

Participant Information Sheet

Study Title: Effect of exposure to odour from humans during stress and relaxation on untrained dogs' behaviour and affective state

Thank you for expressing an interest in our exciting new study. We would like to formally invite you to take part in this research aimed at improving our understanding of how dogs respond to changes in human odour associated with different emotional states.

This study is based on evidence from humans that the odour from stressed individuals subconsciously affects the emotions and judgement bias of others. As one of our closest animal companions, dogs are also exposed to the changes in odour that occur when we experience stress. Understanding how this affects a dog's own wellbeing is an important consideration for dogs kept in kennels and when training dogs for working roles such as assistance dogs. How the odour of stress affects a dog's emotional state is not well understood and there has yet to be a study measuring the effect of human stress odour on judgement bias in dogs.

This study aims to measure the behavioural, physiological, and cognitive response of dogs to human sweat and breath collected during stressful and relaxing situations. We will also look for differences in odour between stress and relaxation samples by analysing the odour profiles of sweat and breath samples at Cardiff University.

What would taking part involve?

If you decide to take part, we will ask that you and your dog attend three 1-hour sessions (1 session per week for 3 weeks). Sessions will take place at the Langford Campus, University of Bristol. Before the first session we will collect some information from you about your dog and their behaviour as this could be important when interpreting results.

During each session, your dog will be presented with a series of full and empty food bowls behind a screen at one end of the room and allowed to approach them freely. We will measure how long they take to approach the bowls during each "run". You will be asked to sit at a start location at the opposite end of the room to the bowls from where you will release your dog at the start and recall them after each run.

To test how your dog responds to the odour of human stress, at the beginning of the session, you will be given a closed jar containing an odour sample (sweat and breath) from a stressed or relaxed person, or a blank control with no odour. While sitting at the start location with your dog, you will be asked to open the jar for 30-60 seconds, to allow the odour to be released and detected by your dog. After 30-60 seconds you will be asked to close the jar. You will then be prompted to release your dog to start the run. You will be asked to repeat this between each run. You'll be given full instructions and guidance from a researcher throughout the session and are free to ask questions if needed.

The behaviour of your dog during these sessions will be video recorded. We would like to stress that the purpose of recording is to observe your dog's behaviour and not you. However, there is a possibility that you may appear in these videos due to your proximity to your dog and the cameras.

As well as helping answer this important research question, at the end of the last session you will receive a gift for your dog.

Handling Samples

The odour samples you will be holding have been collected from volunteers during a period of stress or relaxation either by breathing onto a cloth (breath) or placing a cloth in their underarms (sweat). To minimise any risk to you from handling these samples, volunteers providing samples were screened for any respiratory infections including COVID-19 before providing any samples. They will also have tested negative on a COVID-19 lateral flow test on the day of sample collection. Neither you nor your dog will directly touch the sample materials and they will remain in the jar for the duration of the session. The outside of jar will be disinfected before being handed to you. You will be provided with gloves to wear while holding samples jars and we will ask you to wash your hands before and after touching any research materials.

The risk to you from these samples is therefore low and a risk assessment for sample collection and handling has been completed and reviewed by the University of Bristol biosafety committee. If you have any queries or concerns, please do not hesitate to ask us.

How will we use information about you?

We will need to collect information from you for this research project. This information will include your name and contact details. This information will be used to carry out the research or to check and make sure that the research is being done properly. People who do not need to know who you are will not be able to see your name or contact details. Your data will have a code number instead. We will keep all information about you safe and secure and will be treated in accordance with the Data Protection Act. Once we have finished the study, we will keep some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study.

All information collected from you will be anonymised and not stored together with any names or personal details. All data will be kept password protected and securely stored. Access to data will be restricted to members of the University of Bristol and Cardiff University involved in this study. All video material will only be viewed by the immediate research team at the University of Bristol. Video recordings will be numerically labelled and not stored with any names or personal details. They will be kept password protected and securely stored. Access to data will be restricted to members of the University of Bristol involved in this study. Following publication, the raw video footage will be destroyed.

The results of this study will be sent to you directly in a summary document once the study is complete. Results may be submitted for publication in peer-reviewed journals and presented in posters and/or verbal presentations at conferences, however all data will be completely anonymous, and it will not be possible to identify your participation.

If you agree to take part in this study, you will have the option to take part in future research using your data saved from this study. Anonymised data will be kept on the University of Bristol's Research Data Repository for research purposes under "open" level of access. However, it will not be possible to identify you from these data.

Please note, that a **complete withdrawal of your data and participation** in the study **can only occur up to the point at which your data is made anonymous, which is one week after your data collection has ended**. After which your data will not be identifiable as yours and can no longer be withdrawn.

You can stop being part of the study at any time, without giving a reason, but we will keep the information about you that we already have. We need to manage your records in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you.

You can find out more about how we use your information:

- at www.hra.nhs.uk/information-about-patients/
- by asking one of the research team using the contact details at the bottom of this information sheet
- by sending an email to University of Bristol Research Governance Team: research-governance@bristol.ac.uk

Further information and consent

Please take the time to consider the above information carefully. If you are happy to participate in the study on this basis, I would be extremely grateful and would like to invite you to read the attached consent form. This is to indicate that you understand the information above and that you agree to your data being used for the purposes stated above. You do not need to complete this consent form in advance, on the day of the first session we will ask you to read and fill in the signature block on the consent form in the presence of a researcher.

You will be able to retain a copy of this information sheet, which includes the researchers' contact details. If you have any questions or would like any further information, please do not hesitate to contact us using the contact details provided.

This study is organised by the University of Bristol in collaboration with Cardiff University, funded by the BBSRC and has been reviewed by the NHS Research Ethics Committee (REC).

Many thanks
Yours sincerely,

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