

**Report on Fukuoka University's Research Branding Project
Fukusou Project: Creating an Energetic and Healthy Life**

Summary

As this is the final year of the project, each research team created a final report and final report presentation video and published them on the website. The format of the general symposium was changed to fully online from the hybrid system of partly in person and partly online, which had originally been planned. The research teams debated the themes of "FUKUSOU" and conducted discussions while receiving comments from companies and government officials with whom they collaborated with on the research projects. As in previous years, we compiled project plans and reports, conducted external evaluations, and held a research branding promotion meeting with COVID-19 measures in place. We updated the website 61 times in total (43 in Japanese and 18 in English).

1. Introduction

The Fukusou Project aims to evolve findings from Fukuoka University's research projects into a progressive health program designed to help people gain energy needed for particular points in life, thereby translating academic "knowledge" into "value" for the public to help build a society where good health is sustainable.

2. Approach

The Faculties of Medicine, Pharmaceutical Sciences, Sports and Health Science, and Humanities participate to work in the following three research teams on the matters below.

- (1) Life with Children (pregnancy, childbirth, and early childhood)
- (2) School Adaptation and Healthy Development (later childhood and adolescence)
- (3) Social Participation Support and Active Senior Citizenship (mid-life and senior years)

3. Outcomes of the research project

Each team's status of progress is as follows:

Team 1: The team changed its plan and decided to create an illustrated book on the essence of the periods from pregnancy to early child-rearing. The team's theme was "life with children," and that begins at the time of pregnancy. During pregnancy, childbirth tends to become the goal. Therefore, the book provides helpful information that is necessary during the periods from pregnancy and birth to postpartum and raising infants. The book contains many illustrations so that readers can picture the periods between pregnancy and early child-rearing. The team believes this book can help reduce child-rearing concerns by allowing readers to picture what life will be like after the birth of a child and by providing advice on

where they can ask for support. The team's research results were summarized as follows: For the "exploratory research of mothers who give birth to high-risk babies, including tendencies toward depression and anxiety, child-rearing difficulties, and their feelings toward their babies," a case study report was created based on results obtained through AY2019. After holding practical training for providing support during the child-rearing period, a report was created on "nursery teachers' experiences providing emergency care for children and factors related to the teachers overcoming their challenges" based on a questionnaire. Furthermore, the team distributed a DVD created in AY2020 as supplementary material to ensure training opportunities and is now conducting an assessment of the effects.

Team 2: School adaptation: A questionnaire reflecting on the three-year social skills training (SST) program and also feedback received from school staff at academic conferences have brought various issues to light. The conclusion: SST allowed all children to practice and implement concrete interpersonal interaction situations that take place during everyday school life. Modeling and role-playing methods, with due care taken not to give children hurtful experiences through the activities, were effective in increasing the children's skills. While SST activities like role-playing caused some uncertainty and nervousness among the children, their responses to the questionnaire indicated that they participated with interest in the SST classes and had fun. The children also showed an intention to apply what they had learned during SST into their personal growth and make use of it in their everyday lives.

Physical education (PE) support: In terms of coordination training (CT), the team focused on outsourcing, such as disseminating information through research papers. Research paper 1: The "juggling bean bags exercise program" improved fatigue recovery, and the "scarf exercise program" showed psychological effects, such as reducing nervousness, improving energy and reducing anger. Research paper 2: Saliva samples taken before and after CT showed that cortisol levels significantly declined after the exercises, confirming their effectiveness in reducing stress. A total of three research papers, including the two described above, were featured on the website. In terms of support for measuring physical fitness, the team conducted research with the aim of exploring when physical fitness differences resulting from being born in different months disappear in boys and girls. The results showed that the effects of having different birth months had disappeared in total points among sixth-grade girls. This indicated that physical fitness differences that result from being born in different months disappear at different times for boys and girls (differences were still observed among sixth-grade boys).

Team 3: Health promotion: The team examined exercise intensity and feedback for "Slow Jogging" while wearing a mask. It was found the exercise intensity while wearing a mask was the same as when not wearing a mask. However, depending on the type of mask, participants could experience breathing discomfort as the exercise time became longer. Therefore, giving

careful consideration to the type of mask and changing masks is necessary for Slow Jogging programs during the COVID-19 pandemic. In addition, the team examined the effects of a Chinese herbal medicine called *hachimi-jio-gan* on the changes in brain functioning in senescence accelerated mice (SAMP8). The purpose was to explore ways to respond to age-induced frailty. Intake of *hachimi-jio-gan* prevented a decline in cognitive functioning in SAMP8 mice and increased the emergence of arginase-1, a protective micro-barrier marker. This indicated that *hachimi-jio-gan* increases protective micro-barriers, which reduce neurological disorders due to old age and prevent declines in cognitive functioning.

Social activity support: With the aim of connecting people even during the COVID-19 pandemic, the team worked with cooperating institutions (Fukuoka City and the Fukuoka City Council of Social Welfare). They also collaborated with Taguma Elementary School District residents and social workers to hold a meeting on providing care support for elderly residents of the community and participated at a meet-and-greet salon. To be able to connect safely with elderly people during the pandemic, the team developed an app on tablet devices and held an online test. Carrying on from last year, the team also conducted and reported on a questionnaire survey on the collaboration that can happen between industrial, academic, public and private sectors in the event of an emergency. Going forward, when the effects of COVID-19 have receded, it will be important to attempt collaborations with companies, the elderly, social workers and the government and also discuss and assess the needs that must be met and what can be done.