Environmental and Occupational Health Practice

Environ Occup Health Practice 2021; 3
doi:10.1539/eohp.2020-0020-OP

Opinion

Suicide prevention for workers in the era of with- and after-Corona

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Abstract

In Japan, over 6,000 workers commit suicide every year, and the Japanese government has taken several countermeasures to prevent *Karoshi* (death due to overwork) and mental health disorders among workers. Risk factors for suicide among workers include long working hours, adverse psychosocial job characteristics, economic recession or financial crisis, job insecurity, and workplace harassment. Depressive symptoms are supposed to play a vital role in mediating mechanisms. Owing to the coronavirus disease (COVID-19) pandemic, economic crises continue and seemingly deepen, and the risk of unemployment increases. Workers with low socioeconomic status and who do not enjoy occupational health services are considered vulnerable, and essential workers (including health care workers) require special attention. Little evidence prevails with respect to workplace suicide prevention measures in a population approach, and hence, suicide prevention should be integrated into the existing workplace mental health activities. Although evidence of secondary prevention, such as screening for depression, is scarce for workplace mental health, such measures, including regular psychological counseling, should be applicable during this crisis. Research is thus crucial for preventing suicide in the workplace using surrogate outcomes, such as suicidality, help-seeking, stigma, access to means, and improving workplace support. Prevention of suicide among temporary workers, freelancers, foreign workers, and self-employed individuals who lack support from regional and occupational healthcare domains remains an untackled issue.

Keywords: COVID-19, depression, long working hours, occupational stress, small-sized enterprises, regional/workplace co-operation

(Received October 27, 2020; Accepted January 14, 2021; Published online in J-STAGE February 25, 2021)

Suicide and mental health at workplace in Japan

Japan has a large number of suicides, and the number of workers' suicides soared to approximately 9,000 in 1998. This level remained until 2009 and then gradually decreased. During this period, infrastructure against suicide was developed. Based on the Basic Act on Suicide Prevention, which was issued and enforced in 2006, the Suicide Comprehensive Measures Charter was formulated in 2007, and the overall review was conducted in 2012 to realize a society where no one is forced to commit suicide. Additionally, several important acts and systems, such as the support system for people in need of living and the Basic Act on Measures Against Alcohol-related Harm, were formulated. It is considered that the amendment to the Money Lending Business Act in 2006 was attributable to the reduction of the suicide rate of middle-aged and older men by protecting the debtors and preventing heavy debts. Even so, over 6,000 workers commit suicide every year.

Almost 60% of the employees in Japan report strong worry, anxiety, or stress at work or in their working lives. A total of 1,820 claims were submitted requesting worker compensation for work-related mental disorders in 2018. In all, 465 claims for mental disorders were approved for compensation, with 76 cases for suicide[1]. The number

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of claims submitted requesting worker compensation for mental disorders has increased almost 10-fold during the past 2 decades[2].

As a countermeasure, the Japanese government released several remedies, including the promotion of law on preventive measures against *Karoshi* (death due to overwork) (enforced in 2014)[3] and the Stress Check Program (enforced in 2015)[4]. A series of remedies to promote Japanese work style reform have been enforced since 2019. Among them, an amendment to the Labor Standard Act includes new regulations on working hours (upper limit on overtime work) and the introduction of the work-interval system (minimum daily rest period)[5]. In 2020, the legalization of measures against power harassment at workplaces has made it mandatory for employers to take necessary measures for employment management to prevent such harassment.

Risk factors for suicide among workers

Most studies on the risk factors of worker suicide use an observational study design. However, a few systematic reviews and meta-analyses exist, and such works reveal the following plausible risk factors (Table 1).

Long working hours

A recent study conducted in Korea (7,797 men and 6,687 women) has revealed that long working hours, even a moderate level of 45–52 working hours per week, were associated with suicide risk[6]. The observed associations were statistically significant, but the confidence intervals were wide. Compared with working 35–44 h per week, the hazard ratio was 3.89 (95% confidence interval [CI], 1.06–14.29) for working 45–52 h per week and 3.74 (95% CI, 1.03–13.64) for working >52 h per week. A United Kingdom census-based longitudinal study (270,011 men and 144,938 women) showed an elevated risk of completed suicide among male professionals/managers and routine occupations although the association did not reach statistical significance (hazard ratios were 1.23; 95% CI, 0.63–2.39 and 1.24; 95% CI, 0.67–2.31, respectively). Depressive symptoms[7] and/or suicidal ideation[8] induced by long working hours were observed to play a role in mechanisms.

