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CoRIPS Research Grant 129

£9,991.29 awarded

**Title: Delivering difficult news during fetal ultrasound examinations:
Would training and support minimise the negative impact on sonographers
and improve patient experience?**

Principle Aim

The principal aim of the project is to investigate which types of difficult news delivery training/support could reduce sonographer burnout, improve sonographer wellbeing and enhance patient experience

Primary research question

To what extent is delivering difficult news associated with higher sonographer burnout and poorer sonographer wellbeing?

Secondary research questions

- Is more training in difficult news delivery associated with higher levels of wellbeing and lower levels of burnout amongst sonographers who regularly deliver difficult news?
- What type and level of difficult news delivery training have UK sonographers received?
- What aspects of difficult news delivery training do sonographers find most useful?
- What support and/or training do sonographers think would help them with delivering difficult news and reduce stress they experience in relation to this?
- What are the overall levels of burnout and wellbeing amongst UK sonographers?
- Could increased sonographer training and support improve patients' experiences?

Outcomes

The proposed project would be the first to investigate whether there is an association between the experience of delivering difficult news and sonographer burnout and wellbeing levels. It would also provide the first information on current UK training practices for delivering difficult news, the extent to which these are useful, and changes which could be made to support sonographers, reduce their levels of burnout and improve their wellbeing. There are five specific outcomes:

- 1) To gain information on current difficult news delivery training practices at UK Higher Education Institutions, and the number of sonographers who receive training from other organisations (e.g., ARC; Tiny Tickers)
- 2) To determine UK-wide rates of sonographer wellbeing and burnout
- 3) To ascertain which aspects of difficult news delivery training sonographers find most useful in clinical practice when delivering difficult news
- 4) To identify whether there is evidence of an association between the delivery of difficult news and sonographer burnout/wellbeing levels
- 5) To determine sonographer suggestions, preferences and further requirements for training and support for the delivery of difficult news
- 6) To ascertain whether sonographers can identify a change in patients' experience following training and support

These aims and outcomes will be met through two phases. In the first phase, a survey will be hosted online and advertised to sonographers via the Society and College of Radiographers, the voluntary sonographer register, the British Medical Ultrasound Society website, the Consortium for the Accreditation of Sonographic Education and the Yorkshire Ultrasound Users Group. The survey will gather information regarding sonographer experiences of difficult news delivery and training, and levels of wellbeing and burnout. Alongside this, a modified version of the survey will be sent to higher education institutions offering sonography training, in order to understand the difficult news delivery training currently provided prior to qualification.

In the second phase, a subset of respondents from the first phase who report low burnout/high wellbeing, but who regularly deliver difficult news, will be invited to participate in semi-structured qualitative phone interviews.

Review of literature and identification of current gap in knowledge

In 2012, 17,839 fetal anomalies were detected in England and Wales affecting over 150,000 families (BINOCAR, 2014). These complications are usually identified or confirmed via ultrasound (Lalor, 2007). Due to the nature of sonography, there is no time to prepare or investigate further before delivering difficult news to the parents and as this news is often unexpected, and a large body of research indicates that expectant parents may experience symptoms of depression, anxiety, and trauma as a result (Guerra, 2011). However, minimal research has investigated the impact of delivering difficult news upon sonographers, or aimed to understand this experience from the sonographer's perspective (Brasseur, 2012).

There is a need to investigate sonographer experiences of delivering difficult news for three reasons. First, qualitative research suggests that difficult news delivery can have a strong negative impact upon sonographers. Savianai-Zeoti and Petean (2007) reported that the majority of practitioners doing fetal scanning (including sonographers) felt no training course they had previously received had prepared them for delivering difficult news. However, there is currently no quantitative research investigating these experiences. Due to current pressures upon the NHS, stress levels amongst healthcare staff are high, and sonographer vacancy rates are currently running at 18% (SCoR, 2014). As such, it is important to identify areas where sonographers can be supported in order to reduce stress levels, and potentially increase staff retention.

Second, there is a need to support sonographers with delivering difficult news in order to uphold the quality of patient care they are able to provide. A number of studies indicate that patients are unhappy with the care they receive when a pregnancy complication is identified (Alkazaleh et al, 2004) but research has yet to investigate the support that sonographers need to improve their difficult news delivery skills.

Third, there is a need to improve the adherence of antenatal scanning units to clinical standards of excellence. NICE guidelines state that staff should be trained in delivering difficult news and state that staff should have competency in communication skills (NICE, 2012). However, it is unclear what training is regularly received by sonographers for delivering difficult news and no research has investigated which aspects of training are considered to be most helpful.

The current project will aim to understand the extent to which delivering difficult news is associated with higher sonographer burnout and poorer wellbeing, and to identify interventions which may support sonographers with this aspect of care. The evidence generated will extend the existing limited body of knowledge on the subject (Menezes et al, 2013), which has almost exclusively focused on obstetricians. The project will focus specifically on sonographers rather than doctors and aim to understand their unique role in delivering difficult news to patients. The study findings will provide a platform for further research developing and testing training interventions for supporting sonographers with the delivery of difficult news

Methodology

Research design

In order to address the project aims, the study will comprise two phases employing mixed methods. In the first phase, a quantitative cross sectional survey which will be completed online by participants. A user group including service user representatives will be used in the design of the questionnaire. In the second phase, a subset of respondents from the first phase will be contacted and invited to participate in semi-structured qualitative phone interviews.

