treatment for women with [postnatal depression](link)."

Ms Omisade's app and treatment tool have been informed by her research identifying an association between treatment delivery and adherence. Her review found that provision for infant care, flexible intervention delivery, availability of extra support to treatment and delivery duration were all important factors in the likelihood of women adhering to treatment.

She found that cost of transportation and overwhelming responsibilities could interfere with the ability to attend scheduled appointments and women were also concerned with stigma and long treatment sessions.

Another study showed that adjunct support and combining multiple interventions would improve adherence. The provision of treatment guidance would also positively enhance treatment uptake and retention.

The app and wheel are currently prototypes but have been positively evaluated by medical practitioners. Dr. Omisade plans to develop her ideas further with larger research projects.