

Participant Information Sheet

Date Information Sheet Produced:

01.05.2023

Project Title

Physical Responses to Emotions of Happiness and Fear During Pregnancy.

An Invitation

My name is Sabina Just, and I am a registered midwife, movement therapist and PhD student from Auckland University of Technology. Along with my supervisors Dr. Hannah Wyatt, Dr. Nimisha Waller, Dr. Ed Maunder and Professor Peter Nair, and Nike, who awarded the PhD research scholar, I would like to invite you to participate in this research.

This project aims to gain a deeper understanding how women's physical responses to common pregnancy related emotions such as happiness and fear. Specifically, we will investigate and evaluate the effect of these emotions on women's body movement, bodily sensations and women's heart rate variability (autonomic nervous system).

What is the purpose of this research?

Pregnancy is a profound experience that evokes a range of emotional and psychological experiences for expecting women which can have a positive or adverse effect on mother and child health (Van den Bergh et al., 2020). There are times where women may not recognise their changing emotions sufficiently and understand how emotions such as happiness and fear manifest in the body. However, those emotions play a substantial role in pregnancy as they can effect women's physical health, how women feeling connected to their changing body and bond with their unborn baby, and how they develop self-confidence in giving birth.

The purpose of this research is to gain fundamental knowledge of pregnant women's emotional world and its effect on their body. Further, it supports gaining a PhD qualification as a benefit to the researcher. As a researcher and midwife, I aim to gain scientific insight into how pregnant women experience happiness and fear in a physical sense (body sensations, heart rate variability and movement). The research may help women to enhance their awareness of their emotional state and build confidence in taking control of their emotional wellbeing.

How was I identified and why am I being invited to participate in this research?

If you are reading this sheet, you may have seen an advertisement online or in person, or received this participation sheet e.g. from your LMC. To be included in this research, participants must be: females above the age of 18 years who are currently pregnant (first time and subsequent pregnancies) with singleton (one baby) pregnancy.

Who can not take part in the study?

Due to ethical considerations, women who have been or are under the care of the researcher (midwife) cannot participant in the study even if you meet the inclusion criteria.

Participants who have existing emotional/mental health conditions, for example post-traumatic stress disorder (PTSD) following previous pregnancy loss, and/or currently under psychological and/or mental health treatment will be excluded from the study.

Participants who report any occurring normal/common accompaniments of pregnancy such as severe nausea, light-headedness, severe fatigue, or any other illness, happening on the data collection day that could impact normal gait, will be excluded.

How do I agree to participate in this research?

We encourage you to read the information in this form and learn more about this study, as well as consult with your whānau, lead maternity carer, GP or obstetrician (where appropriate). If you are keen to participate, you can indicate this by contacting us via phone or email on the details provided at the end of this information sheet. We will guide you through a series of questions to confirm your eligibility for this research before booking your first session. Before progressing with this initial session, you will have the opportunity to ask any additional questions;

once you have all the information you require, you will be asked to provide written consent via a form which will be provided to you.

Please note your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

If you choose to participate in this research, you will make an appointment with me at AUT Millennium (17 Antares Place, Rosedale, Auckland). Upon arrival you will be given an opportunity to ask any questions that you may have about the study and/or the data collection process. Once you are happy to proceed you will be asked to sign a consent form. The study will involve attending AUT Millennium once in the third trimester and the session will take approximately 1.5 hour of your time and will include data collection of three measurements and two questionnaires. During the session we will collect two questionnaires and three types of information/assessments: 1) Assessment of your bodily sensation response to pregnancy related emotions; 2) Assessment of your physical movement and posture response to pregnancy related emotions; 3) Assessment of your heart rate variability response to pregnancy related emotions. None of these assessments will increase risk to yourself or your baby beyond what you would experience in daily living.

Clothing: For the session, you will be asked to wear your own clothes, if possible, darker coloured, bodily shaped clothes such as long/short tights or leggings and a bodily fitted t-shirt (see example picture below). You may wear these to arrive or change into on site in a private changing area.



