

Institution: The Open University		
Unit of Assessment: A3 Allied Health Professions, Dentistry, Nursing and Pharmacy		
Title of case study: Advancing perinatal mental health assessment		
Period when the underpinning research was undertaken: 2000-2018		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Prof John Oates	Professor of Developmental Psychology	1971-present
Period when the claimed impact occurred: 2013-2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact		
<p>Research by Professor John Oates and colleagues identified the significance for child development of carers' mental representations of their children and led to the design and development of a set of robust tools to measure these, for use by practitioners such as health visitors, psychiatrists, clinical psychologists and psychotherapists. The tools have led to impact on health policies and professional services and practice through:</p> <ul style="list-style-type: none"> • Inclusion in the Royal College of Psychiatrists' Framework for Routine Outcome Measures in Perinatal Psychiatry (2018); • Adoption by >30 NHS Trusts' perinatal mental health services; • Adoption by health care systems in >4 countries in 2 continents. 		
2. Underpinning research		
<p>Prior to the research and development work of Prof. Oates and colleagues, there was an unmet need in perinatal mental health services for robust screening tools specifically designed to identify mothers' disordered thinking about their infants. This is a known risk factor for dysfunctional parenting, difficulties in forming secure attachment relationships and longer-term poor outcomes for the child. For example, a mother may perceive her infant as being too demanding and not caring about her, which can then lead to her not responding appropriately to infant signals of need for comfort, interfering with the formation of a secure attachment.</p> <p>Research by Oates and colleagues has shown strong associations of such disorders with mothers' anxiety and depression, and thus with subsequent developmental problems in their children [O1]. Although health visitors may often feel concerns about a mother-infant relationship, until the tools that form the basis of this impact case study became available there were no easy-to-use instruments available for standardised assessment of this aspect in primary care. Psychotherapists and other health practitioners delivering perinatal health services also need easy-to-use tools as indicators to help them decide on the most appropriate treatments. Similar needs exist for assessing disordered caregiver thinking with respect to young children. Given the identified significance of such disorders, clinical research also requires validated instruments to investigate the developmental pathways and most appropriate treatments to avoid negative long-term outcomes in child development.</p> <p>Oates' research gathered and analysed mothers' narrative accounts of their perceptions of their infants to identify the range of descriptors they used. Based on a thematic analysis, forty-four distinct descriptive terms were identified and presented to mothers in the form of a questionnaire with a Likert scale degree of agreement response frame. Statistical data analysis to identify principal components resulted in psychometrically robust 14-item short form questionnaires in English and Hungarian [O2, O3] called the Mothers' Object Relations Scales - Short Form (MORS-SF) also titled in service use as the 'My Baby' tool [O1]. This demonstrated that women's mental representations of their infants' thoughts and feelings towards them can be adequately described by values on two separate parameters (warm-cold and invasive-distant) and that these parameters can be accurately measured by the short form questionnaire [O1]. This questionnaire was designed to meet the need for a short, easy-to-administer tool for use by health practitioners in primary and secondary care. Prior to this discovery, the only available method for assessing maternal representations of infants had been structured clinical interviewing and subsequent systematic analysis of transcripts, requiring training and time-</p>		

consuming coding, an approach not feasible in primary mental health service delivery. Full-scale community-wide trials of MORS-SF in an NHS Trust found that the tool showed clinical utility in assisting health visitors with making care pathway decisions [O4].

The extensive validation research, carried out mainly in England and Hungary, has shown the psychometric robustness of the tools and their measurement efficacy. Further, this research has confirmed that the MORS-SF parameters are associated with significant short- and long-term infant developmental outcomes and are affected by maternal anxiety and depression, while being moderated by social support [O1]; these findings are of significant value for health practitioners in gaining better understanding of the nature of service users' problems in their relationships with their infants.

Health practitioners' positive reception of MORS-SF and the need for an equivalent for use with respect to older children stimulated the development of a modified version, MORS-Child [O5]. This research was a collaboration with the University of Warwick Medical School and involved the validation of the tool for assessment in carers of older children (2-4 years). MORS-Child has been shown to perform better than the only other comparable tool [O5].

