

**Abstract #: 1503****The association of work-related stress with aggravation of pre-existing disease during COVID-19 emergency in Japan**

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**Background:** The job environment has changed since the sweeping of coronavirus disease 2019 (COVID-19) pandemic. The current study aimed to investigate the association between work-related stress and aggravation of pre-existing disease among workers during the first state of COVID-19 emergency in Japan.

**Methods:** Data were obtained from Japan COVID-19 and Society Internet Survey (JACSIS) conducted between August 25 and September 30, 2020. Participants who reported had a job as well as current history of disease(s) (i.e., pre-existing conditions) were included (n = 3090). Work-related stress since the state of COVID-19 emergency (April 2020) was assessed according to the job demand-control model. Aggravation of pre-existing disease during the state of emergency was self-reported. Multivariable logistic regression models were adopted to demonstrate the association.

**Results:** 334 (11%) participants reported with aggravation of pre-existing diseases. The numbers of participants with high demand and low control were 112 (18%) and 100 (14%), respectively.

Compared to medium demand, high demand was significantly associated with aggravation of pre-existing diseases (odds ratio: 1.67, 95% confidence interval: 1.20-2.28). Low control was significantly associated with aggravation of pre-existing diseases (odds ratio: 1.41, 95% confidence interval: 1.02-1.95) compared to medium control.

**Conclusions:** Work-related stress during the first state of COVID-19 emergency was associated with aggravation of pre-existing disease during that period.

**Key messages:** Eleven percent of the working participants with pre-existing diseases reported its aggravation during the first state of COVID-19 emergency in Japan.

Job strain characterized by high job demand and low job strain control was associated with aggravation of pre-existing disease.