Tottori J. Clin. Res. 14(1, 2), 21-23, 2025

Health benefits of using Smile Master
–Stress-relieving effect–

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Abstract

Recently, human contact has been restricted strongly under the recent pandemic of COVID-19, and the opportunities for laughter have decreased. The decrease in the opportunities for laughter promotes the accumulation of stress, possibly with adverse effects on health. Therefore, we evaluated the stress-relieving effect of Smile Master, a game application incorporating elements of laughter. As a result, the stress score decreased in all 6 participants, and the mean stress scores in all participants before and after the use of the application were 60.5 and 29.8 kIU/L, respectively. The results indicate a stress-relieving effect of laughter and the usefulness of the application Smile Master as an option for experiencing laughter.
Tottori J. Clin. Res. 14(1, 2), 21-23, 2025

Key words: area occupational therapy, assistive products, health, relaxation

Introduction

One indispensable element of our communication is smiling. Smiling is the strongest communication tool that transmits a sense of security, hope, and energy. However, with the decrease in human contact partly due to the effect of the recent epidemic and pandemic, the opportunities to change facial expression, such as laughing and talking, have decreased. There have been a number of reports about the stress-relieving effect of laughter.[1)] The decrease in the opportunities to laugh promotes the accumulation of stress, which may exert adverse effects on health.[2)] We, therefore, evaluated the stress-relieving effect of Smile Master, a game application incorporating elements of laughter, in the current status of stress accumulation and the reduced opportunities for changing facial expression associated with a restricted lifestyle.

Subjects and Methods

1. Subjects

The subjects were 6 individuals (4 males and 2 females aged 22-82 years).

2. Measurement method

They were given an explanation in advance, asked to play with an application, and the stress level was evaluated using a salivary amylase level monitor before and after playing. The application was Smile Master (Figure 1) developed by Tsujimura et al.,[3)] and the stress score was measured using Nipro dry clinical chemical analyzer Salivary Amylase Monitor (Figure 2).

3. Statistical analysis

For statistical methods, Wilcoxon's signed rank sum test was used to compare stress before and after implementation. Excel for Windows was used for these statistical analyses, and the significance level was set at less than 5%.

4. Ethical consideration

This study was carried out by obtaining consent to participation from the subjects and approval of Osaka Electro-Communication University concerning the contents of the study and handling of personal information. There are no COIs to declare concerning this study (Approval No. 08-020) .