In collaboration with the University of Birmingham, Oates followed a similar research methodology to include a selected set of the MORS-SF questionnaire items in developing an assessment tool for use in informing and monitoring psychiatric and psychological treatments, the Postpartum Bonding Questionnaire (PBQ) [O6]. Important benefits of PBQ over other tools include its alignment with clinicians' interests in gaining insights into specific aspects of serious attachment problems between mother and infant that present in the period shortly after birth, to inform psychiatric treatment decisions and to track response to treatment.

3. References to the research

All cited outputs can be made available on request

- O1.** Oates, J., Gervai, J., Danis, I., Lakatos, K., and Davies, J. (2018) 'Validation of the Mothers' Object Relations Short-Form (MORS-SF)', *Journal of Prenatal and Perinatal Psychology and Health*, vol. 33(1), pp. 38–50. <http://oro.open.ac.uk/56660/>
- O2.** Oates, J., and Gervai, J. (2019) 'Mothers' perceptions of their infants', *Journal of Prenatal and Perinatal Psychology and Health*, vol. 33(4) pp.282-300. <http://oro.open.ac.uk/69171/>
- O3.** Danis, I., Scheuring, N., Gervai, J., Oates, J.M., and Czinner, A. (2013) 'A rövidített szülő-csecsemő kapcsolat skála Magyar változának (H-MORS-SF) pszichometriai mutatói nagy mintán' (Psychometric properties of the Hungarian MORS-SF parent-infant relationship measure in a large sample), *Psychiatria Hungarica*, vol. 27(6), pp. 392–405. <http://oro.open.ac.uk/36918/>
- O4.** Milford, R., and Oates, J. (2009) 'Universal screening and early intervention for maternal mental health and attachment difficulties', *Community Practitioner*, vol. 82(8), pp. 30-33. <http://oro.open.ac.uk/17908/>
- O5.** Simkiss, D.E., MacCallum, F., Fan, E.E.Y., Oates, J.M., Kimani, P.K., and Stewart-Brown, S. (2013) 'Validation of the Mothers Object Relations Scales in 2-4 year old children and comparison with the Child-Parent Relationship Scale', *Health and Quality of Life Outcomes*, vol. 11(49). <https://doi.org/10.1186/1477-7525-11-49>
- O6.** Brockington, I.F., Oates, J., George, S., Turner, D., Vostanis, P., Sullivan, M., Loh, C., and Murdoch C. (2001) 'A Screening Questionnaire for Mother-infant Bonding Disorders', *Archives of Women's Mental Health*, vol. 3, pp. 133-140. <https://doi.org/10.1007/s007370170010>
This paper has underpinned more than 70 published clinical research studies. An example of this is a study published in *J. Clin. Med.* by Gilden *et. al.* <https://doi.org/10.3390/jcm9072291>

MORS-Child is used in the large-scale (n > 2,000) British SEED longitudinal study commissioned by the Department for Education establishing the best predictors of children's

cognitive and emotional development. Available at:

<https://www.gov.uk/government/publications/early-education-and-outcomes-to-age-5>

The MORS-SF tool has been used as a measurement instrument in numerous research studies into perinatal psychology and neuroscience by other clinical research centres including:

- The Anna Freud Centre, London. <https://doi.org/10.1002/imhj.21553>
- The Centre for Women's Mental Health, Institute of Brain, Behaviour and Mental Health, University of Manchester. <https://doi.org/10.1371/journal.pone.0088436>
- The Wellcome Trust funded SPRING cluster randomised controlled trial in India and Pakistan. ClinicalTrials.gov Identifier: NCT02059863. A substudy of the trial covering rural India was published in 2019 by Bhopal *et al.* <https://doi.org/10.1371/journal.pone.0209122>
- The Department of Obstetrics and Gynaecology, Faculty of Health Sciences, Semmelweis University, Budapest, Hungary.

4. Details of the impact

Rapid and accurate identification of cases where a mother has disordered thinking and atypical representations of her infant is critical in ensuring that 'at risk' mother-child relationships can receive targeted, appropriate intervention at the earliest stage possible. Given the limited resources available for such interventions, to ensure optimal healthcare provider resource allocation it is important to identify where an intervention to specifically address this disorder is indicated.

