

# Physiological and Psychological Effects of Head Baths as a Hairdressing Service

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On November 1, 2021, Takara Belmont Corporation released the Yume Head Bath, a shampoo accessory used for head baths that were developed as a new salon hairdressing service to be provided during head baths provided at hair salon shampoo stations. The results of research on the physiological and psychological effects of a head bath were presented on September 3, 2021, at the 23<sup>rd</sup> Annual Meeting of the Japan Society of Kansei Engineering.

A head bath is a new experiential hairdressing service that fully submerges the head in a sink filled with warm water while the hair is washed and rinsed with hot and warm water; the experience provides customers with blissful relaxation that cannot be experienced in everyday life. This was originally a bathing technique used in the hot spring areas of Akita Prefecture. However, when attempts were made to replicate the technique in hair salons, it was not possible to submerge the back of the head further than the level of the ears, making it impossible to achieve the essential level of comfort of a head bath. By adding a waterfall spout over the hairline of the forehead, we developed a device that gives customers a new physical experience that only salons can provide from full-head warm-bath effects.



## ■ Psychological Effects

We used two methods to evaluate how subjects felt before and after the head bath experience: the Visual Analogue Scale (VAS) and the Two-Dimensional Mood Scale—Short Term (TDMS-ST). Our results showed that the physical fatigue, mindset, and motivation of the subjects significantly improved after the experience of a head bath (Fig. 1a). Furthermore, the subjects whose psychological state was disjointed prior to the head bath experience were led into a stable, relaxed state (Fig. 1b).

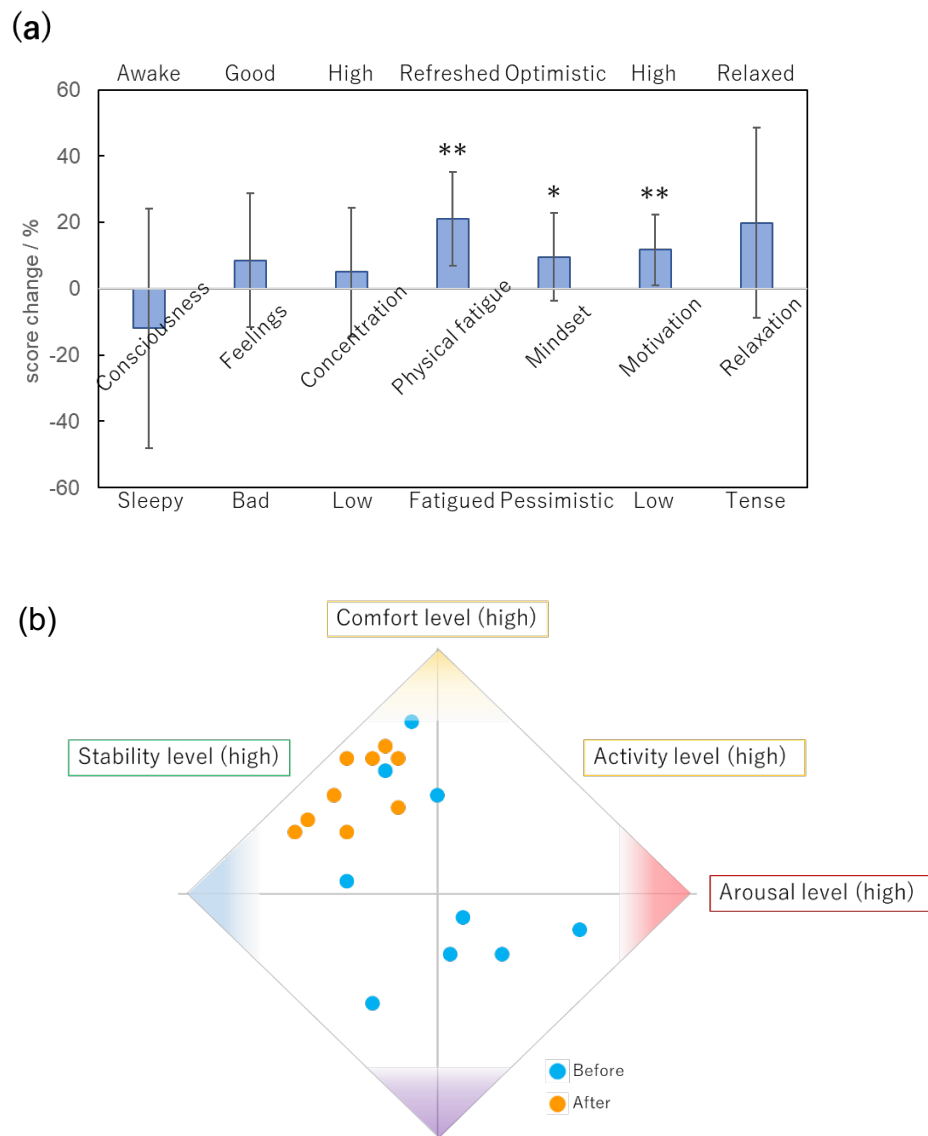


Fig. 1. Changes in mood before and after the head bath. (a) Seven item evaluation using the Visual Analogue Scale (VAS)/ (b) Mapping using the Two-Dimensional Mood Scale—Short Term (TDMS-ST).

