Objectives: Ceramic bathing is a kind of sauna on which visitors lie and enjoy hot stimulus. Our aim in this study was to examine whether an intensive exposure of ceramic bathing improves physical and psychological functions or not.

Methods: The study design is a non-randomized single-arm before-after trial. The 38 subjects (6 males and 32 females) were enrolled in Yachiyo city, Chiba, Japan and bathing 8 times in 2 months from November 2009 to May 2010. Physiological, physical and psychological functions were examined when participants were bathing first and last time. We measured systolic blood pressure, diastolic blood pressure, pulse rate and body mass index (BMI) as physiological functions and SF-8, Profile of Mood States (POMS), and Cornell Medical Index (CMI) questionnaire score for examining subjective changes of physical and psychological functions. The results were compared by paired t test.

Results: Physiological functions were not changed considerably by intensive bathing, excepting a slight decline of diastolic blood pressure. Concerning subjective physical functions, we observed statistically-significant improvement in 11 items: eyes/ears, cardiovascular, digestive, skin, nervous, physical component summary, general health, role physical, bodily pain, vitality, and physical functioning. Regarding subjective psychological functions, 9 items were significantly improved: sensitivity, anger, psychological component summary, role emotional, mental health, tension-anxiety, anger-hostility, fatigue, and confusion. We observed certain but not-significant improvements in 6 items of subjective physical functions (respiratory, musculo-skeletal, genito-urinary, fatigability, frequency of illness, and social functioning) and 5 items of subjective psychological functions (depression in CMI and POMS, maladaptation, anxiety, and tension). There observed little change in only 1 item in subjective psychological function (vigor in POMS). There were no items showing significant deterioration after intensive bathing.

Conclusion: An intensive exposure of ceramic bathing might be effective in improving physical and psychological functions without changing physiological status.

Keywords: Ceramic bathing, Physical function, Psychological function