As a package of clinically focused assessment instruments, the primary areas of impact are **Health Policies, and Professional Services and Practice**. The beneficiaries are the NHS and health services in other countries.

Pathways to impact on health services and practice have included talks, workshops, conference papers and training events undertaken by **Oates** and his research colleagues in the UK and overseas, throughout this period of assessment. The uptake of the instruments has been supported by giving guidance and advice for first and second-tier perinatal mental health services, including via the Parent-Infant Foundation, and collaborating with the Institute of Health Visiting to deliver training for health visitors **[C1]**.

The previous Professional Development Officer for the Institute of Health Visiting **[C1]** states:

"The presentations and subsequent discussion were very well received. Practitioners reflected on their current practice in relation to parent infant interactions and recognised the significant benefits of the MORS SF tool in being able to demonstrate improved outcomes when working with families".

The Specialist Community Public Health Nurse for Somerset Sirona Care NHS services **[C2]** states:

"Following your informative presentation at iHV PIMH champions training, I'm writing to let you know that all the North Somerset HV team continue to use MORS to enhance their assessments around infant/parents bond and screening for any concerns around attachment and bonding between parent and child. This allows the HV's to discuss/offer an enhanced service around both parental mental health and if there are any interventions to promoting bonding".

A further route to impact is a dedicated website **[C3]** that has been set up for health practitioners to register and gain access to proforma versions of the instruments, including in different languages. The website provides download guidance on administration, scoring and interpretation for the use of the tools in screening and treatment; to date (31 Dec 2020) more than 250 health practitioners have made use of the site.

Inclusion of MORS-SF and PBQ in a Royal College of Psychiatrists Framework

As an overarching indicator of the significance of the suite of instruments, the MORS-SF and PBQ have been included in the Royal College of Psychiatrists' (RCP) Framework for Routine Outcome Measures in Perinatal Psychiatry (2018) **[C4, p.7 and p.15]**. The RCP Framework recommends MORS-SF and PBQ for use in perinatal services as 'best practice' in the UK.

Consequently, the RCP Framework has been a pathway to impact by leading to changes in routine clinical practice for perinatal health care professionals, and further NHS services adopting MORS-SF in perinatal mental health programmes. This has been supported by the increased investment into this area of health, which is an NHS priority for development. MORS-SF is also recommended by the NHS national IAPT (Increased Access to Psychological Treatments) Under-Fives programme [C5].

Adoption of MORS-SF by the NHS

Adoption has become increasingly broad across the NHS in this assessment period, with >30 NHS Trusts' perinatal mental health services reporting the use of MORS-SF [C6, pp.2-3], including the Bristol University C-Change [C6, pp.4-9], the Devon Children and Families Partnership [C6, pp.10-11], the Essex Partnership University NHS Foundation Trust [C10, pp.12-16], the Bradford Infant Mental Health Service [C6, pp.17-18] and the Bradford District Care NHS Foundation Trust [C6, pp.19-20].

The Clinical Lead for Perinatal Mental Health in the Bradford District Care NHS Foundation Trust SMABS service [C6, pp.19-20] comments: *"The Specialist Mother and Baby Mental Health Service in Bradford have used MORS-SF since we launched in May 2018 as the tool was recommended by the Royal College of Psychiatrists as an outcome measure for perinatal services. We have found it easy to use and a useful conversation starter to open dialogue around child development and baby's needs [...]. We are a multi-disciplinary team with varied backgrounds (psychological therapists, mental health nurses, occupational therapist and nursery nurses), the tool has helped us bring the parent infant relationship to the centre of our work ensuring we hold baby in mind and support mum in holding the baby in mind"*.

Further, a Senior Psychologist in the Child and Parent Service within the Manchester University NHS Foundation Trust [C6, pp.21-23] states: *"We use it [MORS-SF] as an outcome measure in our clinic work and in our group work, pre and post intervention, and have found it has clinical utility also in assessment in helping generate conversations with parents about what interventions might be most useful for them"*.