You will be familiarised with the data collection room, collection equipment and method on how we plan to collect the data. For assessment 1 and 2, you will be exposed to two types of emotional stimuli: emotion words and two questions related to your pregnancy.

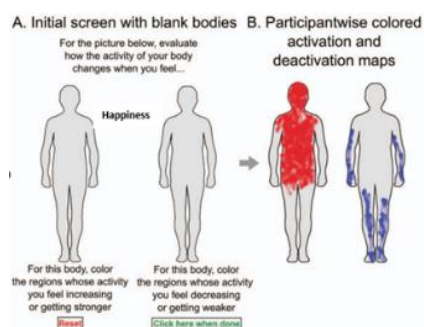
Emotion words: Fear, Neutral and Happiness

Emotion questions: Q1: Do you feel fearful or experience(d) fear that is related to your pregnancy?

Q2: Do you feel happy or experience happiness that is related to your pregnancy?

1) Assessment of bodily sensation response to pregnancy related emotions.

The bodily sensation assessment will use a computer program called emBODY. To begin with, you will be asked to read an emotion stimulus (emotion word or question), which is placed between two body silhouettes (see below). With this specific emotion in your mind you will be asked to feel into your body and into any bodily sensations. After that, you will be asked to notice and evaluate where in the body the emotion is being felt. You will use an iPad pencil to colour the body regions you feel have activated or de-activated while being exposed to the emotional stimuli.



2) Assessment of physical movement and posture response to pregnancy related emotions.

Measurements of your body position and movement pattern during walking will be taken by a 3D motion capture system in our laboratory. We will also record your body motion and movement pattern via video camera system (two iPads). While feeling specific emotions are felt, we will ask you to stand up and when you feel ready start walking in the room. With this emotion in your mind and body, you will walk five times 7 meters (35 meter), between two points at a self-determined walking speed (see below). You will have the opportunity to stop walking and/or take a seated rest period at any point throughout the testing that you would like.



3) Assessment of heart rate variability in regards to pregnancy related emotions.

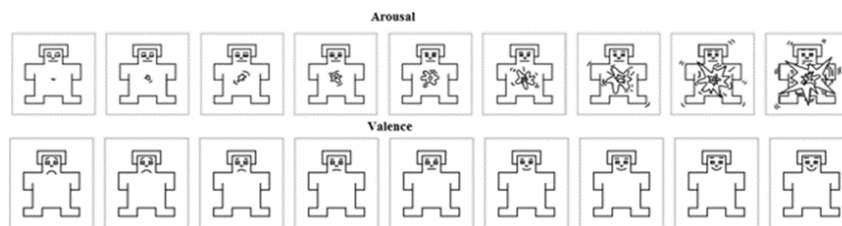


Polar H10 heart rate variability strap

Your heart rate variability assessment will be collected using the during your emotional response of assessment one and two. The heart rate monitor can be worn under your clothes and will be fitted by myself (a female researcher/midwife) at the start of the data collection process.

Evaluating emotions intensity level

As a part of assessment one and two you will be asked to evaluate your perceived arousal and valence affective state using a 9-point Self-Assessment Manikin (SAM) picture orientated questionnaire, as shown in Figure below. SAM measures arousal (intensity) and valence (pleasure) from high to low level on a discrete scale. This questionnaire contains nine cartoon images for each emotion and participant will rate their affective state by placing an X over the figures that describes best how they currently feel.



What are the discomforts and risks?

There should be no significant risk to you during the study, however some minimal risk in the way of potentially discomfort is acknowledged. We do not anticipate the walking activities (movement assessment) or emotion stimuli activity to be any more demanding than would be experienced during normal daily activities. We will aim to minimise any discomfort or risks, but as fear will be one of the emotions involved in the study, there is a chance of discomfort when you are asked to consider this emotion.

If you experience discomfort at any stage, you are encouraged to inform the researcher who is with you at the time, so that they can quickly address the problem.

How will these discomforts and risks be alleviated?

