6th World Nursing and Healthcare Conference

August 15-17, 2016   London, UK

Effect of childcare activities on the neck and shoulders: Visualization of specific muscle activity

Saori Yoshinaga[1], Takuma Kiyokawa[1], Eriko Kuramoto[2], Hiroe Kinoshita[1] and **Seiji Nemoto[1]**
[1]University of Miyazaki, Japan
[2]Miyazaki Prefectural Nursing University, Japan

The awkward movements and postures associated with childcare activities can lead to musculoskeletal symptoms in the neck and shoulders. To our knowledge, the relationship between childcare activities and the physical load on the neck and shoulders is poorly understood. Topography can be used to produce a visual expression of a physiological phenomenon and image processing is the most useful method for evaluating the amplitude, or localization. Elucidating the myogenic potential topography of the human trapezius muscle may provide the foundation for visually assessing childcare worker's physical conditions. Using myogenic potential topography, the physical load on the neck and shoulders was verified through simulations of lifting up and setting down a child. From repetition of these movement loads, high-potential changes were observed in regions of the trapezius on myogenic potential topograms. By projecting myogenic potential topograms on a model of the neck and shoulders, high-potential regions were observed not throughout the entire trapezius but only in limited areas of the neck or scapular region. Examination of, the relevance between the myogenic potential topograms and actual complaints of musculoskeletal symptoms showed that the distribution of high-potential changes and subjective symptoms were in agreement. These results suggest that the high-potential changes indicate specific muscle activity from the physical load associated with the childcare activity, and that the myogenic potential topogram is able to visualize individual loads on the neck and shoulders. The understanding of physiological symptoms related to musculoskeletal disorders will help personalized interventions.

Biography

Saori Yoshinaga has completed her PhD from Miyazaki University. She is an Assistant Professor of Miyazaki University, Department of Fundamental Nursing, and studies the development of the evaluation method for the physical load.

saori_yoshinaga@med.miyazaki-u.ac.jp

Notes:

J Nurs Care

ISSN: 2167-1168 JNC, an open access journal

World Nursing 2016
August 15-17, 2016

Volume 5, Issue 4(Suppl)

Page 279