MORS-SF data gathered by NHS practitioners are entered into the National Mental Health Data hub, run by NHS Digital, contributing to statistics tracking and analysing mental health across the English population [C7].

Adoption of MORS-SF and PBQ by health services overseas

MORS-SF has been translated into Polish, Chinese, Hungarian, Russian, Dutch, Hindi and Arabic, and has been adopted by health care systems in other countries including Hungary [C8, p. 3], Australia, Belgium [C8, p.3] and Russia.

For example, the Head of the Early Childhood Eating and Sleeping Disorders Outpatient Clinic at the Heim Pál National Paediatric Institute, Budapest, Hungary [C8, p.2] states:

"The instrument is our primary research tool for questionnaire assessment of the mother-infant relationship and aligns well with our theorising about the importance of maternal perceptions of infants and our therapeutic orientation. We have found that the MORS is a thought-provoking set of questions, giving a unique value in starting them thinking about their child's behaviour potentially facilitating positive change in response to therapy".

And in Belgium the chief psychiatrist of the Bethany Psychiatric Hospital, Zoersel, Belgium [C8, p.3] states:

"We implemented the MORS-SF in all our modules [treatment pathways] in the MBU [mother-baby unit]. We are really pleased with the usefulness of it".

An online survey of MORS-SF users [C8, pp.4-35] was conducted in June 2017. This survey reported wide uptake and application with more than 4,000 patients internationally. Based on Oates' and colleagues' research and the positive value of the tools found by clinical users, initiatives have been established over the last five years in which these assessments are central elements. These include a new perinatal mental health clinic model in Budapest, incorporation into perinatal mental health treatment programmes in clinics in Perth, Australia and a revision to

the IAPT (Increased Access to Psychological Treatments) Under-Fives programme by NHS England. The MORS-SF tool has been included in the Checkware virtual suite of clinical tools for access by health practitioners world-wide [C8, p.36].

The PBQ has similarly been widely adopted internationally and translated into many languages, and Oates has collaborated with a Brazilian clinical team to develop and validate a version of the PBQ in Portuguese [C8, pp.37-43].

5. Sources to corroborate the impact

C1. Testimonial: Institute of Health Visiting.

C2. Testimonial: Somerset Sirona Care NHS services.

C3. [MORS-SF](#) website.

C4. College Report: Royal College of Psychiatrists.

C5. Testimonial: IAPT CYP U-5s Anna Freud Centre, London.

C6. Evidence of adoption of MORS-SF by the NHS:

- Details of NHS and other services using MORS-SF (pp. 2-3).
- Bristol University C-Change assisting clinicians in their practice with children and families: Evidence of the use of MORS-SF (pp. 4-9).
- Evidence of the use of MORS-SF by Devon Children and Families Partnership (pp. 10-11).
- Testimonial: Essex Partnership University NHS Foundation Trust (pp. 12-16).
- Testimonial: Little Minds Matter: Bradford Infant Mental Health Service (pp. 17-18).
- Testimonial: Bradford District Care Trust (pp. 19-20).
- Testimonial: Manchester University NHS Foundation Trust (pp. 21-23).

C7. [The National mental health data hub](#), run by NHS Digital.

C8. Adoption of MORS-SF and PBQ by health services overseas:

- Testimonial: Heim Pál National Pediatric Institute, Budapest (p. 2).
- Testimonial: Bethany Mental Health Care, Belgium (p. 3).
- An online survey of MORS-SF users (p. 4-35).
- [Checkware website](#): access to MORS-SF for health practitioners (p. 36).
- Baldisserotto, Márcia Leonardi, Theme-Filha, Mariza Miranda, Griep, Rosane Harter, Oates, John, Renó Junior, Joel, & Cavalsan, Juliana Pires. (2018). Transcultural adaptation to the Brazilian Portuguese of the Postpartum Bonding Questionnaire for assessing the postpartum bond between mother and baby. *Cadernos de Saúde Pública*, vol. 34(7), e00170717. <https://doi.org/10.1590/0102-311x00170717>