Should you feel that involvement in the study introduces discomfort, AUT Student Counselling and Mental Health is able to offer three free sessions of confidential counselling support for adult participants in an AUT research projects. These sessions are only available for issues that have arisen directly as a result of participation in the research and are not for other general counselling needs. To access these services, you will need to:

- drop into the centre at WB203 City Campus, email counselling@aut.ac.nz or call 921 9292.

- let the receptionist know that you are a research participant, and provide the title of the research and my name and contact details as given in this Information Sheet.

You can find out more information about AUT counsellors and counselling on <https://www.aut.ac.nz/student-life/student-support/counselling-and-mental-health>

What are the benefits?

A primary benefit of the research will be to gain foundational knowledge on pregnancy related emotions of happiness and fear and its impact on women's physical body and autonomic nervous system.

Potential benefits for the participant during the project:

- Get a health check (heart rate, blood pressure, temperature, respiration rate, oxygen saturation).
- Gain an insight into your emotion state of happiness and fear and the effect on your body.
- Increase your level of emotion self-awareness.
- Receive personal report on your research findings.
- An opportunity to connect with a health professional (midwife).

Your participation will help us to build an understanding of the pregnancy related emotional changes and its physical, emotional, and physiological effect. We hope the study will lead to build an emotional self-awareness tool that supports women taking care of their emotional (mental) health during pregnancy.

At the conclusion of this research, you will receive a report of your own data and the findings of the research project via email. With this information, you will have insight into the latest research on you will be able to apply it to your daily life. The researcher is a midwife and has expertise in pregnancy and its care, so feel free to chat and ask me questions about anything related to these topics.

What compensation is available for injury or negligence?

In the unlikely event of a physical injury as a result of your participation in this study, rehabilitation and compensation for injury by accident may be available from the Accident Compensation Corporation, providing the incident details satisfy the requirements of the law and the Corporation's regulations.

How will my privacy be protected?

Original raw information (e.g. video footage) where you are identifiable will only be accessible to AUT researchers directly connected to this project. Throughout the data collection and analysis process all data will be stored on password-protected computers or in locked filing cabinets. The raw data will be processed at AUT, and as part of this, the information will be coded to de-identify all extracted data using a unique code assigned to you upon entry to the study to protect your privacy. The data will be stored for ten years after the completion of the study, following which time it will be destroyed. Your name, contact number or email address and emergency contact information that you will be asked for upon submission to the study will be kept in a password protected file in a secure room. This information will only be used to contact you regarding an upcoming appointment or if needed in the case of an emergency. Your data will not be used for any research beyond that described, and only for which you have given informed written consent

What are the costs of participating in this research?

There are no monetary costs associated with participating in this research. Your time-cost associated with this research will be 1.5 -2 hours once for your visit to AUT Millennium. Koha will be provided to thank you for your time and travel to each session.

What opportunity do I have to consider this invitation?

We would appreciate if you could let us know within 14 days whether you would be available to take part in the study or not.

Will I receive feedback on the results of this research?

We can provide you with a summary of the research findings at the conclusion of the study.

What do I do if I have concerns about this research?

Project Supervisor, Dr Hannah Wyatt, Email: Hannah.wyatt@aut.ac.nz, Phone: 09 921 9999 ext 7253

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

Sabina Just (PhD student), Email: Sabina.Just@autuni.ac.nz, Phone: 0272273187

Project Supervisor Contact Details:

Dr. Hannah Wyatt

Research Fellow, Sports Performance Research Institute NZ, Auckland University of Technology.

Approved by the Auckland University of Technology Ethics Committee on *type the date final ethics approval was granted*, AUTEK Reference number *23/129*.

Reference:

Van den Bergh, B. R. H., van den Heuvel, M. I., Lahti, M., Braeken, M., de Rooij, S. R., Entringer, S., Hoyer, D., Roseboom, T., Raikkonen, K., King, S., & Schwab, M. (2020). Prenatal developmental origins of behavior and mental health: The influence of maternal stress in pregnancy. *Neurosci Biobehav Rev*, 117, 26-64.
<https://doi.org/10.1016/j.neubiorev.2017.07.003>