和服の短時間および長時間着用時の心拍変動からみた着心地

京都女子大学短期大学部  岡部  和代*
京都女子大学短期大学部  出口  明子*
消費科学研究所  大槻 尚子**

Physical Comfort viewed from Heart Rate Variability during Short- and Long-time Wearing of Kimono

Kazuyo Okabe*, Akiko Deguchi* and Hisako Ohtsuki**

*Kyoto Women’s Junior College, 35 Kitahiyoshi-cho Imakumano Higashiyama-ku,Kyoto 605-8501 Japan
**Consumer Product End-Use Research Institute Co.,Ltd. A TC O’s605 2-1-10 Nankou-kita Suminoe-ku,Osaka 559-0034 Japan

Abstract

This study was performed to investigate physical comfort of short- and long-term kimono wearing based on a power spectral analysis of heart rate variability. Changes in the heart rate was measured using an ACTIVETRACER (AC-301A, GMS). The kimono used in the study was a lined kimono tied with a fukuro-obhi of otaiko knotting. Subjects were 17 healthy young female students.

Compared with condition before wearing the kimono, the heart rate of most subjects decreased during short-time wear of a kimono. The HF/TP (high frequency / total power) ratio increased in those subjects, which indicated a parasympathetic hyperactivity. During long-time wearing of kimono, the HF/TP ratio of some subjects decreased in an early stage of the study and the ratio of other subjects increased temporally. In most cases, however, the long-term wearing of kimono suppressed the HF/TP ratio, which was considered to cause a physical stress to the subjects.

(Received February 8, 2008)
(Accepted for Publication August 25, 2008)

Key Words: kimono 和服, heart rate variability 心拍変動, power spectral analysis パワースペクトル解析, physical comfort 着心地, tired feeling 疲労感