Preliminary study of the effects of complete bed baths with synthetic towels
Comparison between inpatients and healthy individuals

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Abstract
Research background and objectives: We have been conducting research to promote hygiene care techniques while taking into consideration safety, comfort, and medical economics in nursing care settings in Japan. Our previous studies have suggested the following: Only a few steam heated towels are used in hygiene care provided for severely ill patients; the reuse of cotton towels is not safe in terms of infection prevention; According to the results of a comparative experiment using towels made of synthetic (Figure 1), instead of cotton, as alternative materials, there were few functional differences between synthetic and cotton. The objective of the present study, a preliminary study to develop hygiene techniques required to provide safe and comfortable care, was to examine the effects of bed bath using synthetic towel conducted for inpatients (Figure 2).

Results and Discussion: Inpatients exhibited significant increases in core body temperature from the start; mean skin temperature tended to increase after temporarily dropping directly after completing the bath (Figure 3). No marked changes were observed in blood pressure, heart rate, or autonomic nerve activity upon completing the bath, suggesting that results were affected by aging. Decreased alertness and lower POMS scores were observed, and scores for 3 of 4 of scales items were high. Although no marked changes in autonomic nerve activity were observed in healthy individuals from the start, significant increases in core body and skin temperature and significant decreases in heart rate and systolic blood pressure were observed, showing marked temperature sensation and circulatory response. Further, after completing the bath, significantly decreased alertness and increased VAS were observed (Figure 4), and only one skin temperature item received high scores.

Conclusions: When it compared the effect of complete bed bath, marked temperature sensation and response occurred in healthy individuals, but very little response was observed in inpatients.

Keywords: synthetic towel, inpatient, healthy individual, complete bed bath, bed bath effects

Methods
Research Design: One group pretest-posttest design
Subject: 5 Inpatients (73±12.1, males: 3, females: 2); healthy subjects (20±1±1.0, males:5)
Preparation of steam heated towel: In a cleaning cart, 78±1.0 0.6°C, Synthesis towel, 55±30.5°C

Preparation of synthetic towel

![Figure 1. Steam heated towels that run from the palm of the hand, 8 sets of 24-ply fabric sheets (40.1x14cm 11g)](image)

Bathing methods

![Figure 2. A scene of bed bathing. Subjects are raising and placing on the bed, and starting bathing procedure.](image)

Data collection

<table>
<thead>
<tr>
<th>Subjective indices</th>
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<tbody>
<tr>
<td>Depression</td>
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<tr>
<td>Fatigue</td>
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<td>Confusion</td>
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![Figure 3. Changes in the deep and skin temperature.](image)

Results

![Figure 4. Subjective effect.](image)

References