### ■ Physiological Effects

Sympathetic-parasympathetic nervous system balance was measured and evaluated by measuring and evaluating EDA (electrodermal activity), electrocardiographic potential, and peripheral blood flow. Time changes for the biological information obtained suggested that head baths had the effect of gently leading the person into a parasympathetic predominant state after initially activating the sympathetic nerves. These effects were not observed with treatments where only the back of the head was immersed in warm water, which showed that the stimulation provided by a cascading waterfall of warm water is important (Fig. 2).

### ■ Future Outlook

The results of this research show that during a five-minute-long head bath there is a time transition in autonomic nervous system balance, and the waterfall spout over the hairline of the forehead contributes to this effect. Moving forward, we will pursue research aimed at elucidating the experiential value and effect mechanisms of the different types of water flow in salon work.

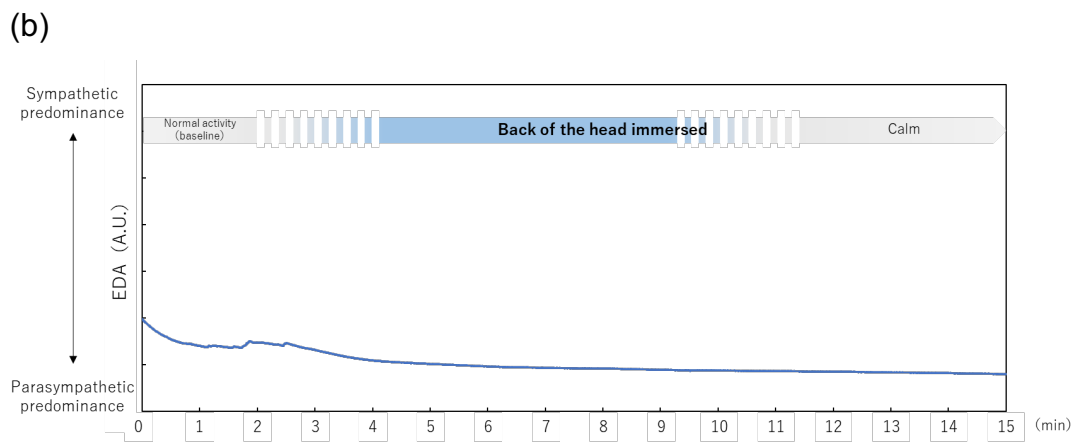
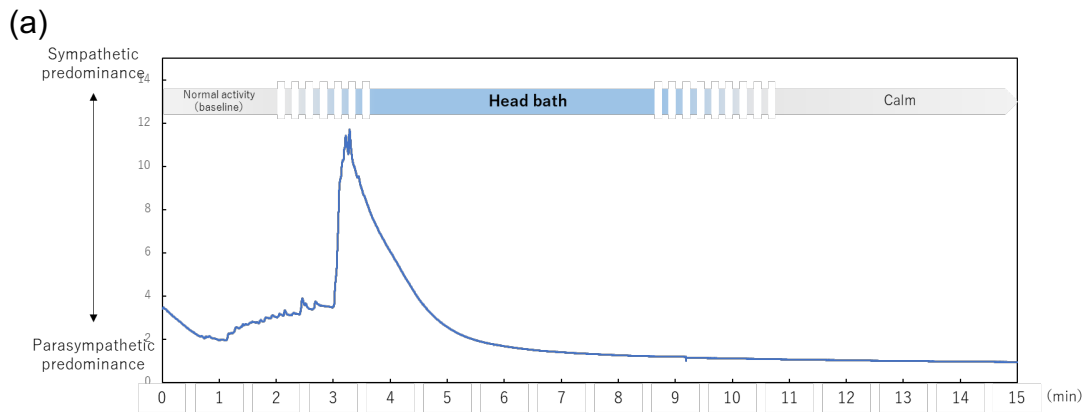


Fig. 2. Examples of EDA spectral comparisons for two processes with the same subject. (a) EDA spectrum during a head bath. (b) EDA spectrum when only the back of the head is submerged in warm water.

■ Related product: Yume Head Bath shampoo accessory

