WE228

Shattering stereotypes: Protocol for an experiment on gender stereotype manipulation in acute pain

Beatrice Korwisi, Rebecca Stewing & Antonia Barke

Department of Clinical Psychology and Psychological Intervention, Institute of Psychology, University of Duisburg.Essen, Essen, Germany

UNIVERSITÄT DUISBURG ESSEN

Open-Minded

Background

- Sex and gender differences play a crucial role in pain experiences[1,2]
- Biological, psychological, and social factors contribute to these sex and gender differences in pain perception[1,2]
- In experimental pain, women tend to have a higher pain sensitivity and a lower pain threshold[2,3]
- One psychological factor that plays a role are gender stereotypes, or gender role expectations[1,2]
- Pain-specific gender role expectations: The expectation to have higher or lower pain sensitivity, depending on one's sex or gender[4]
- Manipulating these expectations can influence experimental pain perception (e.g., pain sensitivity, pain tolerance) [4,6]
- **Aim of the study:**
  - Manipulate pain-specific gender role expectations in an experimental acute pain paradigm
  - Assess whether the manipulation changes pain threshold, pain tolerance, pain intensity ratings, pain unpleasantness ratings

Methods: Study setting and outcomes

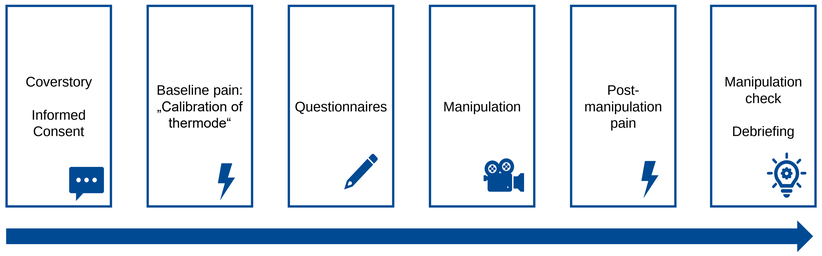
- The study will be implemented at the University of Duisburg-Essen (Essen, Germany)
- Ethical approval will be obtained from the IRB at the Institute of Psychology, University of Duisburg-Essen
- Target N=66
- **Inclusion criteria:**
  - Healthy women
  - Age ≥ 18 years
- **Exclusion criteria**
  - Factors that interfere with the experimental pain paradigm (e.g., chronic pain, intake of pain medication, current acute pain)
  - Factors that prevent the application of experimental heat pain (e.g., dermatological conditions, scar tissue)
- **Outcomes**
  - Change in pain threshold and pain tolerance
  - Change in pain ratings (intensity, unpleasantness)

Methods: Materials

- Thermosensory stimulator (TSA-2)[7] to apply tonic and phasic heat pain stimuli
- Computerized Visual Analogue Scale (CoVAS)[8] for continuous ratings of pain intensity
- VAS for ratings of pain unpleasantness
- Video vignettes to manipulate pain-specific gender role expectations: Pain education by an expert (ca. 3 minutes)
- Questionnaires:

Demographic data	Menstrual cycle	GREP[4]
PASS-D 20[9]	PSQ[10]	PCS[11]
PHQ-9[12]	GAD-7[13]	Emotional status

Methods: Procedure



- **Cover story for the study:** Experiment on the effect of the menstrual cycle on pain perception
- Participants will rate pain intensity on the CoVAS
- For pain unpleasantness ratings, participants will use the same VAS with a slider implemented in LimeSurvey
- **Manipulation check:**
  - Quiz on the contents of the manipulation video
  - Open question whether cover story was believed

Discussion

- The proposed study will be one of the first studies to show whether a manipulation of pain-specific gender role expectations influences pain perception in healthy women
- It forms the basis for follow up studies:
  - Including all sexes and genders
  - Longitudinal design with a second measurement time to assess the stability of the manipulation effect
  - Including a clinical sample of persons with the lived experience of chronic pain
- **Limitations**
  - Inclusion of only one sex (i.e., female participants)
  - Cross-sectional study design only
- **Conclusion**
  - Unraveling the factors that contribute to sex and gender differences in pain may reveal important knowledge that can be translated to clinical care in the future

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Contact Details

Dr. Beatrice Korwisi
Department of Clinical Psychology and Psychological Intervention
Institute of Psychology | University of Duisburg-Essen
Essen. Germany
E-Mail: beatrice.korwisi@uni-due.de