Table 1. Work-related risk factors for suicide

Long working hours (overtime work)
Psychosocial job characteristics
Lack of support from supervisors/colleagues
Low job control
Job insecurity
Downsizing (economic recession, financial crisis)
Harassment and bullying at workplace
Shift work; night work; physically challenging or dangerous work
Adverse chrono-biological and/or physical working conditions
Occupation-based access to lethal means of suicide

Sources: [9,15,19,44]

Psychosocial job characteristics

A meta-analysis has affirmed that the lack of support from supervisors and colleagues and low job control are risk factors for suicide[9]. Although research is still ongoing[8,10], job insecurity is evaluated as a risk factor for suicide ideation[9]. Moreover, robust evidence prevails on the occupational stress that predicts the incidence of mental health disorders. Underlying mechanisms through which occupational stress leads to suicide may include clinical depression caused by stress[11,12].

Economic recession

Economic recession or financial crisis is associated with an increase in the number of suicides, particularly among men, and poor mental health is closely associated with this factor[13,14]. A considerable surge in the number of suicides in the late 1990s in Japan was characterized by an increase in the number of suicides among male, middle-aged, and older employees and supervisors in metropolitan areas. The economic recession and deterioration of employment situations were associated with this phenomenon. Recession does not necessarily shorten the working hours. Economists observed the increase in the working hours of regular male employees in Japan during the severe recession in the early 2000s and speculated that the work load of the employees who were retained after downsizing increased[15]. The increased number of suicides among Japanese managers and professionals around the year 2000 was explained by the similar mechanisms[16].

Workplace harassment and bullying

A recent relatively increasing trend of younger workers committing suicide has suggested the change of risk factors for suicide among workers. Associations between workplace harassment and suicidality have been studied among specific occupations, such as medical professionals[17] and (female) firefighters[18], whereas studies among general working populations are scarce[19]. The systematic review results validated that a positive association prevails between workplace bullying and suicidal ideation, but the absence of high-quality epidemiological studies precludes a definite conclusion. A recent Swedish prospective study of 85,205 men and women has corroborated that workplace sexual harassment was associated with suicides and suicide attempts. After adjustment for potential confounding factors, the increased risks of suicide were 2.8-fold for suicides (hazard ratio 2.82; 95% CI, 1.49–5.34) and 1.6-fold for suicide attempts (hazard ratio 1.59; 95% CI, 1.21–2.08)[20]. Bullying has a significant impact on the development of depressive symptoms[21].

Mounting stressors during the coronavirus disease (COVID-19) pandemic

Working populations that require special care include essential and healthcare workers. The fear of infection, prejudice (or lack of respect), and overtime work are large stressors for essential workers. Healthcare workers, particularly those who are frontline care providers, also experience the fear of infection, high job demands while providing care to patients, discrimination, stigma, and violence. In some circumstances, medical professionals are compelled to make difficult decisions related to life or death[22]. Thus, these stressors would become strong risk factors for mental health disorders that may lead to suicide.

The COVID-19 pandemic has tremendously impacted the global economy. From February through early September 2020, over 500 bankruptcies have been recorded within Japan. Between January and August 2020, over 50,000 employees have been forced to leave their jobs. The number of dispatched workers decreased by 160,000 in July 2020 as a result of COVID-19, and this is the largest drop since the comparable year of 2014. Many workers are under the threat of job or income loss. By the end of August 2020, the number of cancellations of informal appointments of new graduates reached approximately 5-fold that of the previous year. Lost revenue and job insecurity have increased uncertainty for the future, and it is expected that economic recovery will decelerate. The cumulative number of suicides is estimated to increase by 140,000–270,000 resulting from the economic downturn caused by COVID-19[23]. Those most vulnerable to this situation are female workers, temporary workers (owing to their being laid off), freelancers, foreign workers, and self-employed individuals. Furthermore, depression is reported to have increased due to the COVID-19 pandemic among vulnerable populations, such as those who have lost their jobs, with lower resources and increased exposure to stress[24].

