

Informed Consent Document

Examination of Psychological and Physiological Pathways Linking Gratitude and Pain

Dr. Nathan T. Deichert

NCT Number: NCT06317844

Approved by BHSU IRB on 04/24/24



Examination of Psychological and Physiological Pathways Linking Gratitude and Pain

Consent to Participate in Research

You are being asked to volunteer for a research study being conducted by Dr. Nathan T. Deichert and the BHSU Health Psychology Research Laboratory. The purpose of the study is to examine the interrelationships among pain and various psychological, physiological, and genetic factors.

WHAT AM I BEING ASKED TO DO?

If you participate in this study, you will be asked to complete questionnaires measuring demographic information, psychological variables, and pain. In addition, you will be asked to complete a brief writing task followed by a cold pressor test, during which time you will submerge your non-dominant hand into almost freezing water. Throughout the study, you will also be asked to provide several saliva samples as well as a DNA sample through a cheek swab.

The experiment is expected to take approximately 45 minutes to complete. Overall, we anticipate collecting data from approximately 150 pain-free, healthy adults from the BHSU community.

Your participation in this study is completely voluntary and you can withdraw at any time without penalty.

ARE THERE ANY RISKS INVOLVED?

It is possible that you may experience some discomfort if you choose to participate in this study. Some of the questions are personal and may cause some distress. Furthermore, it is very likely that you will experience physical discomfort during the cold pressor task.

Additionally, although research has shown the cold pressor to be well-tolerated, it is possible that an adverse cardiovascular event may be experienced during this task which may include changes in heart rate, dizziness, or lightheadedness. If this happens, please let the researchers know immediately. In extremely rare circumstances, asystole (a type of cardiac arrest) has also occurred during a cold pressor test. To ensure the safety of all participants, all members of the research team have been CPR / AED trained and are currently certified.

WHAT ARE THE BENEFITS OF PARTICIPATING?

You will not directly benefit from participating in this study, but your participation will help develop new scientific knowledge about how psychological, physiological, and genetic factors relate to one another and impact pain.

HOW WILL MY PERSONAL INFORMATION BE PROTECTED?

To protect your personal information, all of your data will be de-identified and stored using only randomly generated ID numbers. Your surveys will be kept in the principal investigator's locked research lab where only trained members of his research team will have access. Your DNA and saliva samples will be kept in a freezer on the BHSU campus and will be stored using the same randomly generated ID number as your surveys. No personally identifying information (i.e., your name) will be linked to the ID number, your surveys, or your DNA or saliva samples. **Your personal data will not be shared with anyone, including you.** When sharing the results of

this study with the scientific community, including public depositories, data will be presented in such a way that your individual data cannot be identified.

WILL MY BIOSPECIMENS BE USED FOR ADDITIONAL RESEARCH?

Yes. Your DNA sample will be stored and may be used for additional research in the future by Dr. Deichert and his colleagues. You will **not** be informed about any future studies using your biospecimens. Future studies may examine how other genes and genetic processes influence the relationship between psychological processes and the experience of pain. Your biospecimens will **not** be used for whole genome sequencing (identification of your entire personal genetic code), specific genetic research looking at diseases and medical conditions passed on in families or populations larger than families, or in the development of any proprietary products or assays used for commercial profit.

WHAT ELSE DO I NEED TO KNOW?

This study has been reviewed and approved by the Black Hills State University Institutional Review Board to help ensure participant's rights and safety are protected. If you have any questions about your right as a participant in the study, you may contact the chair of the IRB, Dr. Cynthia Anderson (Cynthia.Anderson@bhsu.edu; 605-642-6519).

You may also contact the study's principal investigator, Dr. Nathan Deichert (Nathan.Deichert@bhsu.edu; 605-642-6544), if you have any questions about the study or would like to receive a copy of the results of the study upon its completion.

This study is registered with ClinicalTrials.gov (Trial Number: NCT06317844). Upon completion of the study, results will be reported to ClinicalTrials.gov and data from this study will be stored publicly through Dr. Deichert's Open Science Framework account. None of the information shared will contain any identifying information.

You will receive a \$20 gift card as a thank you for participating in the study.

Statement of Consent

When you sign this form, you are agreeing to take part in this research study. This means that you have read the consent form, the questions you have at this time have been answered, and you have decided to volunteer. A copy of this consent form will be given to you.

Participant Name (Printed)

Participant Signature

Statement of Person who Obtained Consent

I have discussed the above study with the participant. It is my opinion that the subject has been explained the risks, benefits, and procedures involved with participation in this research study.

Researcher Name (Printed)

Researcher Signature