

**Sheffield
Hallam
University**

Centre for Health
and Social Care
Research

Research Profile
Midwifery



About the centre

The core mission of the Centre is the pursuit of practical applied research in the field of and health care and its translation into evidence based policy, practice and clinical protocols.

The Centre benefits from the wider expertise within the University. Sheffield Hallam is one of the largest providers of health and social care professional training in the UK. This means we can access high levels of expertise in areas including • nursing and midwifery • physiotherapy • occupational therapy • radiography • radiotherapy • social work • paramedics and operating departments.

Beyond healthcare, we work with colleagues in areas including • sport and exercise • psychologists • biosciences • design • modeling • engineering • computer science • business management • environmental sciences • town planning. The Centre also benefits from an in-house team of experienced information scientists who support our research staff by conducting literature searches and reference management for bids and funded projects, and providing information skills training.

The Centre hosts a vibrant postgraduate research training program with over 80 doctoral students in health and a further 90 students in Sports and Bio-science.

Attached are a sample of recent research projects undertaken by staff from the Centre for Health and Social Care Research in conjunction with academic colleagues from the Nursing, Allied Health and Social Work Departments of the Faculty of Health and Wellbeing at Sheffield Hallam University.

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Management of the Third Stage of Labour in Iran

Professor Hora Soltani of Sheffield Hallam University was part of an international research team set up in liaison with the European Project on Haemorrhage Reduction (EUPHRATES) and academics in Iran to explore information pertinent to developing policies with a global impact on reducing maternal mortality and morbidity.

Funded by the World Health Organisation, this major collaborative project aimed to both

- facilitate research capacity development and
- encourage international academic development.

Management of the third stage of labour is a major concern in relation to maternal mortality and morbidity, as well as neonatal well-being across the world. This study was set up in response to the need to identify background information on the management of the third stage of labour in delivering appropriate intervention and designing effective policies to improve maternal and neonatal health.

The project explored various patterns of care management in the third stage of labour in Iran. It also sought to provide information and support - in liaison with the European Project on Haemorrhage Reduction (EUPHRATES) and academics in Iran - with a view towards developing policies and education with a global impact.

The World Health Organisation will use the findings from this project as a platform, with its outcomes used to facilitate research and development of the subject in other less well-resourced countries.

Project lead

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Researching the management of the third stage of labour in Iran, and to find any contextual or underlying issues which cause concern regarding maternal mortality and morbidity.



A physiologically based model for pregnancy

This multidisciplinary project involved eminent experts in the field from Leeds and Manchester universities as well as a University of Sheffield spin-off company. By building on the existing literature, it provided opportunities for further research on the effects of medications and other substances during pregnancy as indicated by several follow on studies by FDA (Food and Drug Administration in USA).

The project aimed to:

- develop a physiologically based model for investigating the fate of xenobiotics (chemical substances that are foreign to the biological system e.g. caffeine) during pregnancy., and
- establish a systematic set of literature on the changes of physiological, anatomical and biological parameters during pregnancy.

Through the collection of data using physiologically based pharmacokinetic (PBPK) modelling, it has been possible to provide predictions on rates of formation and destruction of each metabolite, allowing for a much clearer picture of how much caffeine has been metabolised.

Providing this material should allow health care officials to have a much clearer picture of the effects of caffeine or other similar substances, the possible risks involved with high levels of consumption or drug under-treatment when higher doses are required during pregnancy and the steps that need to be taken to ensure that clinicians are receiving the guidance and support that they need to offer advice on healthy and informed dietary and drug therapy decisions.

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‘By building on the existing literature, this provided opportunities for further research on the effects of medications and other substances during pregnancy.’



Talking Health – Health Promotion in Pregnancy

Funded through Doncaster NHC and CLARHC South Yorkshire, this initiative aims to:

- work with practicing midwives and health visitors, as well as mothers who use maternity care services, to discover training needs in the field
- to develop a training toolkit to meet those needs

Health professionals, such as midwives and health visitors, have key roles to play in health promotion for expectant and new mothers. They are expected to offer support and advice to pregnant women on lifestyle changes which will help them to have a healthy pregnancy and birth.

From this study, backed by almost £17,000 of funding, researchers aim to establish the needs of key health professionals in delivering that support and advice to pregnant women, as well as identifying any barriers they may face. The findings will then be used to develop a toolkit to help them deliver appropriate, high quality services.

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Promoting health in pregnancy



Maternal Obesity and Mobile Technology – MOMTech

Maternal obesity is associated with a significant increase in the risk of maternal and neonatal ill health and death.

The first stage of this project, supported by Engineering for Life and CLAHRC, explored the practicality of developing a complex intervention using mobile technology to optimise access to and promote the effectiveness of a maternal obesity management service.

The aims of the project were to:

- determine, through focus groups with health professionals and mothers, what barriers and stigmas are attached to maternal obesity
- develop an intervention in collaboration with the main stakeholders, including women and health professionals, to ensure it is sensitive to their needs
- explore the practicalities of implementing the intervention in a clinical setting
- find the scope for further research and to explore feasibility of developing a large multicentre randomised control trial

The initial stage of this project, backed by £60,000 of funding, looked at how a mobile technology-based intervention could help reduce maternal obesity by overcoming challenges associated with the stigma and other face-to-face barriers.

Several components made up the project, including focus groups, planning workshops and a cyclic evaluation. Participants included maternity users, clinicians, researchers from maternity and health psychology, and experts from User Centred Healthcare Design (UCHD)

Women and midwives suggested the use of text messaging and helped in shaping the intervention. A message delivery platform, 98 motivational text messages and food and activity diaries were developed to help with goal setting for diet and physical activity behaviour change. With support from Bupa, further work will be carried out on verification of the text messages plus application of diaries, prior to a pilot evaluation.

The e-health platform of text messaging will not only provide patients and midwives with up-to-date information, support and motivation, but will also allow health institutions to provide such a service at minimal cost. More research is needed to trial and evaluate a midwife-delivered SMS service, and to assess the practicalities of installing such a facility.

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‘Using mobile phones in tackling maternal obesity’



Maternal weight and neonatal health outcomes: A cohort study in Padang, Indonesia

This research, funded by the Directorate General of Higher Education, Ministry of Education and Culture in Indonesia, examined the impact of maternal anthropometric status and weight changes during pregnancy on maternal and neonatal health.

The study aimed to:

- identify the pattern of BMI prevalence for mothers in West Sumatra
- establish a cohort of mothers and infants whose data will provide information on their health outcomes over a period of two years
- to use this data to provide contextual information regarding the impact of maternal obesity and the knock on effect it has upon neonatal health outcomes.

Backed by £30,000 of funding from the Indonesian government, this research was carried out in partnership with the department of nutrition at Andalas University. The study is investigating the impact of maternal weight on maternal and neonatal health outcomes in Padang, the largest city and capital of West Sumatra, Indonesia.

The project builds on Sheffield Hallam University's international maternity research profile and expands our global research activities in supporting our colleagues in other parts of the world.

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'Examining the impact of maternal anthropometric status and weight changes during pregnancy'