The COVID-19 pandemic has forced many workers to alter their working styles and patterns — for example, by switching to telecommuting. Moreover, the altered working styles and patterns have ushered in several benefits for workers, such as increased job control and decreased commuting hours. Previous analyses have concluded that telecommuting has small but beneficial effects on the mental health of workers[25,26]. Conversely, telecommuting has some negative impacts, such as decreased professional and personal support[27] and deteriorating health, including the risk of being vulnerable to alcohol and substance abuse. It is unforeseeable how large and far reaching the impact of reduced professional and private support will be on Japanese employees who are used to working in a collectivity culture[28]. Blurred boundaries between work and home are likely to increase overtime work and decrease recovery hours[27]. Owing to the abrupt shutdown of school and childcare facilities, working from home while caring for children at the same time is expected to become an enormous burden, particularly for female workers. As a further concern, domestic violence has been reported to be increasing since the COVID-19 outbreak[29].

Workplace suicide prevention countermeasures

Little evidence exists on a population approach for workplace prevention[30]. The consensus is that workplace suicide prevention should be integrated into ordinal occupational health practices along with the guidelines for the promotion and maintenance of the metal health of workers[31,32].

The effect of promoting law on preventive measures against *Karoshi* appears to have a positive impact on the reduction in working hours and overtime-related cerebrovascular and cardiovascular diseases[33]. Because evidence is lacking on mental health problems and *Karojisatsu* (suicide from overwork), further studies are necessary to confirm the effectiveness of the implementation of the health management and programs. However, conducting countermeasures against overtime work in a proper fashion is indispensable. Psychosocial job characteristics are modifiable risk factors for mental health disorders. Occupational health practitioners can improve their workplace environment using group analyses based on the Stress Check Program. Although there is no evidence since the Stress Check Program started, the improvement of work environments based on stress surveillance has been shown to be effective against deterioration in workers' mental health[34]. A recent study suggests a combination of a stress checks and improvements in the work environment reduces workers' psychological stress responses[35].

Special attention to medical professionals and healthcare workers should be considered during the COVID-19 pandemic. In an ordinary period, screening for mental health cases, such as depression, is less common and recommended only with a rigorous after-screening follow-up[36]. Frontline healthcare workers facing COVID-19-related challenges may be an exceptional target population. Occupational healthcare staff members should consider regular screening for depression and suicidality of frontline healthcare workers and provide timely treatments for those with severe mental health problems. Safe communication channels are crucial to reduce the isolation of healthcare workers, and employee assistance program (EAP) services (such as psychological counseling) would be helpful. Clear communication with regular and accurate updates about COVID-19 is essential to mitigate the fears of workers[37,38] (Table 2).

Table 2. Suicide prevention components in the workplace

Primary level
Countermeasures against long working hours
Resilience training (for individual workers)
Leadership training (for supervisors)
Training for occupational health staffs
Workplace improvement (based on the Stress Check Program)
Communication with accurate information (on COVID-19 crisis)
Secondary level
Awareness training
Gatekeeper training/Peer support programs
Mental health/suicide surveillance procedures
Employee wellbeing training
Addiction training (vs treatment programs incl. consultation support for alcohol/drug abuse, etc.)
Mental health "check-ups" (the Stress Check Program) or, screening for depression
Tertiary level
Crisis telephone hotline (EAP service)
Grief care of the people involved in the victims

The abovementioned components are not necessarily specific for suicide but for general mental health.
Sources: [31,37,38,44]

Untackled issues

To date, more than half of *Karoshi* cases in Japan have occurred in small-sized enterprises[3]. According to the scale of enterprises, small-sized enterprises do the least work on mental health measures, while being the most likely to not conduct or to not have decided how to conduct medical interviews for those workers with overtime work. The reasons include the difficulty of securing doctors who are in charge of interviews and the considerable associated costs[39]. The medical interview for those workers who accumulated 100 or more hours of overtime work per month (80 or more hours since 2019) and complained of fatigue began after the amendment of the Industrial Safety and Health Law issued in 2006. This obligation was applied to the employers of small-sized enterprises in 2008, but it was not thoroughly implemented.

