Emotional factors in placebo analgesia: Psychophysiological experiments

**Results:**

Placebo analgesia is the reduction in pain after administration of an inert substance together with information that the substance is a painkiller.

EXP 1: Do positive expectations of drug treatment lead to decreased stress that mediate placebo analgesia? Stress was not affected. Placebo analgesia was seen in males only. All the experimenters were female nurses. Exp. 2 investigated whether the presence of a male or female experimenter modulated pain report in males and females.

EXP 2: Males who reported pain to females reported lower pain compared to males reporting to males. Females reported similar pain to both male and females. To investigate whether males who report lower pain to females feel less pain, or just report lower pain, Exp. 3 investigated the physiological response to pain in males and females tested by males and females.

EXP 3: Measures of heart rate variability (HRV), indicating autonomic response, were included. HRV to pain stimuli was similar in males reporting to females and males reporting to males, indicating that the response to pain was the same in both females and males. Thus, social context modulated pain report but not pain sensation.

EXP 4: Nocebo hyperalgesia is increased pain after administration of treatment signalling increased pain. A conditioned stimulus (CS) signalled the onset of pain. The CS increased pain report compared to control. The CS also increased stress and sympathetic response.

**CONCLUSION**

Placebo analgesia is not related to decreased stress. Nocebo hyperalgesia is related to increased stress. Social context influences pain report. The effect of social context must be taken into consideration in all studies where pain is subjectively recorded.

**Published work:**


Planned publications


Johansen, O., Flaten, M.A. The role of symptom-related information on treatment of fibromyalgia and low-back pain. Will be submitted to the *European Journal of Pain.*

Conference presentations


Researchers contacts:

Magne Arve Flaten
Department of Psychology, SV-Fak
University of Tromsø
N-9037 Tromsø
Norway
Telph.: +47-77644344 (w) / +47-41047378 (mob.)
Fax: +47-77645610
E-mail: magnef@psyk.uit.no