

2021 Doctoral Dissertation (Abstract)

Factors Related to Self-perceived Fatigue and Coping Behaviors  
among Older Workers of  
Silver Human Resources Center:  
Focusing on Motor Function and Cognitive Function

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## **Introduction**

Recently, the number of older workers aged 65 and over has been increasing. Older workers are more likely to suffer serious occupational accidents than younger workers<sup>1)</sup>, therefore preventive health management is important for older workers. Self-perceived fatigue of worker is predictor of occupational accidents<sup>2)3)4)</sup>. However, little is known that factor related self-perceived fatigue and the characteristics of coping behaviors among older workers. In this study, we focus on the members of the Silver Human Resource Center (SHRC). SHRCs, there are 1,335 locations and 715,558 older people are registered<sup>5)</sup>, and that is the most popular and common way for older people in Japan who hope to work for their well-being<sup>6)</sup>. The purpose of this study is to examine the effects of motor function and cognitive function on self-perceived fatigue and coping behaviors of older workers in SHRC.

**Study 1: Influence of Motor Function and Cognitive Function on self-perceived Fatigue: Examination of Outdoor Work by Older People Registered in Silver Human Resources Center**

This study analyzed the effects of motor function and cognitive function on self-perceived fatigue among older worker. Participants were 157 members (133 men and 24 women) of the SHRC in “A” City, Tokyo, who were in charge of outdoor work (weeding and park cleaning), aged 63-86 years (mean age:  $74.2 \pm 5.3$  years). The following variables were measured: self-perceived fatigue, motor function, cognitive function, age, sleep duration, air temperature during working hours, physical activity, and job control. It was suggested that motor function and cognitive function were not significantly related to change self-perceived fatigue, but interaction term between both functions was significantly related to change of self-perceived fatigue. ( $\beta = -0.07$ ,  $p = 0.004$ ). Fatigue management methods should be developed to functioning of older workers.

## **Study 2: Coping Behaviors for Occupational Fatigue among Members of Silver Human Resources Center during Outdoor Work: Comparison by Motor Function and Cognitive Function**

This study examined the characteristics of coping behaviors for occupational fatigue among older worker, divided into four groups based on their motor function and cognitive function: (1) “Both-High”; (2) “Motor-Low”; (3) “Cog-Low”; (4) “Both-Low”.

Participants were 40 older people selected from participants in Study 1. Data were collected through semi-structured interviews and analyzed with summarizing content analysis. The differences of the mean number of codes about coping behaviors for occupational fatigue between four groups were confirmed using the Kruskal-Wallis test. As a result of multiple comparisons, the mean number of codes was significantly higher in the “Motor-Low” than in “Cog-Low” and “Both-Low” ( $p < .01$  for both groups). We suggested that understanding for characteristics of coping behaviors for occupational fatigue in these four groups was important in the Safety and Health Management System in older workers, and complementary support each other among different groups was effective.

## **Limitations and Recommendations for Future Study**

This study had several limitations that deserve mention. First, the kind of work was only outdoor work. Future studies should cover a more diverse kind of work. Second, the coping behaviors for occupational fatigue examined by interviewed. Future studies should use an objective measure, such as using apps. Third, we did not examine the effectiveness of coping behavior in reducing self-perceive fatigue. Future Studies should examine the effectiveness by motor function and cognitive function of older workers, and to clarify effective coping behaviors.

## **References**

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