It is difficult for occupational healthcare staff members for small-sized enterprises, such as retail and wholesale — the very enterprises most affected by the COVID-19 pandemic — to take countermeasures. Prefectural and regional occupational health centers should function to support such enterprises[40]. Collaborations between regional and occupational health fields in mental health care have long been in the planning stage. Workers often do not gain appropriate support owing to the gap between the regional and occupational support systems in the healthcare domains[41]. For instance, employees on sick leave are easily lost to follow-up with when they fail to apply invalidity benefits because occupational health staff members and/or those who in charge of personnel labor management often do not involve them. In such a case, health outreach workers (public health nurses) may become key supporters. Promoting "regional/workplace co-operation" for seamless support for those workers at risk of lost is vital.

Milner et al. argued that workplace suicide prevention programs require multi-faceted, comprehensive, and community-based approaches[32]. As they noted, worker suicide cannot fully be prevented unless preventive approaches extend beyond workplaces. Workers who have not enjoyed occupational health services, such as temporary workers, freelancers, foreign workers, and self-employed individuals, must be supported. In the current Japanese occupational health service system, most of them cannot be reached in ordinal occupational health practice activities. The United Nations proposes to support community actions that strengthen social cohesion, solidarity, and healthy coping; reduce loneliness; and promote psychosocial well-being, especially among people who have lost their livelihoods[42]. Outreach, both online and by phone, is necessary for seamless support.

Ensuring labor power is a key to prevent overwork, enabling the building of societies in which those who want to work can do so, and in a decent manner. Enterprises are required to offer flexible jobs in which every worker — including the elderly and women — can work according to their personal situations. Balancing work and long-term care is important to prevent long-term care leave. The male breadwinner model, which has deeply

permeated Japanese society, leads to long working hours among men (at least in part) while reduces working opportunities among women. Thus, rigid gender role stereotyping should also be corrected[43].

Future research for occupational health practices

High-quality longitudinal studies on the associations between harassment at work/workplace bullying and suicide/suicidal behavior/suicidal ideation are scarce. The effectiveness of workplace suicide prevention has been understudied. Therefore, controlled trials using outcomes of suicide death and other proximal outcomes (such as suicidality [suicide ideation and attempts/self-harm], help-seeking, stigma, and access to means) are needed[32]. Future research should include discussions on the practices that should be incorporated to maintain or enhance workplace support during the COVID-19 pandemic.

Self-employers and/or small-scale enterprises appear to not well understand mental health issues; hence, they should receive proper information. How to deliver the necessary and useful information to them is an important research question. Methodologies using patient and public involvement can be applied.

Conclusion

We must be vigilant in mitigating the increase in the number of worker suicides as the COVID-19 pandemic brings about short- and long-term or sustained psychological impacts. Within the scope of society, social security should be timely, considered, and adequately delivered to vulnerable workers. Regional/workplace co-operation should be strengthened to provide seamless support to the needy, thus building resilient communities. In occupational healthcare practices, in addition to the ordinal mental healthcare at workplace, specific care should be considered for essential and healthcare workers. The effects of new normal working styles, including telecommuting, on the mental health of workers are to be observed and examined[31,37,38,44].

Sources of Funding

This study received funding from the Work-related Diseases Clinical Research Grant 2020 (200401-01) and the Health, Labour and Welfare Sciences Research Grants (20CA2044) from the Ministry of Health, Labour and Welfare, Japan.

COI statement

The authors declare that there are no conflicts of interest.

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How to cite this article: Tsutsumi A. Suicide prevention for workers in the era of with- and after-Corona. *Environ Occup Health Practice*. 2021; 3: eohp.2020-0020-OP.
https://doi.org/10.1539/eohp.2020-0020-OP