

Mental Health DX Project using AI analysis of visual information

| | |
|------------------------|---|
| Principal Researcher: | Junko Okuyama (Assistant Professor, Department of Rehabilitation, Tohoku University Hospital) |
| Co-Researcher: | Shuji Seto (Associate professor / lecturer, Office for Establishment of New Faculty, Akita University) |
| Co-Researcher: | Tomonori Motokawa (Senior Researcher, Frontier Research Center, POLA Chemical Industries, Inc.) |
| Research Collaborator: | Yoshihito Furusawa (Assistant Professor, Department of Functional Medical Science, Division of Disability Science, Tohoku University Graduate School of Medicine) |
| Research Collaborator: | Tomomi Kato (Associate Senior Researcher, Frontier Research Center, POLA Chemical Industries, Inc.) |

The Current Research Period : April 2023 to March 2024 (2nd year of a 3 year plan)

Summary:

1) A Study of Japanese Mental Health and Support under Natural Disasters :

① Psychological impact of record-breaking rainfall since July 2023 in Akita Prefecture: After a major disaster, mental health problems such as insomnia, depression, stress reactions, and suicide occur extensively after the acute phase, affecting mental health support. Therefore, this study conducted a web-based longitudinal survey on the psychological impact of record-breaking rainfall in Akita Prefecture by region. It was found that PTSD symptoms were observed in 27% of the total respondents six months after the damage.

② Discussion of pamphlet on post-disaster care of disaster victims : In order for disaster survivors to recover after a disaster, it is thought that obtaining information on post-disaster care, not only psychological but also physical, will help. Therefore, using a booklet published after the Great East Japan Earthquake, we sent it to prefectural government departments related to disaster prevention, conducted a satisfaction survey of this booklet, and examined the booklet's potential for post-disaster recovery.

2) Study of Mental Health Improvement by Smartphone Apps in Adolescents :

① Examination of female students affiliated with a physical education university : Female university students who belong to an athletic club in a physical education department need to perform well in sports even when they are suffering from premenstrual syndrome (PMS), which is thought to cause them a great deal of stress. We conducted a pilot study of the me-fullness app among female students at a college of physical education. The group using the app (85 participants) showed statistically significant improvement in stress, insomnia, and PMS scores (Wilcoxon signed-rank test: $P < 0.05$).