

This study was carried out to measure pain sensitivity and response during nursing care, and to clarify the relationship between pain sensitivity and response. Seventeen healthy female students consented to participate in the experiment. The subjects, supine on beds, were attached to devices for recording electrocardiograms (ECG), local sweat volumes and skin temperatures. Hot compresses, music therapy, massage and association games were used as nursing cares in this study. RR intervals on the ECG and sweat volumes were analysed during nursing care, with and without electrical stimulation. Experimental pain was evoked in the left anterior cubital region by an electric stimulator. The stimulus intensity was set at 60 ~ 70 on the Visual Analogue Scale of pain (VAS). The subjects assessed the amount of pain experienced using the VAS. This study confirmed that both sweat volume and RR interval changed when the pain stimulus was applied and that there was little adaptation to the pain. Also, it is clear that human interaction during nursing care, such as massage and association game, is an important factor for analgesia.

Kiyoko FUKAI, Kazumi ONO, Miho TANAKA, Keiko SEKIDO and Akiko NIIMI : Differences in Pain Sensitivity and Response According to the Sex of the Subject and the Relationship Between Subject and Investigator

The aim of this study was to clarify whether pain sensitivity, pain response and the analgesic effects of nursing care vary with human relationships and sex differences. Thirty healthy students, seven females who were known to the investigators (A), twelve females (B) and eleven males (C) that the investigators met for the first time, consented to participate in the experiment. A were students in the same department as the investigators, and B and C were students from another department. Hot and cold compresses, music therapy, massage and association games were used as nursing cares in this study. Subjects, supine on beds, were attached to devices for recording electrocardiograms (ECG), local sweat volumes and skin temperatures. The stimulus intensity was set at 70 ~ 80 on the Visual Analogue Scale of pain (VAS). The following conclusions were drawn : the pain tolerance threshold is higher in males than females, both pain sensitivity and response are related to body fat in males, and the analgesic effect of each care depends on the human relationship between subject and investigator.

Teruo TAKAHASHI and Satoru KASENO : Measuring Erythrocyte Sedimentation Rate by Application of an Aggregation and Sedimentation Model

The erythrocyte sedimentation rate is a useful qualitative index in various clinical cases. As the mechanism of erythrocyte sedimentation is multifaceted, many experimental and theoretical investigations have been done. Despite the large number of models developed in previous studies, no model has proven to be a comprehensive solution. In this paper a new aggregation and sedimentation model is proposed. The model utilizes underlying Stokes' equa-