Sampling strategy and sample size estimation

No sampling frame of sonographers participating in delivering difficult news exists. There is currently no mandatory registration for this professional role and no comprehensive register of practitioners; however, the Society and College of Radiographers has a voluntary register for sonographers, with 752 registrants (SCoR, 2015); in addition, current BMUS membership totals over 1300 from both the UK and overseas (this includes members who do not do obstetric ultrasound examinations) and according to the 2015-16 Consortium for the Accreditation of Sonographic Education (CASE) handbook, 15 higher Education Institutes offer courses with Obstetric Ultrasound as a component (CASE 2015). The Yorkshire Ultrasound users Group has been re-established following a period during which membership lapsed and therefore membership numbers are not yet available.

It is estimated therefore that the (individual) population of interest is at least 1000 practitioners. The research team will approach the organisations stated above with an intention of reaching as many of these sonographers who undertake obstetric ultrasound examinations and deliver difficult news on a regular basis. For the second phase, the aim is to recruit a sample of 15-20 participants, who report regularly delivering difficult news yet have the highest wellbeing and lowest burnout scores.

Recruitment process

Following ethical approval (see below), suitable sonographers will be invited to complete an online questionnaire about the training they received in delivering difficult news, the impact this had on their ability to deliver difficult news effectively and whether they have on-going psychological support. The initial invitation will also include posters, to be displayed prominently within obstetric ultrasound departments, inviting all sonographers employed in the service to participate in the survey. A response rate of approximately 40% might be expected on the basis of a similar approach (Hardy & Barrett 2003, Snaith & Hardy 2008, Hardy et al 2008). An online individual survey conducted by the Society of Radiographers in 2009 received a 37% response rate. A 40% response rate from a conservative estimate of 1000 eligible individual sonographers might thus yield 400 participants. A follow-up reminder via electronic advertising of the study will be conducted via the SCoR and BMUS publications one week before the survey completion deadline to optimise response rates. Additional permission will be sought from those organisations to add hyperlinks to their social media (Twitter/Facebook) accounts.

Following the completion of Phase 1 of the project, a subset of respondents will be invited to participate in qualitative phone interviews in Phase 2. Participants will be selected who i) agree to be re-contacted regarding further research, ii) report regularly delivering difficult news and iii) report low levels of burnout and high levels of wellbeing.

Data collection and analysis

The online survey will be hosted by Bristol Online Surveys®, a secure platform for collecting sensitive data which the University of Leeds subscribe to on behalf of their staff and students. Closed and forced response questions will be used to collect factual data, with the use of some open free-text questions to allow respondents to highlight related issues of interest or concern that the research team may not have considered important at this stage, and that may help inform the design and conduct of subsequent studies.

The questionnaire will ask participants to describe their qualifications, experience and current involvement in delivering difficult news in obstetric ultrasound setting. They will be asked to outline the training they received in delivering difficult news and which aspects of this, if any, were helpful. They will also be asked whether they receive on-going psychological support, and they will be asked to complete measures of psychological wellbeing (General Health Questionnaire-12) and burnout (Oldenburg Burnout Inventory).

Initial drafts of the questionnaires will be piloted for face and content validity and for reliability within the University of Leeds using a small sample of current students undertaking the Obstetric Ultrasound module, clinical mentors and service managers (n =10).

Survey data will be coded, collated and analysed by the research team using Bristol Online®, Microsoft Excel® and SPSS® software to produce summary descriptive statistics which describe the current sonographic workforce and the nature of their experiences and practice. A thematic analysis of free text comments will be used to identify personal and / or professional issues that may be pertinent to further investigation.

The follow up interviews will be conducted via phone and the responses will be recorded electronically and transcribed by the support staff. Qualitative analysis of the responses will be undertaken by the project team.

Ethics

Ethical approval will be sought via the University of Leeds School of Medicine Research Ethics Committee.

Study data and personal information will be handled in accordance with the Data Protection Act. Data will be kept secure on University of Leeds password protected servers with responding departments and individual participants anonymised prior to data collation and analysis. Individual respondents will not have to divulge their name to participate, and any potentially identifying data will be excluded from summary statistics so that no individual will be identifiable in the disseminated results.

Consent will be obtained at both a gatekeeper level and an individual level and relevant study information will be provided accordingly. Informed consent will be sought from all interview participants at the beginning of each telephone interview and transcripts will be provided to participants to ensure true reflection of discussions. Confidentiality of participants and participating organisations will be maintained by using pseudonyms and the Data Protection Act will be observed. All reports or dissemination will only include anonymised data.

A process will be established for managing the unlikely eventuality of any participants disclosing unsafe practice including the reporting of this to the relevant authority. Details of this process will be made available to participants prior to informed consent.

Participant information will be provided and included in the preliminary pages of the online surveys. Participants will have to indicate (compulsory tick box) that they have read the PIS and consent to participate before continuing with the survey

Potential impact

This research will help to identify whether there is an association between the delivery of difficult news and sonographer wellbeing and burnout levels, and to identify which aspects of training sonographers find most useful in clinical practice when delivering difficult news. It is hoped that this research can provide a platform for further work developing and testing a training intervention to aid sonographers in delivering difficult news in practice which could be utilised by HEI in current ultrasound training programmes. In addition, there would be the opportunity to offer these courses to current practitioners for CPD.

Dissemination Strategy

Study progress reports and results will be supplied to the SCoR as outlined in the CoRIPS scheme instructions and will subsequently be available to members via the SCoR website. Study results will also be submitted for presentation at appropriate professional meetings & scientific conferences and for publication in peer reviewed journals –British Medical Ultrasound Society Scientific Meeting; UKRC; Radiography and / or British Journal of Radiology

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