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Peer reviewed experimental study on humans

Group singing reduces symptoms of postnatal depression for up to six months

New research from the Institute of Psychiatry, Psychology & Neuroscience (IoPPN) at King's College London and the social enterprise Breathe Arts Health Research has shown that a specially designed group singing intervention, *Breathe Melodies for Mums*, is an effective and acceptable way to treat mothers with postnatal depression.

The study, published in the British Journal of Psychiatry, is the first to evaluate both the clinical and cost effectiveness of group singing sessions for mothers experiencing postnatal depression. It is part of the SHAPER programme¹ which is assessing the effectiveness and implementation of arts-in-health interventions.

The SHAPER-PND project, reported here, explores the impact of community-based group singing on maternal mental health, providing an accessible intervention that helps new mothers overcome the personal and societal barriers that can stop them seeking support.

Approximately 24 per cent of UK² mothers experience postnatal depression, an illness typified by prolonged feelings of sadness or hopelessness following birth. If left untreated, it can have long-term effects not only on maternal wellbeing, but also on infant development, as well as affecting the quality of the mother–infant relationship.

For this study, 199 mothers experiencing postnatal depression were recruited to participate in sessions at children and family centres across South London, and were randomly split into two groups. 66 participants, acting as the control group, were signposted to preexisting mother-baby activity groups that did not involve singing for 10 weeks, while 133 were provided with 10 weeks of the in-person group singing intervention for mothers and babies, Breathe *Melodies for Mums*.

At the beginning of the study all participants were assessed for severity of depressive symptoms, and attended follow up check-ins at weeks 6, 10, 20 and 36 after the groups began.

Researchers found that both groups experienced a reduction in the severity of depression symptoms at week 10 after they had completed either the singing or control activity. However, only the singing group showed significant reductions in depressive symptoms at weeks 20 and 36, demonstrating the long-lasting effects of the singing intervention, up to 6 months after it had concluded.

Further analysis revealed that the singing group had a much lower dropout rate (23% of participants at 10 weeks) compared with the controls (43% of participants at 10 weeks). In both groups there was no difference in levels of depression at the beginning of the study between those who did and those who did not continue. In the singing group

participants were more likely to report that they liked and welcomed the intervention compared to those in the control activity group, and that they found it a good match for their needs and easy to use.

Professor Carmine Pariante, Professor of Biological Psychiatry at King's IoPPN and the study's senior author said, "Unfortunately postnatal depression is a common illness experienced by many new mothers. While effective interventions like psychotherapy and medications can and do help, there are societal barriers due to the stigma that surrounds depression that mean other interventions are a necessity to ensure that these women can receive the support they need."

"Our study provides vital evidence that Breathe *Melodies for Mums* can offer an effective means of support that is also engaging and accessible."

The research also assessed the cost effectiveness of the intervention. The UK healthcare regulator - the National Institute for Health and Care Excellence (NICE) - recommends that the NHS should pay between £20,000 to £30,000 for 1 year of life in perfect health. The researchers found that the cost of the singing intervention ranged between £11,122 to £21, 215; well within the recommended spend.

Dr Rebecca Bind, a Research Associate at King's IoPPN and the study's first author said, "At a time when the NHS is oversubscribed and under pressure to make every pound count, this intervention is a demonstrably good use of resources that has a powerful and long lasting impact on the mothers, and potentially their babies."

Yvonne Farquharson, Managing Director of Breathe Arts Health Research said, "Breathe are excited to be part of this pioneering new study that shows how our bespoke group singing programme can be an effective and accessible treatment pathway for women struggling with postnatal depression. We hope this research provides a compelling case to commissioners and funders across the UK to invest in this clinically and costeffective programme, which is now proven to change lives.

"There are often many cultural and societal barriers to women accessing mainstream healthcare services, and we can now show that this creative intervention can be a viable option for those women who might not otherwise access traditional healthcare. As well as providing an additional option for those already accessing help and support.

"At Breathe, we pride ourselves on putting science at the heart of creative health, so we know not just if something works, but how, and this study is a perfect example of that."

Girija, a mother who has taken part in the singing group said, "I didn't have the introduction to motherhood I was expecting with my son arriving two months early whilst abroad. He was hospitalised for weeks. When we had settled back home in the UK, the enormity of everything we'd been through hit me. I was feeling quite low.

"Singing in Breathe Melodies for Mums gave me a space for all my feelings. The songs helped me process the trauma of my son's birth and gave me a powerful tool for

bonding with him. Even now when he's unsettled I sing songs from Melodies. Sometimes it calms him, sometimes it helps him sleep, but it always calms me."

This study was funded by Wellcome, and received additional support from the National Institute for Health and Care Research (NIHR) Maudsley Biomedical Research Centre (BRC).

Ends

For more information, please contact Patrick O'Brien (Media Manager) on 020 7848 5377.

- For more information about SHAPER Scaling-up Health Arts Programmes: Implementation and Effectiveness Research please visit - https://www.kcl.ac.uk/research/shaper
- 2. Harrison S, Quigley MA, Fellmeth G, Stein A, Alderdice F. The impact of the Covid-19 pandemic on postnatal depression: analysis of three population based national maternity surveys in England (2014–2020). Lancet Reg Health Eur 2023; 30: 100654.

Clinical effectiveness, implementation effectiveness and cost-effectiveness of a community singing intervention for postnatal depressive symptoms: SHAPER-PND, randomised controlled trial (DOI 10.1192/bjp.2025.10377) (Bind, Pariante et al) was published in the British Journal of Psychiatry.

About King's College London and the Institute of Psychiatry, Psychology & Neuroscience

King's College London is amongst the top 35 universities in the world and top 10 in Europe (THE World University Rankings 2023), and one of England's oldest and most prestigious universities.

With an outstanding reputation for world-class teaching and cutting-edge research, King's maintained its sixth position for 'research power' in the UK (2021 Research Excellence Framework).

King's has more than 33,000 students (including more than 12,800 postgraduates) from some 150 countries worldwide, and some 8,500 staff. The Institute of Psychiatry, Psychology & Neuroscience (IoPPN) at King's is a leading centre for mental health and neuroscience research in Europe. It produces more highly cited outputs (top 1% citations) on psychiatry and mental health than any other centre (SciVal 2021), and on this metric has risen from 16th (2014) to 4th (2021) in the world for highly cited neuroscience outputs. In the 2021 Research Excellence Framework (REF), 90% of research at the IoPPN was deemed 'world leading' or 'internationally excellent' (3* and 4*). World-leading research from the IoPPN has made, and continues to make, an impact on how we understand, prevent and treat mental illness, neurological conditions, and other conditions that affect the brain.

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About Breathe Arts Health Research

Breathe Arts Health Research is a pioneering social enterprise that combines the transformative power of the arts with robust scientific evidence to improve health and wellbeing. With programmes spanning physical and mental health, Breathe partners with the NHS, universities, and communities to deliver life-enhancing interventions that inspire hope and lasting change.

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