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Carolan M, Barry M, Gamble M et al (2011).

Midwifery, 2011: March 1.

The limerick lullaby project: an intervention to relieve prenatal stress



Julie Wray unwraps a recent research paper which assesses the value of singing in pregnancy and the perinatal period

With the festive period looming I felt that the topic of this paper 'singing lullabies' resonated with the custom of singing at Christmas time, but more than that, the joy and peace of singing, regardless of the festivity, is far reaching. I am not a singer (I wish I was) but people who do sing tell me how happy it makes them feel. There can be no doubt that singing is synonymous with a sense of wellbeing and good health. Indeed, Carolan et al provide extensive supporting literature of the positive effects of maternal singing and music therapy on infants and note the benefits to pre term infants within their paper (Carolan et al 2011: 2). So I present to you for this Research Unwrapped, a detailed appraisal of this paper alongside a warm gesture of respect for those of you who can sing!

Research Unwrapped is a popular bi-monthly series to help readers make sense of published research by undertaking a detailed appraisal in a logical manner. In doing so we are

seeking to advance your knowledge and understanding of the research topic as well as the skill of evaluating research. 'Critical appraisal is fundamentally the process of weighing up the evidence to see how useful it is in decision-making and whether it can be applied to practice.

Background and principles to unwrapping research

The research method selected by Carolan et al (2011) is qualitative, so it is important to understand this type of research from the outset. The well established Critical Appraisal Skills Programme (CASP) in Oxford offers easy to understand information and useful appraisal tools to facilitate research appraisal/critique. In my teaching experience, student feedback concerning these resources is positive with both undergraduate and postgraduate students. CASP suggests that there are three broad areas that need to be considered when appraising the reporting of any - but in this case qualitative - research:

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- **Rigour:** has a thorough and appropriate approach been applied to key research methods in the study?

- **Credibility:** are the findings well presented and meaningful?

- **Relevance:** how useful are the findings to you and your organisation?

There are a number of guiding research appraisal frameworks available in the literature (such as CASP (2011) or Introduction, Method, Research and Design (IMRAD) (Day 1989), but regardless of the framework you prefer to use, the following stages need to be considered, as informed by both Crombie (1996) and Wickham (2006):

- Is it research?
- What is the research design (may influence the type of appraisal tool)?
- Read, read and read again!
- Break it down.
- What are the strengths and weaknesses?
- What is it telling you?
- Trustworthiness?
- Relevance?

Looking in detail at the research

In the first instance I always start by examining the abstract, highlighting key words before reading the whole paper. It is a worthwhile and informative first step and I recommend that you take some time to assess research abstracts. In this way you start to ask some preliminary questions about the study generally, but also it helps you to decide if this is a research paper that needs to be read in more depth; in other words whether a full and detailed critique is necessary.

Returning to the appraisal in some detail, the following broad headings are used to structure my critique as they

best reflect the key questions posed by Crombie (1996), Wickham (2006) and CASP (2011) as follows.

Background

In this section the authors are expected to provide a reliable and succinct overview of the literature in support of the purpose for undertaking the research study. Carolan et al do provide a clear section covering relevant literature and previous research from disciplines such as psychology, psychiatry, sociology, obstetrics (medicine), midwifery, epidemiology and music. The background demography of the geographical area in which the study is located (Limerick, Ireland) is contextualised, telling us how financial stress or rising unemployment escalate the risks of maternal stress. They make obvious associations between stress, anxiety and depression in relation to childbirth and the psychological benefits of music therapy. The need and desire to offer non-pharmacological therapy so as to avert negative impacts of treatments for stress and anxiety in pregnancy upon the developing fetus are well explained. Of interest is the emerging evidence of the benefits of singing and music therapy on infants, maternal infant attachment and maternal stress, and of note in the authorship of the paper is an academic of music and dance. This section concludes with the aim of the study: to explore the impact of a programme of singing and playing lullabies in an Irish setting and whether such a programme would be acceptable to women and show benefits for both mothers and infants.

Methods

(including sample, study setting, data



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collection/analysis and ethical issues)

Being able to judge whether the conduct of the study (the right methods and people) fits with its purpose (Long 2002, Polit and Beck 2008), lies in this section of the report. Carolan et al's recruitment strategy was directed at primiparous women over 18 years with an uncomplicated singleton pregnancy, decisions which are not fully explained. There are reflective points in the discussion section concerning the recruitment, which mainly refer to low uptake to participate. Women were recruited from antenatal classes at the Regional Maternity Hospital in Limerick (no details of size or births per annum at this unit are provided). In total six women participated in the study, despite 40 women declaring an

interest. Ethical approval was obtained by the hospital and university ethics committees.

The study hinged upon women attending a series of four group singing sessions where they learnt three lullabies and were encouraged to practise singing at home.

Data were collected via face to face interviews 'approximately' three months post partum, and focused on the experience and value of learning to sing lullabies in pregnancy. It would have been useful to know what 'approximately' meant and some insights into the frequency or patterns of singing that women adopted. That said, the researchers provide the questions used in each interview. Brief information about data analysis using Burnard's steps (Burnard 1991) is outlined.

I always recommend to students that questions about the methods and analysis be emailed to the author as I

find most are happy to assist and offer further information.

Findings

Carolan et al display a table showing the characteristics of the six

participants, who were above average age for primiparous women in Ireland at 29.7 years, five of the six were employed and all were well educated (to tertiary level). Once again in the discussion section, reflective points are made regarding the homogeneity of the participants - good practice in qualitative research reporting. Analysis revealed four broad themes outlined: connection, communication, stress reduction and confidence building and fetal attachment. Each theme is then explained with relevant direct quotations from women by way of providing primary evidence in support of the theme. The authors' overall message in this section is that the aim of the study was achieved; moreover they claim that benefits extended beyond their intentions. For example, women described how singing lullabies in the early postpartum period facilitated infant attachment, helped settle infants and acted as a source of relaxation.

Discussion

This section is refreshing as the authors



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provide a substantive, honest and reflective discussion with supporting literature. They acknowledge that recruitment was a disappointing feature and that the nature of the six women who participated, limiting. Overall they feel convinced that they have provided further evidence that a programme of singing lullabies enables pregnant women and new mothers to feel calm and improve attachment and bonding, thus having scope to reduce maternal stress. I would urge you to read this paper in full, draw your own conclusions, but realise that scope does exist to promote singing in pregnancy and in motherhood for positive benefits.

Readability and relevance

I found the paper readable with a good, logical flow and easy style of writing. The topic is relevant; encouraging mothers to engage in such a singing programme is easy, low in cost and fun! As Caralon et al note, the programme is low risk by design, with no negative impacts and potentially huge benefits to mother and infant. **TPM**

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